Spring August 2014

THE FINANCIAL SECTOR AND INCLUSIVE DEVELOPMENT IN AFRICA: ESSAYS ON ACCESS TO FINANCE FOR SMALL AND MEDIUM-SIZED ENTERPRISES IN SOUTH SUDAN AND KENYA

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A Dissertation Presented

by

JAMES ALIC GARANG

Submitted to the Graduate School of the
University of Massachusetts Amherst in partial fulfillment
of the requirements for the degree of

DOCTOR OF PHILOSOPHY

May 2014

Department of Economics

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DEDICATION

I dedicate this dissertation to my Wife Maria Ayak Kenyang and our beloved children Alic Jr., Adhot and Adut as well as my Mother Abuk Jana, my wonderful siblings and to the entire Family of Lual Guot.

ACKNOWLEDGMENTS

I will be eternally indebted to my advisors, Professors Leonce Ndikumana and James K. Boyce, for their dedication, encouragement, experience and knowledge imparted on me and time expended in this academic pursuit. Professor Ndikumana's rich African perspective on macroeconomics and financial matters, his unfailing inquisitive and insightful suggestions and advice on econometric issues and model specification is very much appreciated. Professor Boyce's abiding kindness, his guidance on analytical issues as well as on matters of style and substance, his on-time-prompt responses to issues of concern and consummate optimism proved indispensable during this journey. I am equally grateful to Professor James Heintz, committee member, for his thoughtful and probing comments which contributed significantly to the quality of the dissertation.

I am also thankful for a fellowship from the Political Economy Research Institute at the University of Massachusetts, Amherst, and for two other outside grants, for facilitating the field research. Without this support, none of the quantitative work could have been done. Any errors are my own shortcomings, though. The research assistants in South Sudan and Kenya and all my respondents deserve a special mention. Additionally, I am immensely grateful to my family. First, my wife Maria and our adorable children, Alic Jr., Adhot and Adut, for their unfailing love and support during all the years devoted to finishing the dissertation and many precious moments not spent with them. Second, my Mother Abuk for her love and lifelong lessons instilled in me at an early age. Finally, I appreciate my siblings, Guot, Ahok , Akech and little Garang for their understanding, love and trust, believing that their eldest brother would finish what he started.

ABSTRACT

THE FINANCIAL SECTOR AND INCLUSIVE DEVELOPMENT IN AFRICA: ESSAYS ON ACCESS TO FINANCE FOR SMALL AND MEDIUM-SIZED ENTERPRISES IN SOUTH SUDAN AND KENYA

MAY 2014

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This dissertation, consisting of three essays, uses data from field surveys of banks and small and medium enterprises (SMEs) conducted in South Sudan and Kenya from July 2011 through September 2012. The first essay examines the role of financial sector development in expanding access to finance by SMEs in Kenya. We find that while the financial system in general, and the Central Bank of Kenya in particular, have made headway in expanding financial inclusion in Kenya, small firms continue to face more constraints in access to finance compared to larger firms. The policy emphasis on financial inclusion, coupled with the widespread innovations in information and communications technology, such as M-Pesa and agency banking, are furthering the expansion of the access frontier in Kenya. The second essay assesses access to finance by SMEs in South Sudan, based on a survey conducted in three of the country's ten states. Using a Probit model estimation, we find that not only does size of the firm matter, but also that distance from Juba is inversely related to access to finance by SMEs. The final essay draws lessons from the Kenyan experience, in light of the findings on access to

finance in South Sudan, to formulate proposals for innovative financial services for SMEs and with regard to the regulatory framework for financial sector development in South Sudan. The aim throughout the dissertation is to explore how the financial sector can serve to advance the goal of inclusive economic development. Policy recommendations emphasize strengthening the regulatory framework, land rights administration, channeling oil resource revenues to fuel broad-based economic development, and pursuing financial inclusion as an objective in its own right and not just a byproduct of economic development.

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LIST OF ABBREVATIONS

AfDB	African Development Bank
ADB	Asian Development Bank
AMPI	Africa Mobile Phone Financial Services Policy Initiative
ATM	Automatic Teller Machine
BIO	Belgian Investment Company for Developing Countries
BOSS	Bank of South Sudan
BRAC	Bangladesh Rural Advancement Committee
CBK	Central Bank of Kenya
CDC	Country Development Corporation
CGAP	Consultative Group to Assist Poor
CPA	Comprehensive Peace Agreement
DFID	Department for International Development
EIB	European Investment Bank
FI	Financial Inclusion
FMO	Netherlands Development Finance Company
FS	Finance Sudan
GoK	Government of Kenya
GoSS	Government of South Sudan
ICT	Information and Communication Technology
IMF	International Monetary Fund
MIGA	Multilateral Investment Guarantee Agency
MFIs	Microfinance Institutions
NBFIs	Non-bank Financial Institutions
NGO	Non-governmental Organization
NPL	Non-performing Loan
PR	Poverty Reduction
SACCO	Savings and Credit Cooperative Organizations
SAP	Structural Adjustment Program
SBA	Small Business Administration
SFC	Savannah Farmers' Cooperative
SPLM/A	Sudan Peoples' Liberation Movement/Army
SMEs	Small and Medium-sized Enterprises
SMS	Short Message Services
SSA	Sub-Saharan Africa
SUMI	Sudan Microfinance Initiative
WB	World Bank

CHAPTER 1

SETTING THE STAGE

1.1 Introduction

Recent years have seen a policy shift to "finance for all" (Marshall, 2004; Helms, 2006; World Bank, 2008; Chibba, 2009), including finance for Small and Medium-sized Enterprise (SMEs), in particular (Ardic, Mylenko, & Saltane, 2012). Billed as dynamic job creators (Buckley, 1996; Duarte, 2004; Ganbold, 2008; SBA, 2009; Ardic, Mylenko, & Saltane, 2012), SMEs make up majority of firms in developing countries. Yet SMEs tend to face significant constraints in accessing credit and other financial services, owing to geographical distance from financial centers, affordability, lack of collateral, poor or nonexistent credit history and other non-price barriers (Beck & Honohan, 2007; Ardic, Mylenko, & Saltane, 2012;Demirguc-Kunt & Klapper, 2013).

However, individual governments, development financial institutions and other stakeholders are realizing today that financial inclusion can bring many important benefits (Chakravarty & Pal, 2013). Expanding the access frontier can have economy-wide consequences, especially by making SMEs as a powerful means to poverty reduction and fostering the Financial Inclusion-Poverty Reduction-Millennium Development Goals nexus(FI-PR-MDG nexus) (Chibba, 2009). An inclusive financial sector can generate positive externalities to the governments, contributing to job creation, and macroeconomic stability. From the standpoint of the banking sector, financial inclusion brings about a broader client base and dependable source of funding. It also reduces some risks in money laundering activities by bringing much of

unregulated/underground economy into the regulated sector, thereby achieving financial stability and integrity.[1] Finally, from the perspective of households and SMEs, financial inclusion provides opportunities to borrow and save, offers efficient means of making payments, and facilitate investment in housing, education, insurance, and firm growth (Aduda & Kalunda, 2012; Hurtado, Torres, & Hayem, 2013).

1.2 Background of the Research Problem, Hypotheses and Justification of the Study

1.2.1 Background of the Research Problem

Throughout the world, and in Africa in particular, the quest for financial inclusion and inclusive economic development is now more than ever paramount (Aduda & Kalunda, 2012: Calice, 2013; Hayem, Hurtado, & Torres, 2013). Expressing this policy agenda, the African Development Bank (AfDB) publication *Financial Inclusion in Africa (2013)* states thus*:* "A clear paradigm shift has resulted in a more inclusive and sustainable growth. For its part, the African Development Bank has launched its Ten-Year Strategy 2013-2022, the main thrust of which is inclusive and green growth" (Foreword, p. 9). Despite high-level policy support, SMEs tend to face significant problems in all economies (Ardic, Mylenko, & Saltane, 2012; Demirguc-Kunt & Klapper, 2013). Nowhere are these problems more acute than in post-conflict and fragile states, where weak institutions, poor infrastructure, political instability, lack of enforcement

[1] Even though the largest amount of money laundering activities (MLA) is orchestrated by individuals and agencies that are financially included and the MLA linked to lack of financial service is minimal, financial inclusion brings to the open for policymakers to see what was already underground.

mechanisms, and underdeveloped financial systems prevail (Sile, 2013). At the same time, the desire to maintain harmony and provide peace dividends is compelling in these settings, bringing greater urgency to the role of SMEs in creating jobs.

This study sets out to analyze credit market access by SMEs in the post-conflict setting of South Sudan and to this end, draw lessons from neighboring Kenya. The aim throughout the dissertation is to identify ingredients of successful financial sector development and regulatory frameworks (see Chapter 5). The overarching goal is to formulate financing strategies for South Sudan that will enhance SME job creation and poverty reduction.

1.2.2 Research Questions and Hypotheses

The study explores and seeks answers to the following questions:

1. What are the major obstacles to SME growth in South Sudan?
2. To what extent do SMEs in South Sudan have access to finance, and on what terms?
3. In what ways are banks expanding the access frontier in Kenya, and how have technology and mobile banking advanced the goal of financial inclusion?
4. How have financial innovations in Kenya affected horizontal inequality, by accident or by design, among the regions?
5. What can South Sudan learn from Kenya's experience in financial sector development?

The ensuing chapters seek to test the following hypotheses:

1. Lack of Access to credit on favorable terms is a major obstacle to the formation and growth of SMEs;
2. Access to finance varies with distance from Juba and gender in South Sudan;
3. Access to finance varies with firm size and technology in Kenya;
4. Innovative financial sector development in Kenya has reduced horizontal inequality by extending access to previously marginalized populations; and
5. South Sudan can learn from best practices in banking in Kenya, and from Kenya's successes and/or failures in expanding access across regions.

1.2.3 Motivation

Simply put, SMEs matter because they are dynamic enterprises and job generators (Buckley, 1996; Duarte, 2004; Ganbold, 2008; SBA, 2009; Ardic, Mylenko & Saltane, 2012; Khanam, Rahman & Zarook, 2013). SMEs contribute to macroeconomic outcomes, notably GDP growth, exports and employment. Yet Khanam, Rahman & Zarook, 2013, p. 11) find that in the case of Libya, SMEs still suffer from lack of access to finance even though they are seen as "economic engines of many economies worldwide." The pecking order hypothesis states that firms obtain capital as follows: Firstly, they exhaust internal profits; secondly, they go for short-term financing; thirdly, long-term financing; and fourthly, they go for least preferred option, new equity investors (Khanam, Rahman & Zarook, 2013). Majority of SMEs do not observe this order; some do not even go beyond the first option after exhausting internal fund. Hence, raising equity is not an option for SMEs. With improved financial services, SMEs can access finance to expand their operations (World Bank, 2008; Cattani, 2002; Beck & Honohan, 2007).

In a post-conflict country such as South Sudan, the problem is all the more acute. Grounds for optimism can be found, however, in recent development of financial sector in Africa and global commitment to inclusive finance as a means to achieve inclusive development (Chibba, 2009; AFI, 2010; Aduda & Kalunda, 2012; Dittus & Klein, 2011). The efforts by international financial institutions such as the World Bank, AfDB and other regional bodies to make the case for financial service inclusion has been of particular interest to development economists. The phrase, "making finance work for Africa" is now a shared goal among policymakers on the continent.

A typical SME faces many problems, including lack of liquidity, high transaction costs, and weak managerial competence. However, access to finance is arguably a major binding constraint on their growth. Any policy that eases financing constraints should be welcome. Banking reforms and financial innovations that aim to reach the 'bottom of the pyramid' are one way to relax those constraints and improve access (Beck, Demirguc-Kunt, & Maksimovic, 2004; Chakravarty & Pal, 2013).

1.2.4 Significance

This research connects to four contemporary issues in development economics. The first is the growing literature on post-conflict development which recognizes that institutions do not spontaneously arise out of thin air but instead must be built, with a key role for public policy in enabling this institution-building, and that post-conflict situations call for inclusivity. The recent inter-disciplinary scholarship on "horizontal inequality", economic inequalities across social groups defined on the basis of ethnicity, language, region and religion, informs my research on access to finance for all at a fair price. Social scientists

from a variety of disciplines, including economist Frances Stewart (2005), political scientist Grudun Ostby (2008) and anthropologist Graham Brown (2009), are beginning to open policymakers' eyes to the importance of "whom" as well as "what" in economic development. The Kenyan 2030 Vision, an economic development plan by the Kenyan Government to develop several different economic zones in various parts of the country, similarly recognizes the importance of inclusion and equitable development. My research extends the analysis of horizontal inequality to the area of financial sector development.

The second issue is the debate on the role of the government in the marketplace. The efficient market hypothesis (Fama, 1970) that holds that financial markets are smoothly self-correcting has been challenged, most recently by the world financial crisis. Governments have an important role to play in regulating the financial sector and in efforts to expand access (see financial inclusion, the role of public sector and central banks in nurturing complementarities). This is a very important point; in the case of South Sudan, a critical challenge has been to build viable government structures, basically from scratch. Can South Sudan learn from the post-independence history of other African countries and avoid making the same mistakes that other sister nations made? Where does South Sudan want to be 50 years from now and in light of the recent internal conflict which started on 15 December 2013? Will it be like Mauritius, Botswana, and South Africa or will it be like Somalia and the like? This should be taken in light of the recent thinking in development economics that a country's process of continuous technological change and industrial upgrading is determined by its factor endowment but that this differs from one level to another as it climbs development ladder (Lin, 2011).

The third issue is whether effective policy can ensure that banks maximize social returns as they seek to maximize their own profits. In other words, what is the appropriate institutional and regulatory framework to channel the resources of the banking sector to productive activities that support broader development objectives? This framework can include public-private partnerships or NGOs partnering with banks to expand access. For example, Equity Bank of Kenya, which is a licensed commercial bank, partners with other multilateral or bilateral development agencies such as China Development Aid, to lend to the sectors not previously served by the formal sector. Banks may serve the financial inclusion mission in areas deemed unreachable a decade ago by using new technologies such as mobile banking by phone or village vans to gain new customers. In other words, mobile banking presents opportunities for cooperation or partnerships between banks and other non-bank sectors. Furthermore, central banks are taking on another role, that of being actively involved in financial inclusion. A number of central banks in Africa, including the Central Bank of Kenya (CBK) are currently engaged in financial inclusion endeavors with view to creating an inclusive financial system and a technology-driven process to deliver inclusive development (Chibba, 2012; Stephen, 2011; Ardic, Mylenko & Saltane, 2012).

The fourth issue pertains to the role of small businesses in economic development. In the U.S., no administration has dared to challenge the job-creating ability of SMEs, and Congress is obligated to come up with attractive policies to support small businesses.[2]

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[2] First many in congress believe that SMEs create jobs. Second, it is politically suicidal to fight this perception because one appears to be fighting for the top 1% and not the underdogs.

The Small Business Administration (SBA) in the U.S. exists for these reasons. The SBA has, over the years, allocated loan guarantees to qualifying businesses, and empirical studies indicate that the programs have worked in boosting local employment (Craig & Jackson, 2007; 2008). SMEs can create jobs in developing regions, too (Audretsch, 2002). SMEs, for example, account for 80% of all new jobs in Kenya (FSD Kenya, 2008). As we will demonstrate in chapter four, 99% of all firms in South Sudan are SMEs.

Loan guarantees are relevant for South Sudan. We will argue later in Chapter 5 that some oil revenue should be set aside and used for targeted lending to SMEs.

1.3 History of Political Instability and Financial Sector Underdevelopment

1.3.1 Genesis of the Tumultuous Political Economy in South Sudan

The prevalence of civil violence and the miseries resulting from economic under-development on the African continent leave everybody wondering what has become of the Afro-optimism and euphoria which were in the air at the dawn of independence in the 1960s. Blame is assigned to internal and external political actors. For many Africans, scholars and laypeople alike, the trinity of slave trade, colonialism and the colonial legacy of 'big men' politics, and ethnic polarization are the scapegoats (Kamara, Mlambo, & Nyende, 2009). Poor governance and corruption as offshoots of the colonial institutional legacy are also mentioned as part of the problem (Acemoglu, Johnson & Robinson, 2001). Soul-searching for political and economic solutions to the continent's problems continues to proliferate.

For post-independence Sudan, civil conflict has been the norm rather than the exception. Foreign invasion, starting with the Turco-Egyptian rule (1821-1898) and Anglo-Egyptian Condominium rule (1899-1956), provide the background for internal turmoil (Collins, 1976; Ali, El Badawi & El-Batahani; Young, 2003; Ylönen, 2005; Natsio & Abramovitz, 2011; D'Agoôt, 2013). Sudan became independent on 1 January 1956. Political differences and divergent economic and social visions led South Sudan to wage war against the Khartoum Government, starting in 1955. That initial war came to an end through a peace accord signed in Ethiopia in 1972. The second war started in 1983 to be concluded only by the Comprehensive Peace Agreements (CPA) signed in Kenya on January 9, 2005 (JAM, 2005). Following a referendum mandated by the CPA, South Sudan achieved independence on 9 July 2011 (World Bank, 2011; SSDP, 2011; Bricéno-Garmendia & Ranganath, 2011; Hale, 2012; D'Agoôt, 2013).

However, South Sudan is discovering that independence alone is not enough to change relationships with bad neighbors or improve economic conditions overnight. The nation currently faces tremendous development challenges arising from oil mismanagement, structural problems, international political contradictions and the relationships with Khartoum (World Bank, 2011; Bricéno-Garmendia & Ranganath, 2011). Delivering on independence promises, dealing with the north, and managing expectations have not been easy. Corruption has reared its ugly head, and not much of the country's oil wealth has trickled down. Even though South Sudan spent $450 million per year between 2005 and 2011 on infrastructure, it has a huge unmet infrastructural gap (Bricéno-Garmendia & Ranganath, 2011).

While South Sudan's economy grew by 4% annually from 2009 through 2011, it drastically declined in 2012 by 56% due to the oil shutdown that resulted from differences over transit fees for passage of the oil through neighboring Sudan (World Bank, 2013). This validly demonstrated how vulnerable South Sudan's economic growth is to oil shocks.

Austerity measures that the South Sudan parliament passed in July 2012, shortly after the completion of the survey for this dissertation, put a freeze on capital outlays and operation costs. The drastic cuts have affected households, the currency market, and by extension, credit allocation to private sector.

Notwithstanding the government's proclaimed intention to make South Sudan a middle-income country by 2040 (SSDP, 2011), there is little to show for it on the ground. Reconstruction in South Sudan is proving difficult because oil resources have not been equitably utilized. In addition, vital institutions such as law and order, civil society, courts, and spirit of entrepreneurship were destroyed or severely degraded during the war (Bricéno-Garmendia & Ranganath, 2011; SSDP, 2011) and have to be rebuilt.

Financial services are typically hard to come by in war-torn economies. For one, conflict takes precedence and scarce resources go toward fighting. Political instability translates into economic instability. In the case of South Sudan, instability has disrupted farming activities which translated into high degree of dependence on humanitarian aid or on a few individual family members when the others are maimed or killed. Low levels of living and low levels of productivity reinforce each other. Political and economic

instability are mutually reinforcing, too, as recognized in Gunnar Myrdal's famous notion of circular and cumulative causation (Myrdal, 1944).

War kills investment by leading to capital flight, misallocation of scarce resources, and destruction of investment assets (Collier, 1999 & 2009; Arunatilake, Jayasurika, & Kelegama, 2001; Kamara, Mlambo, & Nyende, 2009). War inhibits growth by damaging the economy through disassembling part of the labor force, blowing up bridges, disrupting social order, making some roads unsafe for travel, imposing undue costs on travelers, suppressing civil liberties, and diverting public expenditure from growth-promoting projects (Collier, 1999 & 2009; Nojanic, 2008).

When the war is over, these challenges persist and consolidating peace is a tough hill to climb. Encouraging investors to come in and gamble with their dollars is difficult and costly because of the risk premium associated with investment in such a setting (Kasturi & Toh, 2012). Local private funding for local projects is inadequate. Multilateral and bilateral assistance for reconstruction normally comes to the country via the public sector, and is often distributed through political mechanisms on a whom-you-know rather than what-you-know basis. Notwithstanding these difficulties, with appropriate policies, a seemingly failing state can turn around. Uganda has been hailed as one such success story (Ndikumana & Nannyonjo, 2007) and so is Rwanda today.

Since 2005, South Sudan has opened the borders to neighboring countries. Regional traders poured in from Kenya and Uganda. They set up businesses, from five-star hotels to apparel shops to nightclubs. It is estimated that between 2009 and 2010, South Sudan imported goods worth around $75 million from Kenya and around $55 million from

Uganda. Many are lemon marketers because some of these services are substandard but costly. Overall market activities are thin, however, limited or missing in some places. Within a short time following the CPA, prices in the capital skyrocketed due to influx of post-conflict aid/oil revenue, leading some commentators to nickname Juba the "second Tokyo."

On the financial sector development front, foreign banks, mainly from East Africa, also came in search of business opportunities. A number of Kenyan commercial banks opened branches in South Sudan because doing business immediately after the CPA was perceived as lucrative. I speculate that donor money and oil-contract jobs were the main motives for coming of some foreign entrepreneurs.

South Sudan, a yet-to-be member of East Africa Community (EAC)[3], is land-locked, meaning that it depends on its relations with Kenya, Uganda and Khartoum for access to seaports. However, land-lockedness is not an insuperable handicap. Some countries overcome it, the classic example being Switzerland in Europe and Botswana in Africa. Sound macroeconomic policies and financial sector development can help to create an enabling environment for development (Akerlof & Shiller, 2009), and regional blocs are an opportunity for small open economies such as South Sudan to expand their influence on the international stages.

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[3] The application process for South Sudan to join this regional bloc is in progress. There is an on-going debate among the current members whether the application should be fast-tracked or allowed to follow the normal process of making sure that all conditions are met; Uganda, Kenya and Rwanda are for quick admission of South Sudan into EAC whereas Tanzania and Burundi advocate for due diligence and checklist. We do not know when it will likely be decided.

1.3.2 Stylized Facts on the Economy in South Sudan

Having emerged out of war, we can think of South Sudan as being at an early stage of development. Countries at such level are typically characterized by relative scarcity of capital and relative abundance of labor (Lin, 2011). Their productive activities are usually labor-intensive and concentrated in sectors such as subsistence agriculture, fishery, mining, and animal husbandry. The small firm size and incomplete markets lead to an economy characterized by close networks. Because of war and development neglect under the old Sudan, the economy of South Sudan today suffers many structural problems. We can summarize these by means of six stylized facts:

First, South Sudan is a subsistence economy. Despite the huge potential for agricultural exports, 78% of population still depends on subsistence farming (see Table 1.1; SSCCSE, 2010). Where there are exports to East Africa, they are handful primary agricultural products.

Second, the high dependence ratio represents a heavy economic burden. Children and people above 65 years old are usually nonproductive and depend on country's labor force for support. With an average household size of about seven members, each working adult has many mouths to feed. Peacetime has seen higher birth rates and this adds to the dependency burdens posed by widows, orphans, war disabled and other victims of the concluded war. Seventy-two percent of the population is below the age of 30 (5^{th} Population and Housing Census, 2008). When the age dependency ratio is computed as those below 14 and above 55 years of age, divided by those in the age range of 14-55, the ratio is 88% for the country as a whole: 75% in the urban settings, and 91% in rural areas

(SSDP, 2011). By way of comparison, the dependency ratio for Kenya is 82%, for instance (World Bank, 2013; see Table 1.1).

Third, the formal private sector is weak and characterized by "hit and run" investors. Because infrastructure and the regulatory and supervisory framework are weak (Bricéno-Garmendia & Ranganath, 2011; SSDP, 2011; Demombynes, Gubbins, & Romeo, 2013), it is hard to attract long-term investors. Uncertainty about the outcome of the post-referendum political issues contributed to this phenomenon. The retail sector is the major area of local entrepreneur occupation. There are no conglomerates or big wholesalers (such as Uchumi, Tuskys, or Utawala in Kenya) to speak of, as of now. In Juba and other urban areas, one sees the springing up of small shops, tea stalls, restaurants, fruit sellers, sewing machine operators, garment hawkers, fish sellers, and many other small enterprises that are either locally owned or foreign owned. The survey data collected for this dissertation confirms the abovementioned proposition.

Fourth, the level of education is low. The country's low level of education is a result of the war and its impact on the human and physical capital development. To inject capacity into civil service, the Intergovernmental Authority on Development (IGAD) Initiative brought about 200 civil servants from Ethiopia, Kenya and Uganda to train South Sudanese civil servants through twinning. So throughout the country, the South Sudan government has hired expatriates, such as teachers and technocrats from neighboring countries, to help with the foundation of the state. Recall that only 27 percent of the total population is literate in South Sudan (SSCCSE, 2010), as cited above. This figure

compares dismally with literacy rates of 87 and 73 percent in Kenya and Uganda, respectively (Central Intelligence Agency, 2013).

Fifth, the telecommunications industry is in its infancy but growing. Based on the National Baseline House Survey (NBHS, 2009), 15 percent of the households own a phone. The ratio is 59 percent in urban areas, compared to only 8 percent in the rural areas. ZAIN, MTN, Gemtel, and Vivacell are pioneering the telecommunications industry (Bricéno-Garmenndia, & Ranganath, 2011). While the mobile industry is not regulated, telephony is increasingly used by small traders to transfer money across the ten states[4] and it has a potential to lower entry barriers, reduce costs and expand access (Demirguc-Kunt & Klapper, 2013). Although it is not called M-PESA as in Kenya (where M-stands for mobile while Pesa is a Swahili word for money, the coinage literally implies mobile money) the emerging system shares some semblance. Despite the digital divide between rural areas and urban centers, a number of South Sudanese are using cell phones (provided they have network coverage) to transmit payments to places where commercial banks or microfinance have no footprint (see Table 1.2). This is noteworthy given the importance of financial inclusion in the economy as well as the promise for mobile

[4] It works as follows: a person remitting money to a relative in the village or another town comes to the independent money transfer service providers. He would give them money and sending fees. After transaction is logged in a cashbook, he is instructed to call his relative and tell him to go and collect the remittance at a designated collection stall. But unlike M-Pesa agent network in Kenya, a South Sudanese recipient cannot just go to any agent providing service. He must go to a particular service provider, say, Jong Bar Money Transfer Service Company in Aweil, and the latter company happens to have a sending branch in Juba. Another cash-in/cash-out provider, say, Tiger Money Transfer cannot serve this individual because the two providers are not affiliated. But like in Kenya, the mobile financial service is a non-bank-led model (Faye & Triki, 2013).

phone-based data collection, the promise that mobile phones have for enabling researchers to collect public opinion polls (Demombynes, Gubbins, & Romeo, 2013).

1.4 Objectives of the Study

The primary objectives of this study are to:

(i) assess the role of the financial sector in financing SMEs in Kenya and South Sudan, and

(ii) draw lessons from the Kenyan experience to suggest possible strategies for improving access to finance by SMEs and households in the post-conflict Republic of South Sudan.

1.5 Scope and Limitations of the Study

Following the literature review in Chapter 2 the dissertation comprises three essays. The first essay (Chapter 3) is on *Financial Sector Development and SMEs in Kenya*. The second essay is on *Lack of Access to Finance by Small and Medium-sized Enterprises as a Constraint to Development in South Sudan* (Chapter 4). We use econometric analysis to distill determinants of financial access in South Sudan. The third essay is about *Enhancing Financial Inclusion for Small and Medium-sized Enterprises in South Sudan* (Chapter 5). In this chapter, we look at lessons that can be learned from Kenya and propose strategies to strength the regulatory framework and offer ways to channel oil resources for broad-based development. The data come from field surveys in South Sudan and Kenya conducted from July 2011 through September 2012.

We investigate the determinants of access, both from the standpoint of SMEs (demand-side) and credit providers (supply-side) so as to provide a full picture of the mechanics

and economics of credit provision. To the best of our knowledge, no prior research has analyzed Kenyan financial sector development with a view to applying it to the South Sudan situation. This is the first study of this kind in South Sudan, connecting it to the current development policy debates on the financial inclusion agenda.

Analyzing access to finance in sub-Saharan Africa is often difficult due to the rudimentary nature of available data (World Bank, 2008; CGAP, 2009; Jerven, 2013). This study therefore faces the usual limitations relying on own-collected data. Let me outline three of those issues:

First, the selection survivor bias from the interviews could not be ruled out. Firms that went out of business were not available for interviews. Second, the data for South Sudan came from three states rather than ten. Third, I had to rely on research assistants to obtain data, and their biases could have influenced the inclusion or exclusion of some SME respondents. While my interviews in South Sudan with commercial banks covered the whole banking population (all eight banks) the situation was different in Kenya. For the latter, I wrote letters to all financial institutions, but ended up using the snowballing method in some cases and systematic sampling afterward. A colleague would ring up a colleague in a bank on my behalf, and if they were willing to talk, then I would sit down with them for interviews. Where I have no networks of friends in a given financial institution, we often were unable to conduct interviews. As a result, I ended up with a smaller sample of banks in Kenya than I would have liked.

The remainder of this dissertation proceeds in chapters as follows. Chapter 2 reviews literature on Financial Sector Development; Chapter 3 presents the essay on Kenya, and

Chapters 4 presents the essay on South Sudan. Chapter 5 draws lessons for South Sudan from the Kenyan experience. Finally, Chapter 6 provides conclusions and policy implications.

Table 1.1: Stylized Facts on the South Sudan Economy[5] Relative to Selected East African Countries and sub-Sahara Africa (SSA)

Indicator	South Sudan	Kenya	Uganda	Ethiopia	SSA Average
Household Consumption (% of GDP)	35	80	81	86	67
Age dependency (% of Total Population)	88	82	103	86	87
Documents to Import (Number)	12	9	10	10	9
Literacy Rate (% of total population, 15 and over)	27	87	73	39	60
Mobile Cellular Subscriptions (per 100 people)	19	72	46	24	53
Military Expenditure (% of GDP)	10.3	2.0	1.4	0.9	1.5

Sources: World Bank, 2013, Central Intelligence Agency, 2013; and South Sudan National Bureau of Statistics, 2010.

[5] Because of the large informal sector and the fact that oil revenues flow through the government, the share of household consumption as a percent of GDP is very small in 2011. But when the oil was shutdown in 2012, total GDP declines by 47% while the share of GDP going to household consumption rises to 93% (World Bank, 2013). This shows the volatility of oil and narrowness of economy base or dearth of non-oil revenue.

Table 1.2: Indicators of Financial Sector Development and Access to Finance in South Sudan, East Africa and sub-Sahara Africa, 2008-2012

Indictor	South Sudan	Kenya	Uganda	Ethiopia	SSA
Domestic Credit Provided by Banking Sector (% of GDP)	-	52.3	16.4	-	77.8
Money and Quasi Money (M as % of GDP)	-	51	24	35	48
Private Credit Bureau Coverage (% of adults)	0.0	4.7	4.1	0.0	6.0
Loan in the past year (% age 15 and above)	-	67.4	52.8	-	46.8
Demographic Branch penetration (Number of Commercial bank branches per 100,000 adults)	1	5	3	2	4
Demographic ATM Penetration (Number of ATMs per 100, 000 adults)	-	9.9	4.00	0.5	4.5
Mobile Phone Used to Pay Bills (% Age 15 and above)		13.4	3.3	-	3.0
ATM is main mode of deposit (% with an account, age 15+)	-	4.2	10.4	-	6.6
ATM is main mode of withdrawal (% with an account, age 15+)	-	69.2	41.7	-	41.8
Account at a formal financial institution (% age 15+)	-	42.3	20.5	-	24.0
Account used for business purposes (% age 15+)	-	12.5	7.5	-	5.3
Account used to receive remittances (% age 15+)	-	17.2	3.3	-	9.1
Account used to receive wages (% age 15+)	-	15.9	9.2	-	9.9
Credit card (% age 15+)	-	6.1	1.6	-	2.9
Mobile phone used to receive money (% age 15+)	-	66.7	25.2	-	14.6
Mobile phone used to send money (% age 15+)	-	60.5	20.0	-	11.2

Source: World Bank, 2012; Global Findex, 2012 (for the USA, the credit provided to private sector by banking sector is 231.6%; for whole world, it is 168.9%).

CHAPTER 2

FINANCIAL SECTOR DEVELOPMENT AND ACCESS TO FINANCE BY SMES: A REVIEW OF LITERATURE

2.1 Introduction

Inequality takes many forms with respect to credit market participants. In general, there is a vertical inequality in access to finance with regard to segments of the society with unequal incomes. The well-to-do section of society tends to face higher probabilities in accessing financial services, whereas the poor and often times, SMEs, tend to have limited financial access (Beck & Demirkuc-Kunt, 2008; Ardic, Mylenko, & Saltane, 2012; Demirguc-Kunt & Klapper, 2013). In addition, there is the issue of horizontal inequality in access to finance, when people of different ethnic groups, regions and gender have differential access.

In Kenya, issues of constraints and uneven access have not faded away, particularly in rural areas despite recent innovations in credit markets (Aduda & Kalunda, 2012). For example, Atieno (2001) observes that commercial banks and other formal institutions often fail to cater for small borrowers because of their strict lending policies and conditions. Citing data from a 1995 survey, she observes that 33% of borrowers in Kenya ranked credit constraints as among their problems and that 86% of borrowers got capital from informal sources.

Countries have, from time to time, intervened in the credit markets to correct some market failures and market imperfections due to monopoly power, adverse selection or

moral hazards or externalities. Development economists increasingly see SMEs as the "missing link" in the puzzle of poverty reduction, and financial inclusion offers possibilities to advance inclusive development (Mendoza & Thelen, 2008; Chibba, 2009; Gencer 2011; Aduda & Kalunda, 2012).

This chapter proceeds as follows: Section 2.2 examines the definition and role of SMEs in modern economies, as well as the typical problem of access to finance. Section 2.3 discusses measurement of financial sector development, while section 2.4 takes on the role of financial inclusion as a way to expand the access frontier and addresses SME financing issues. Section 2.5 assesses conventional and unconventional measures in the credit markets, and finally, section 2.6 concludes the chapter.

2.2 SMEs and Access to Finance

2.2.1 Definition of SMEs

There is a wide range of definitions and measures of SMEs that differ from country to country (see Table 2.1). Though there is no universally agreed upon definition of SMEs (Singh & Tandon, 2012), three commonly used criteria are the number of employees, value of assets, and value of sales (Ganbold, 2008; Ardic, Mylenko, & Saltane, 2012). The number of employees has gained prominence because it is easy to collect.

The European Union (EU) defines a small enterprise as one which has a headcount of less than 50 employees and a balance sheet and turnover each of which is not more than 10 million Euros. A medium-size enterprise has headcount of less than 250, and a turnover of not more than 50 million Euros or a balance sheet of not more than 43 million Euros. Value of assets refers to the balance sheet of the enterprises which reflects the

overall wealth of the enterprise, whereas turnover or sales simply refers to annual sales volumes minus discounts and sales taxes in a given accounting period.

In the USA, the Small Business Administration (SBA) Size Standard Office is charged with setting the size of SMEs to reflect sectoral differences and to aid policies targeting SMEs. A firm with less than 500 employees is considered a small business (SBA, 2009). The definition of SMEs is not simply based on the employees alone, however; it also brings in considerations that differ across sectors. For example, an enterprise specializing in service delivery is considered small if it has a balance sheet of $10 million or less.

In Kenya, a firm that employs between 5 and 50 persons is defined as small, while one that employs 50 to 200 is a medium-sized enterprise. Kenyan SME eligibility criteria are thus closer to those of the EU than U.S. At present, South Sudan does not have an official definition for SMEs. For the purpose of this study, I adopt the World Bank Business Environment criteria[6], according to which firms with one to four employees are considered microenterprises, five to nineteen small, 20 to 99 medium, and 100 and above, large.

[6] These firm-level surveys by the World Bank are conducted every three years since 2002. The surveys cover most regions of the world on issues related or focusing on firm financing, labor, payments systems and other topics that assess business environment and firm parlance (see World Bank Business Environment and Enterprise Performance Survey, 2009).

2.2.2 Role of SMEs in the Modern Economies

According to a 2004 OECD Survey, SMEs in emerging economies account for 60% of all companies. In China, they account for 70% of foreign trade (Tung & Aycun, 2008). The SME sector accounts for 80% of employment opportunities in Kenya (FSD Kenya, 2010). In Nigeria, SMEs account for about 95% of all jobs in manufacturing (Ganbold, 2008). A recent survey involving 47,745 firms in 99 countries across the world shows that SMEs are first suppliers of employment and contribute 66% of all jobs in developing economies (Bilandzic, Hommes & Stein, 2013).

SME peculiarities give them some advantages. According to Buckley (1996) SMEs are innovators, employment creators and bridge builders in international trade. They exhibit high levels of productivity and capability, quickly responding to market changes. They are immediate end-users of indigenous research (Amaeshi, Jackson & Yauz, 2008). They provide a breeding environment for entrepreneurs, and act as a bridge in flows of trade, investment and technology. By using more labor intensively than large firms, they generate more employment per unit investment. They outperform in innovations per capita, and they help in transferring labor-intensive technologies and small-scale technologies (Reynolds, 1997; Liedholm, 2002; Duarte, 2004; Ganbold, 2008; SBA, 2009). This growth potential prompted the World Bank (2004) to devote $10 million to the promotion of small enterprises in Bangladesh. The Bank argues that small firms foster competition and innovation (Audretsch, 2002; Demirguc-Kunt, Levine, & Beck, 2005; Beck & Honohan, 2007).

The contribution of SMEs to modern economies is not without controversy. The first criticism directed at SMEs posits that big firms come with advantages, too: better pay for workers, safer working environments, and economies of scale and scope, including the capacity to undertake and bear fixed costs associated with R&D (Rosenzweig, 1988). For Alfred Chandler (1990) and other skeptics, size matters, and to participate globally, you have to be big. Second, the concept of SMEs is not clear cut. Definitions are arbitrary, and there is no common set of measures and policies (Nkurunziza, 2010). Third, some critics argue that the scale-based approach is not the best way to develop and frame economic policy making (Little et.al, 1987).

The pro-SME camp argues that critics are mistaken to posit a static minimum efficient scale (MES) which if not achieved makes the firm Pareto suboptimal (Audtretsch, 2002). Proponents pose the question: Who does not start small before they become big? Think about Google, an idea hatched by two college kids; Microsoft, a brainchild of college dropout; the invention of flight industry by the Wright Brothers; or Vodafone company, an idea credited to Gerry Whent (he is both a founder and the first CEO of Vodafone company). Each of these companies started small, the counterargument goes; the weaklings of today can be the giants of tomorrow. This line of reasoning is consistent with Jovanoic's model of noisy selection, where inefficient firms fail and efficient ones survive and grow (Audretsch, 2002).

A second pro-SME argument is based on innovation. SMEs produce twice more innovations per employee than large firms (Preston, 1997). Larger firms have an advantage only in appropriating but not in generating new knowledge, by buying

property rights or enjoying spillover effects (Acs & Preston, 1997). Audretsch (2002) theorizes that as the gap between the wage rate and return from starting a new firm widens, the likelihood of an agent choosing to appropriate the value of his knowledge internally through starting new enterprise becomes greater. This would help to explain why SMEs are better at creating radical innovations, and why they record more patents on a per-employee basis.

Third, SMEs are constantly churning, as some enter and others exit (Amaeshi, Jackson & Yauz, 2008). If one focuses on aggregate measures, this dynamism is missed. Moreover, SMEs come with spinoff effects (satisfying consumer demand) and spillover effects (acting as suppliers to larger firms) that extend beyond the SME sector.

2.2.3 Problems of Access to Finance by SMEs

Access to finance is defined as availability of financial services in the forms of demand deposits, credit, payments, or insurance (Beck & Honohan, 2007; Donovan, 2011; Aduda & Kalunda, 2012; Arnold & Johnson, 2012; Massa, 2013). The availability of such services can be constrained by physical access, affordability and eligibility. Barriers such as high transactions cost, distance, and minimum balance requirements can exclude individuals and firms. Access to finance also refers to the degree to which financial services are available at a fair price.

Access to finance matters to SMEs. In particular, access to credit is associated with positive growth (Ardic, Mylenko, & Saltane, 2012; Ouma & Ramo, 2013). In the words of Charles Ou, “access to credit for small business startup, expansion, survival, and financial institutions plays an important role in providing capital to small firms (those

with fewer than 500 employees) since these firms are not in a position to access fund from equity capital or publicly traded markets" (SBA, p. 9). Special problems of credit access by SMEs arise due to several reasons. First, SMEs lack strong and transparent record-keeping systems. This leads to difficulty in assessing client creditworthiness and enforcing creditor rights (Beck, & Honohan, 2007). Second, SMEs access to finance is poor because of high default risk, collateral requirements, delays in loan processing, inflexible conditions, and high interest rates. Third, SMEs face small markets, often fragmented financial systems, and difficult business environments (Kauffamn, 2005; Sacerdoti, 2005). Fourth, SMEs can and do fail due to lack of competent management, poor bookkeeping, staffing, sales and marketing problems, and adverse economic conditions.

For these reasons, formal banks often see lending to SMEs as unprofitable (Aryeteey, 1994). In African countries, commercial banks have not traditionally serviced small-scale borrowers, and instead depended on lending to the state and larger private sector enterprises. So, institutionally, banks have had little capacity (or incentive to build capacity) to administer small-scale loans. Such loans are costly to manage (transactions costs) and lack of information on borrowers can present a further problem (Kablan, 2010; Sacerdoti, 2005; Boyko & Gottesman, 2011).

SMEs sometimes have turned to microcredit units, which themselves are constrained and face limited expansion possibilities. Despite their revolutionary contributions to credit availability, microfinance institutions (MFIs) typically lend on short terms and do not provide long-term financing that SMEs need for expansion. MFIs also usually lend in

small amounts which can be inadequate to satisfy SME needs. Constrained by lack of savings mobilization, MFIs depend heavily on donor resources (World Bank, 2008). In addition, MFIs operate under different mission statements, often rely on NGO support that is not sustainable, and in some cases may crowd out commercially viable projects (Basu, Blavy & Yulek, 2004). For example, focus on microfinance for poverty reduction can shift attention to subsidies and charity, which can hurt the quality of services. The poor lack of access to education, markets, technology, and other factors that expand production frontiers and these may not be overcome by microfinance alone.

Improved access to formal finance can improve economic growth and social services (IMF, 2008; Gencer, 2011; Aduda & Kalunda, 2012), consistent with the view that growth can be good for both poor and rich (Dollar & Kraay, 2002). This does not mean there are no distributional issues, nor is it an endorsement of trickle-down-Thatcher-Reaganomics. But when there are improved macroeconomic and institutional frameworks and lower interest rates, formal bank lending to SMEs can bring substantial benefits above and beyond those of lending by MFIs. Banks and MFIs can play complementary roles, as well. For example, formal banks sometimes learn lessons from deposit mobilization initiatives by MFIs such as the Indian Self-help Group initiative (Basu, Blavy & Yulek, 2004).

In Kenya, a series of enabling financial-sector innovations have been tried, including changes in regulation and supervision. Some measures indicative of policies to improve access include: (1) investing in information infrastructures, and building credit registries, (2) encouraging openness, competition, and increased transparency through periodic

publication/surveys,(3) formalization and enforcement of lender responsibility (this means central bank regulators are required to ensure that firms comply with regulations, as well as have proper recourse to court to recoup assets from defaulting parties), (4) public-private partnerships through club membership, guaranteeing solvency, and awards, and (5) overcoming physical access barriers through the technology-based agency model and mobile branches. One bank in Kenya that has taken mobile banks to new heights is the Equity Bank. As of 2006, Equity has about 100 mobile vans providing financial services in rural areas in Kenya with a scheduled frequency (Beck & Honohan, 2007). It also provides financial literacy training, same-day emergency loans, and encourages women entrepreneurs to seek assistance.

Markets alone are not the solution, because markets can and do fail due to collective action problems, power concentration, greed, and lack of foresight. Policy regulation, supervision and some nuanced governmental controls are needed for macroeconomic stability which means that government interventionist policies are here to stay to address externality and coordination issues (Akerlof & Schiller, 2009; Lin, 2011). Because financial markets, like other real markets, do fail, there is a burden on the financial regulators and central banks not just to focus singly on price stability but also provide prudent regulation to minimize undue system-wide financial risks.

Ayyagari, Demirguc-Kunt and Maksimovic (2006) find that while "inefficient functioning financial markets, inadequate security, and enforcement of property rights, poor provision of infrastructure, inefficient regulation and taxation and broader governance features such as corruption and macroeconomic instability are discussed

without any comparative evidence on their ordering" (p.1), not all obstacles are equally constraining to firm growth. Rather they find that access to finance, crime and political instability have direct impacts on firm growth, and that other obstacles affect firm growth indirectly. On a further robustness test, they conclude that access to finance is "the most robust of the three" (p.1). Similarly, Kumar, Rajan, and Zingales (1999) find that average size of the firm is larger in countries with better financial markets, suggesting that financial constraint does in fact limit a firm size. Protecting property rights can enhance external financing for small firms more than that of larger firms (Beck, Demirguc-Kunt & Maksimovic, 2008). This implies that delivering political stability, and reducing crime rate, as well as financial sector reforms, can help to foster growth in the SME sector (Ayyagari, Beck & Demirguc-Kunt, 2007).

2.3 Financial Inclusion

Access to finance is widely seen as the major binding constraint on growth (World Bank, 2008; Beck, Demirguc-Kunt, & Laeven, 2006; Demirguc-Kunt & Klapper, 2012; Andrianaivo & Kpodar, 2012; Singh & Tandon, 2013). Recent efforts by international financial institutions (Department for International Development [DFID], AfDB, Multilateral Investment Guarantee Agency [MIGA], European Investment Bank [EIB], Asian Development bank [ADB], Commonwealth Development Corporation [CDC], Netherlands Development Finance Company [FMO], and Belgian Investment Company for Developing Countries[BIO])[7] and a number of governments to support financial

[7] Example of these include support to women-SME term loan for women and growth-oriented women entrepreneurs in Kenya, gender empowerment program in Nigeria,

service inclusion reflect the growing interest of development economists in the potential role of banking in facilitating not only economic growth but also equitable growth (see Ardic, Mylenko, & Saltane, 2012; AFI, 2013; Calice, 2013; Hayem, Torres, & Hurtado, 2013; Massa, 2013; World Bank financial contributions to SMEs). After all, we know that "An economy cannot thrive on a fraction of its citizens while excluding others" (Aduda & Kalunda, 2012).

To illustrate the growing interest in financial inclusion agenda, a number of workshops, conferences and symposia held around the world speak volumes. Examples abound: the Maya Declaration and G-20 Financial Inclusion Action Plan (AFI, 2013), the United Nations Conference on Financial Inclusion in Africa, held in Dakar, June 2006; World Bank Access to Finance, Washington D.C, March 2007; Making Finance Work for the Poor, April 2007 (jointly organized by DFID, USAID and WB); DFID's Financial Inclusion Conference, June 2007; Global Conference on Next Generation and Access to Finance: Gaining Scale and Reducing Cost with Technology and Credit Scoring, Washington D.C, September 2007 under IFC, CCAGP and VISA International (Chibba, 2009).

Already, according to the 2010 Financial Access Database, 74 out of 140 surveyed countries report data on SME financing (Ardic, Mylenko, & Saltane, 2012). Kenya is among these and is one of the 59 countries where central banks report SME financing

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Uganda women entrepreneurs, and women entrepreneurs program in Tanzania, among others (see Massa, 2013).

through regular reporting. Eighteen countries of the sample in Africa are collecting core data for gauging success in financial inclusion.

Particular financial inclusion workshops or conferences in Africa include: Ready for Takeoff: A High Level Conference on Kenya's Economic Successes, Prospects, and Challenges, Nairobi, September 2013; the 2012 Global Policy Forum (GPF) held in Cape Town, South Africa, under the overall theme of Making Financial Inclusion Real, and the first GPF AFI conference in Nairobi, September 2009.

The phrase, "making finance work for Africa" thus has become a widely shared goal among policymakers (Beck & Honohan, 2007, p. 146-148). As of today, there is a growing recognition among central banks, governments, mobile provider operators and microfinance institutions that financial inclusion is essential for several reasons, including employment opportunities and poverty reduction (Singh & Tandon, 2013). Today a number of developing countries elsewhere around the world also have made financial inclusion one of their policy objectives (Singh & Tandon, 2013). For instance, Brazil, India, and the Philippines, have embraced the goal of financial inclusion. What is encouraging in this drive is that central banks are in the driver seat. Many countries are adopting mobile money applications as a way to further the financial inclusion objective. For Kenya and the Philippines, in particular, the service provider "intimately" interacts with the regulators, resulting in a conducive environment for mobile financial services to take-off without premature or stymying regulation (Stephen, 2011; AFI, 2010). Financial inclusion is no longer seen as a passive by-product of development but rather as an objective in its own right to be pursued.

In addition to their role of financial services, mobile phones are also increasingly being used to collect data which can then be used to further improve financial services and other services such as implementing surveys, monitoring conditional cash transfers, interview enumerators via phones and monitoring of health programs among others (Demombynes, Gubbins & Romeo, 2013). This holds a great prospect because mobile phone subscriptions grew in Africa from 87 million in 2005 to 433 million in 2011 (Demombynes, Gubbins & Romeo, 2013, p. 2).

Financial inclusion, which AfDB (2013) defines as "all initiatives that make formal financial services available, accessible, affordable to all segments of the population" covers both demand and supply-side factors. On the supply side, a number of fundamental pillars are in the forefront to drive financial inclusion: mobile financial services, ATMs, NGOs, MFIs, and the public sector (Figure 2.1).

The first key pillar of financial inclusion is the role of non-financial private sector in tapping the technology-based deployments (mobile applications or adoption of mobile financial services such as M-Pesa in Kenya) through e-banking and telecommunication (Chibba, 2009; see Figure 2.1). According to Donovan (2012, p. 61), "Mobile financial services are among the most promising mobile applications in the developing world." This is due to the fact that mobile applications are easily adopted across diverse sectors such as healthcare, commerce, larger manufacturers, agriculture and credit markets as there are presently close to110 mobile money systems adopted in the developing world and the most developed and well known among them is the M-Pesa (Donovan, 2011; Chibba, 2009). As Figures 2.2 and 2.3 show, the deployment of mobile financial services

is growing and by this measure, Sub-Sahara is in the lead. This offers range of innovative services including (1) payments through peer-to-peer transfer, (2) finance via offering insurance products, such as *Salama Kilimo* in Kenya, and second generation mobile financial services in South Africa, and finally, (3) banking such as checking account access miles away from bank premises (Faye & Triki, 2013; Table 2.2). Unlike the previous attempts, which were either credit or savings-led, the M-Pesa drive suggests a third approach called the "payment rail." In other words, proponents believe that there are forces inherent in mobile money—ubiquity of data transmission, mobile money as new industry and as infrastructure supporting new businesses and other industries, the infusion of capital abroad and from informal sector, as well as efficiency gains from digital currency— that will effectively drive growth (Gencer, 2011). Mobile banking offers cheaper, safer and faster methods to transfer funds (Table 2.3). At the same time, mobile money can have a positive impact on the GDP through (1) reducing the untaxable "gray economy" and reduction of fraud, (2) productivity gains through efficient communications, underscoring that connectivity is productivity and (3) increased investments, hence producing more jobs (Figure 2.4). For example, by March 2010, due to M-Pesa, Safaricom is believed to have created over 36,000 new agents and telecommunications jobs in Nairobi, Africa's New Silicon Valley (Gencer, 2011).

The second pillar of financial inclusion is financial literacy, defined "as the ability to make informed judgments and to take effective decisions regarding the use and the management of money" (Chibba, 2009, p. 222). It matters for expanding access (Demirguc-Kunt & Klapper, 2013). Today, a number of banks such as Faulu Kenya (Cohen & Nelson, 2011) in Kenya are engaged in the promotion of financial literacy as

they rollout many of their financial services through client workshops/face-to-face training, campaigns on money management principles through radios, TV or print media. Understanding the psychology of financial exclusion due to illiteracy, low income, distance, and self-exclusion, is also another component of this pillar (Aduda & Kalunda, 2012)[8].

The third pillar of financial inclusion is the role of microfinance institutions (MFIs). They have long and successful records in promoting financial inclusion. Some of the MFIs (for example, Faulu) in Kenya are converting to deposit-taking to engage further with the public. While MFIs alone are not enough, they complement other financial inclusion toolkits.

The fourth pillar of financial inclusion is public sector support. This is a country-specific politico-economic dimension that ensures appropriate legislation as well as supervision and implementation (Chibba, 2009; Aduda & Kalunda, 2012). M-Pesa did not succeed in a vacuum but rather thanks to the concerted efforts of the Kenyan government and concerned stakeholders to cooperate in implementing appropriate regulations and accountability mechanisms (AFI, 2010). Others argue that Kenya's adoption rate was boosted by the presence of a "perfect storm" in political, demographic and business factors (Gencer, 2011).

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[8] Aduda and Kalunda (2012) classify types of financial exclusions as physical access exclusion, access exclusion, condition exclusion, price exclusion, marketing and self-exclusion. Other researchers classify them differently; namely balance levels requirements, insufficient documentation, and interest rate barriers among others.

To the extent these pillars are transformative; they can be strengthened through five models: financial sector consensus, private sector development, public sector leadership, civil society and the catalytic model (Chibba, 2009):

2.4 Measuring Financial Sector Development and Financial Inclusion

Some consensus is emerging over the question whether there is a direct link between financial sector development and economic growth through finance (Goldsmith, 1969; McKinnon, 1973; Benhaib & Spiegel, 2000; Classens & Laeven, 2003; Love, 2003; Beck, Levine & Loayza, 2000a, 2000b). Love (2003) argues that financial development impacts growth by reducing financing constraints (legal constraints, enforcement of property rights, creditor rights and accounting standards), hence removing distortions that would have made investment more inefficient. In testing this relationship, Benhabib and Spiegel (2000) conclude that financial sector development correlates with total factor productivity growth and investment and that many of results are sensitive to country fixed-effects, implying differences in broader characteristics and level of financial sector development.

Using data on 80 countries from 1960 to 1989, Levine and King (1993) find some associations between level of financial sector development on one hand and real GDP growth, rate of physical accumulation and efficiency in which all factors are properly utilized in the economy, on the other hand. This finding corresponds with Schumpeter who held the view that financial system has a potential to promote economic growth. Levine and King(1993) claim that “In 1911 Joseph Schumpeter argued that the services provided by financial intermediaries—Mobilizing savings, evaluating projects, managing

risks, monitoring managers, and facilitating transactions—are essential for technological innovation and economic development" (p. 717).

This view has not always been uniformly accepted within the economics discipline. Some economists contend that finance is unimportant for growth. Robinson (1952) believes that financial development only follows economic growth and more recently, Lucas (1988) calls the relationship between financial sector development and economic development as something "overstressed" (Levine & King, 1993, p. 717). Beck, Levine and Loayza (2000a) argue that "Economic theories mirror these divisions" with some going back to 19th century. For example, Hamilton (1781) contended that "Banks were the happiest engines that ever were invented" so as to spur economic growth while on the other hand, others offered different claims, for instance Adams (1819), argued that banks had negative effect on the " morality, tranquility, and even wealth" of given states or countries. In that regard, one group favors the role of financial intermediaries to economic growth (Hamilton, 1781; Bagehot, 1873; Schumpeter, 1943) and while another group minimizes its role (sees Adams, 1819; Robinson, 1952; Lucas, 1988).

However, recent studies have come to find stronger relationships between growth and financial sector development. On their part, Gregoro and Guidotti (1995) examine link between the long-run economic growth and financial sector development, proxied by ratio between bank credit to private sector and GDP. They find a positive relationship between the two in a large cross-country sample and vary across countries with negative impact for Latin America when they used panel data. They also conclude that the channel from financial sector to growth is through efficiency, not volume of investment. Other

models they cited include “endogenous growth literature (Bencivenga & Smith, 1991; Greenwood & Jovanoic, 1990) which focuses of marginal product of capital which remains positive in their investigation.

Identifying sources of growth such as private savings rates, physical capital accumulation, and total factor productivity, Beck, Levine and Loayza (2000) find that financial intermediaries impact growth through its positive effect on total productivity growth.

Financial sector development, therefore, is now widely recognized as contributing to economic growth and poverty reduction (Aduda & Kalunda, 2012; Jung, 1986). According to Levine (1997, p. 703), “there is even evidence that the level of financial development is a good predictor of future economic development.” Johnson and Nino-Zarazua (2011, p. 475) remark, “The role of financial sector as a leading contributor to growth has been substantially accepted and recently the focus has turned to its contribution to poverty reduction.” There are two views in this debate. The first view, referred to as “demand-following” asserts that economic growth leads to expansion of financial system and on the second view, referred to as “supply-leading”, argues for the expansion of financial services before demand for financial services or “The financial sector precedes and induces real growth” (Jung, 1986, p. 333).

There is no one-size-fits-all measure of financial development. Nevertheless, conventional indicators of financial development include:

(i) Private credit from financial intermediaries to the private sector divided by GDP. Studies show that private credit is a good predictor of economic growth (Beck, Demirkuc-Kunt & Levine 2005; Sacerdoti, 2005; Ardic, Mylenko, & Saltane, 2012; see Chapter 1.1, Table 1.2).

(ii) The ratio of liquid liabilities to GDP (M2/GDP), which is an indicator of "financial deepening." This measure has received criticisms because it overlooks openness, extent of public borrowing from domestic financial system, the development of nonbank financial intermediation, and the competitiveness of the banking sector (Kablan, 2010).

(iii) The ratio of the total loans outstanding to GDP, another measure of financial depth. Greater depth is associated with greater access, since access itself is hard to measure (CGAP, 2009). This measure is also criticized because domestic private credit is conflated with government borrowing which may crowd-out private sector borrowers.

Financial development is associated not only with increased access to finance but also with higher quality of services. Beck, Demirguc-Kunt and Peria (2007) put together a list of indicators to measure banking sector penetration and outreach that also address quality attributes:

1. Geographic branch penetration: number of bank branches per 1000 km sq;
2. Demographic branch penetration: number of branches per 100,000 people;
3. Geographic ATM penetration: number of bank ATMs per 1000 km square;
4. Demographic ATM penetration: number of bank ATMs per 100,000 people;

5. Loan accounts per capita: number of loans per 100, 000 people;
6. Loan-income ratio: average size of loans to GDP per capita;
7. Deposit accounts per capita: number of deposits per 1000 people;
8. Deposit-income ratio: average size of deposits per 1000 people.

The financial inclusion agenda is concerned today about expanding the services through improvement in each of the above criteria (see Chapter 1, Table 1.2; Table 2.4).

2.5 Interventions in Credit Markets

Credit markets in Africa tend to exhibit the following characteristics:

(1) Inability to satisfy existing credit demand, especially among SMEs and in rural areas.

(2) Imperfect information, costly screening and monitoring, and poor contract enforcement, all of which contribute to moral hazard and adverse selection problems; according to Atieno (2009), credit markets tend to be segmented and incomplete, hence making it harder for SMEs to secure credit.

(3) Dualistic markets—informal and formal markets existing side- by-side.

Small business enterprises often rely on their own savings or turn to friends and families to finance expansion (see survey analysis in Chapters 3 and 4). Sometimes they go to moneylenders who charge exorbitant rates. The result is a dualistic monetary system, in which banks lend to big businesses and leave small borrowers out in the cold, where they may be at the mercy of loan sharks. Nevertheless, informal finance in some cases succeeds where formal finance fails.

Aryeetey (1997) contends that informal financial markets serve niches that formal banks cannot reach in Africa. The unorganized monetary system mobilizes household savings and provides financing to small businesses. In order to overcome weaknesses in legal structures and poor contract enforcement, informal markets use social sanctions, collateral substitutes, reputation and group dynamics and personal relationships. For example, informal finance has been important in Ghana for decades, whether the government has pursued liberal or repressive financial policies (Aryeteey, 1997).

Even though informal finance serves niches that formal banks do not reach, it has its limitations. SMEs often demand larger loans than informal finance can provide. Moreover, some informal lending sources, such as moneylenders (who do not mobilize deposits but raise capital from their own earnings, and economic activities such as farming and trading), charge exorbitantly high interest rates.

At the same time, SMEs often have difficulty accessing formal-sector finance. In Kenya, despite the more than doubling of banking assets between 1990 and 1995, few commercial banks were lending to SMEs in the late 1990s (Atieno, 2001). Exceptions include Barclays Bank which lent to women in groups and as individuals, and set up loan guarantee funds. Also, Kenya Commercial Bank has offered government guarantee loans to deserving SMEs.

Atieno (2001) found that Kenya's Central Bank rules lowering entry requirements (minimum capital requirements) led to growth of non-bank financial institutions (NFIs) from 23 in 1981 to 54 in 1988, and that the number declined to 24 in 1997 following the conversion of many NBFIs into commercial banks. I suspect that this growth of NBFIs

exerted some competitive pressure on licensed banks and might have helped to expand access to small borrowers. NBFIs include currency exchange bureaus, insurance firms, cashier check issuers, and check cashing locations. NBFIs occupy an intermediate position on the continuum between the formal and informal finance. Microfinance institutions, Savings and Credit Cooperative Organizations (SACCOs) and Rotating Savings and Credit Associations (ROSCAs) also fall on this continuum. In Kenya, SACCOs, MFIs, and ROSCAs are categorized as "other alternative financial services" (Central Bank Act, 2008). Let us now turn to general conventional and non-conventional means of interventions in the credit markets.

2.5.1 Conventional Means of Interventions in Credit Market

In good times, a country's central bank has at its disposal a number of conventional monetary policy tools. Interest rate policies, open market operations and changes in reserve requirements are applied to control credit supply. While the degree of intervention is different, advanced as well as developing countries use these conventional monetary policies.

Monetary theory holds that in a competitive credit market without externalities, the first fundamental welfare theorem states that forces of supply and demand interact to produce market clearing interest rates which are Pareto optimal. Any other interest rate would be disequilibrating. But because the standard model of competitive market is rare to find in developing countries due to market failures, governments have intervened in credit markets. These interventions have taken varied forms, both in the past and present.

First, governments in developing countries were frequently used to intervene through selective credit schemes. But these schemes came under heavy criticisms for bearing below-market interest rates and therefore becoming commercially unviable. In the face of such criticisms, they have been largely abandoned on the ground they tend to lead to financial repression (see McKinnon, 1973). Structural adjustment programs grew out, in part, of this understanding of the need to correct the government inefficiencies in the credit markets.

Second, governments in developing countries used to intervene in the rural credit markets, including through nationalization as in India in 1969 and Mexico in 1982 (Besley, 1994). Compelling banks to set up branches in rural areas to lend to agriculture is another such scheme.

Today, a number of conventional market based-solutions are being sought in which developing country governments are intervening in credit markets through other means. One such intervention is through pure regulation, which has been and continues to be used to affect daily operations of bank, including capital ratios and other soundness measures. There is also increased cooperation between the public and private sector in rolling out some financial services, such as M-Pesa or agency models in Kenya. In addition, not only are central banks issuing prudential guidelines to commercial institutions, they are also using moral suasion to encourage implementation of the financial inclusion agenda.

2.5.2 Non-conventional Means of Interventions in Credit Markets

There are two kinds of interventions in this category, one dealing with stock markets and the other dealing with banks to affect credit markets. In developing countries, unconventional means of interventions include:

First, investing in informational credit databases, such as credit references. This can have far reaching implications in access to credit. Commercial banks, central banks and concerned governments such as the Government of Kenya (GoK) are pushing hard for this investment because of the benefits it provides to the lenders, borrowers and the credit market in general.

Second, there has been an interest in governments to subsidize early innovators, for example, by giving them tax breaks. The growth of M-Pesa is a good example of such early subsidization, in that the Kenyan Government did not heavily regulate the financial service provider in the early stage (AFI, 2010). This model in which innovation precedes regulation gave the M-Pesa platform a breathing space. Another example is the Grameen Bank in Bangladesh. The latter pioneered the innovative group lending model which has been embraced by the MFI industry because of its implication in reducing information asymmetries between lenders and borrowers. Mashigo (2008) finds, for example, that group lending improves access to credit by group members in Soshanguve informal settlement in South Africa.

Third, small loan guarantees, such as the ones offered by SBA in the US are hypothesized to provide net positive social welfare gains[9]. Craig, Jackson and Thomson (2007, p. 7) find that there is a "significant correlation between the average annual level of employment in a local market and the level of SBA guaranteed lending in the local markets." However, there are few studies in this area, which means that there is no definitive answer as to whether guaranteed subsidies help small businesses or remain ineffective though they are politically popular. This model is not peculiar to the western governments. A number of developing country commercial banks are partnering with development institutions to pool resources and lend them to SMEs.

In the developed economies, when policy interest rates reach the zero bound level, central banks have the option of using monetary stimulus via "quantitative easing," which is another unconventional forms of intervention (Imus, Srinivasan & Vladimir, 2009; Santo & Suchanek, 2013). Indeed, following the global financial crisis of 2008-2009 that hit the advanced economies, governments took a number of unconventional measures to intervene in the credit market (Tong & Wei, 2010). These unconventional measures included debt guarantee purchases of toxic assets and bank recapitalization. These interventions, according to Tong and Wei (2010), helped alleviate the credit constraints for the non-financial firms. These non-standard measures have been transitory and tailored to the needs of each economy (Trichet, 2013). In the words of Santor and

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[9] For over half a century, SBA has been providing loan guarantees as mechanisms to mitigate credit rationing. Consistently over the years, the federal loan guarantees grew from $12.6 billion to $18 billion in 2006 and $25 billion in 2008 (see Craig, Jackson & Thomson, 2007).

Suchanek (2013, p. 11), “Unconventional monetary policies have thus become part of the toolkit of central banks, permitting them to provide considerable policy stimulus should circumstances require more action.”

While these unconventional measures have also helped real economies, such measures have also created real potential costs and challenges for the central banks in the mechanics of expanded balance sheets and how to exit (Bernanke, 2012; Santo & Suchanek, 2013). Exiting too soon may undermine recovery, but exiting too slow may lead to excess liquidity and building up of inflationary measures. Many have thus called for clear communications and guidance.

Another problem is that a given central bank’s credibility (especially the U.S. Fed) may be at stake if it is seen to continue propping up government spending through large fiscal deficits. There is also a concern about “low for long”, a situation in which interest can stay low for an extended period (Carney, 2012). This may have distributional and spillover effects in other asset prices (Santor & Suchanek, 2013), and the commitment to keep interest rate close to zero for extended time permits the operation of “zombie banks,” which remain operating due to continued government support despite negative net worth (Imus, Srinivasan and Vladimir, 2009).

At the end of the day though, developed and developing countries face different policy settings and different challenges in applying unconventional measures. Advanced countries have efficient financial infrastructures which make it easy to transmit monetary policy injections across the entire economy. Second, developing countries are more dependent on cash-based transactions than advanced countries. Cash-based economy

(soft currency) comes with a baggage of disadvantage ranging from insecurity carrying cash to losing value if there is hyperinflation. Having soft currency as opposed to hard (strong) currency complicated interventions because in developing countries, much of the economy is underground. That advanced countries have hard currency position does not undercut their policy intervention; developing countries face the issue of soft currency, which is constantly fluctuating due to political instability or lack of confidence in a given national currency. In other words, the economic fundamentals are very weak in developing countries than in developed countries which make monetary policy less effective in the former.

Intervention in credit market is not a common experience in South Sudan because the country, including its Central Bank just emerged on the scene recently. The Bank is presently managed by 9-member board of directors which is the "highest policy and decision making body" (GoSS, 2011). The board composes of a governor, and two deputy governors who are generally appointed by the president as well as six-nonexecutive members who are not Bank employees, proposed and appointed by Governor and the president, respectively. A governor who happens to be chairman of the board and two deputies are appointed for five years and the other board members for seven years each. An exception is made for first such two deputies and other members of board who are slated to serve staggered terms to provide continuity.

Many of conventional and as well as unconventional means of intervening in the credit markets are still foreign to South Sudan, which has only a bank-based weak financial system. The only two major areas where the Bank has played a role in the economy are to

act as a banker and agent of the government (receiving its oil revenue and representing the government in some international obligations falling within its competency). Except through occasional fixed exchange rate policy, many of these policy tools are out of its reach or have not delved into yet. For example, commercial banks are not lending, so interest policy has not been an effective policy. On reserve requirements, many banks are having enough liquidity sitting idly and only found a borrower in the name of the government during austerity measures of 2012. Commercial banks were issued treasury bills and lent money to ministry of finance.

There is no policy of providing credit guarantees to businesses or private sectors nor is the Bank engages in quantitative easing policies as is the case in the West. In short, there are no applications of both the unconventional and conventional means of intervention in credit market today in South Sudan. First, the banking sector is limited in their lending activities and is much concerned with exchange transactions, involving personal remittances and bank transfers. Second, lack of skilled management in the Bank and commercial institutions as well as lack of strong regulatory framework is constraining any meaningful interventions. The recent devaluation of the currency on 11 November 2013 proves disastrous because of these limiting factors or weak regulatory system.

2.6 Conclusion

From 1956 through 2005, South Sudan has been a region which has put political liberation above everything else. And between 2005 through 2011, the Southern Sudan (a region then) was once again preoccupied with holding credible referendum and seceding. While the secession came on 9 July 2011, the country came to the world scene as the

youngest nation and among the least developed economies, with no experience in virtually everything. Hence, its central bank is two years old and all its institutions are beset by weak regulatory framework. Oil fueled consumption in the expense of other pursuits such as access to credit and financial inclusion in general.

Aware of the current affairs of the banking sector in South Sudan, role of the CBSS and the ills facing its economy, this chapter aims to shade some light on the role of SMEs in modern economies and offer suggestions for enhancement of financial inclusion.

This chapter, therefore, defines SMEs and discusses why they are important in modern economies as a vehicle to create jobs and reduce poverty. We argue that development circles have come to a better understanding in advocating financial inclusion not only through MFIs but also through technology-based applications such as ATMs, mobile finance services such as M-Pesa, and innovative leadership in the public-private sector nexus.

Central banks in the developing world are currently the prime movers taking on the unconventional objectives of pushing for financial inclusion and greater interoperability (the capacity for operations or to operate together, for instance, inter-operation between M-Pesa platform and that of M-Kesho) in financial services. This is witnessed by the growing number of financial inclusion workshops, symposia and conferences, as well as interventions in credit markets to further these goals.

This dissertation's exploration of the Kenyan experience in expanding financial access to SMEs, and of the challenges of doing this in the post-conflict environment of South

Sudan, builds upon these developments in an effort to formulate a strategy for promoting financial inclusion in a setting where credit markets are singularly underdeveloped.

Table 2.1 Definition of Small and Medium-Sized Enterprises in EU, U. S and Kenya

Country /Region	Enterprise	Headcount	Turnover	Balance Sheet
EU	Small	< 50	≤ € 10 million	≤ € 10 million
	Medium	< 250	≤ € 50 million	≤ € 43 million
USA	Small Business	< 500	$ 7 million (service)	$ 7 million (service)
Kenya	Small	Between 5 and 50	N/A	N/A
	Medium	Up to 200	Ksh. 2 million	Ksh. 2 million

Source: U.S. Small Business Administration, and EU Recommendations (2003/361/EC)

Table 2.2: Different Types of Mobile Financial Services across the World

Type	Kind of Services
Mobile Finance	- Credit - Insurance - Savings
Mobile Banking	- Transactional - Informational
Mobile Payment	- Person-to-person - Government-to-person - Business-to-business

Source: Adopted from Donovan, 2011

Table 2.3: Cost of a 200 USD Money Transfer (Person-to-person; P2P)

Mobile Payment		Cash to Cash	
Provider	Cost (USD)	Provider	Cost (USD)
Celpaid (Cote d'Ivoire)	8	WARI(Senegal)	20
Airtel (Burkina Faso)	6	CMS(Senegal)	2
Inova (Burkina Faso)	6	ACEP(Senagl)	2
Societe Generale (Senegal)	10	Eco-bank (Burkina Faso)	8
M-Pesa (Kenya)	1		
Orange Money (Senegal)	9		

Source: AfDB Publication, 2013

Table 2.4: Use of Financial Services across Africa (% of Adult population)

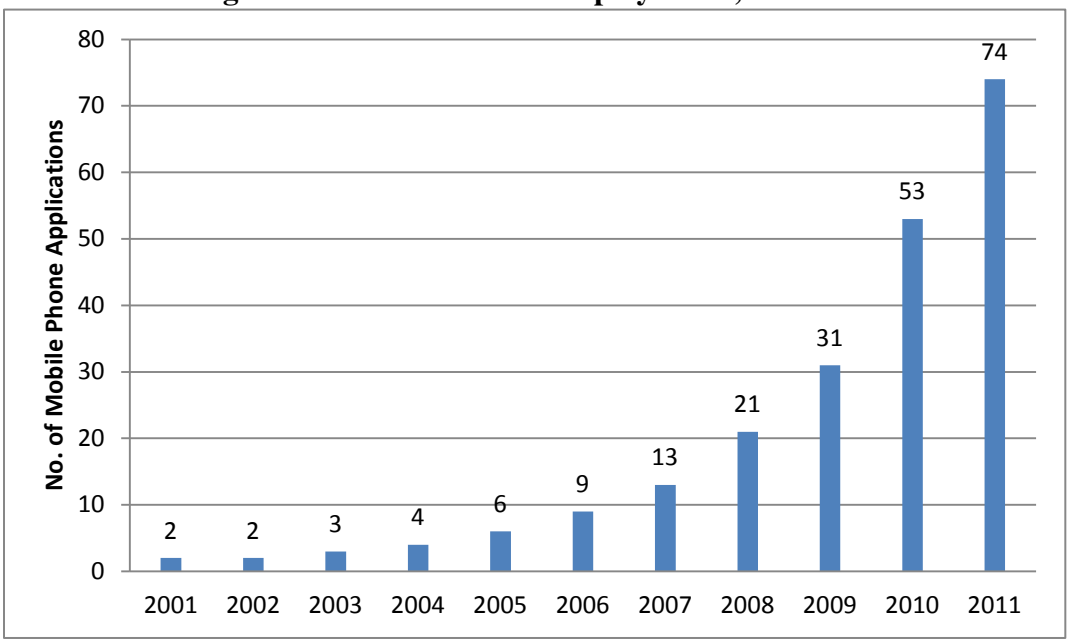
	Formal	Formal Other	Informal	Excluded
Kenya	21.5	15	29.5	34
Tanzania	15	2	7	75
Uganda	18	0	29	52
Zambia	14	12	11	62
Botswana	44	5	5	48
South Africa	54	6	9	31
Namibia	53	3	1	42

Source: Beck et al., (2010)

Figure 2.1: Pillars of Financial Inclusion

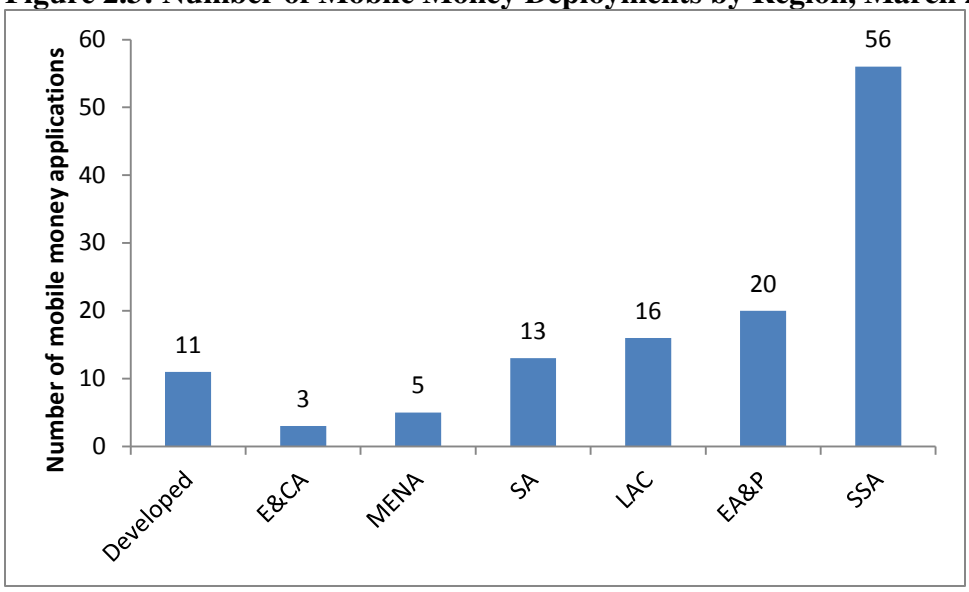
Source: Author (2013)

Figure 2.2: Global Mobile Deployments, 2001-2011



Source: Donovan, 2011

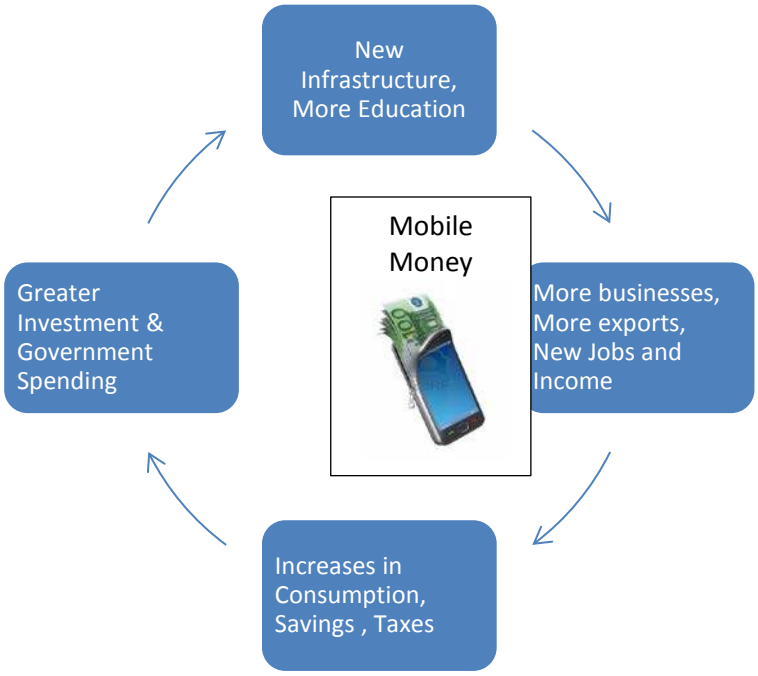
Figure 2.3: Number of Mobile Money Deployments by Region, March 2011



Source: Donovan, 2011

Note: E&CA = Europe and Central Asia; MENA = Middle East and North Africa; SA = South Asia; LAC = Latin America and Caribbean; EA&P = East Asia and Pacific; SSA = sub-Saharan Africa.

Figure 2.4: Financial Inclusion Contribution to a Country's GDP



Source: Gencer (2011); Modified by Author (2013)

CHAPTER 3

FINANCIAL SECTOR DEVELOPMENT AND SMALL AND MEDIUM-SIZED ENTERPRISES IN KENYA

3.1 Introduction

Received wisdom links access to credit with economic growth through efficient resource allocation and enablement of exchange of goods and services (Levine, 1997; Beck, Demirguc-Kunt & Maksimovic, 2005; Johnson & Arnold, 2012; IMF, 2008; Ouma & Ramo, 2013). In development circles, emphasis is increasingly placed on financial inclusion, based on the understanding that lack of basic financial services, such as credit, savings mechanisms and insurance policies contributes to unrelenting income inequality, poverty and lethargic economic growth (Dev, 2006; Kendall, Mylenko & Ponce, 2010; Nkurunziza, 2010; Singh & Tandon, 2012; Cracknell, 2012; Koker & Jentzsch, 2012; Lassila, 2012; d'Alcantara & Gautier, 2013; Bauchet & Murdoch, 2013). Demand-side factors[10], such as lack of employment, fluctuating incomes, and illiteracy as well as supply-side factors such as geographic distance, excessive cost of financial services, lack of identification documents or high minimum balances, often lead to financial exclusion of significant segments of the population in low-income countries (Atieno, 2009; Johnson & Nino-Zarazua, 2011; d'Alcantara & Gautier, 2013; Aterido, Beck & Iacovone, 2013). In the words of Singh and Tandon (2012, p. 49), "financial exclusion leads to social exclusion, poverty as well as all the other associated economic and social problems." For

[10] Theoretically, we have come to understand constraints to access to finance in the lens of New Institutional Economics which shines a spotlight on asymmetric information and transaction costs that may arise from geographical distance, cost of services, and identity card requirements, among others; (see Johnson and Nino-Zarazua, 2009).

this reason it can be argued that financial services should be considered as "merit goods", defined as goods that should universally be provided to individual not so much on willingness and ability to pay but on needs-based criteria (d'Alcantara & Gautier, 2013, p. 131). Merit goods may arise due to preference –distortion problem, distributional problem and public good problem (Head, 1966). Examples of merit goods in our society today include public education, subsidized housing and head-start programs because they embody positive externalities.

This recognition has led international financial institutions, governments and private sector agencies to advocate policies geared toward creating broad-based financial sectors as one of the tools to achieve inclusive economic development (United Nations, 2006; World Bank, 2008; IMF, 2008, AfDB, 2013). In addition, financial inclusion is pursued for the goals of financial integrity, such as anti-money laundering (Koker & Jentzsch, 2012), based on the argument that bringing everyone into the formal financial system stifles illegal activities (see Kenya's Prevention of Terrorism Act 2012).

Access to finance by Small and Medium Sized enterprises (SMEs) is an important element of financial inclusion agenda. In Kenya, Equity Bank has demonstrated that banking with the bottom of the economic pyramid[11] can be safe and profitable (Cracknell, 2012). Banks should, therefore, look at financial inclusion both as a business opportunity and social responsibility (Dev, 2006). This awakening to the possibilities of "banking the unbanked" is gaining foothold in Kenya, a country where the financial

[11] According to Prahalad (2004), about 4 billion people fall in this category, many of whom live on less than $5 a day.

sector has been reasonably stable since the early 2000s. Based on my fieldwork and review of the literature, financial stability in Kenya has been attributed to several factors, including enforcement of capital requirements, strong regulation, a deposit protection fund, strong audits which bring credibility to the banking sector, declining non-performing loans due to credit referencing and window shopping, regulation of microfinance institutions (MFIs) to mitigate systemic risks, and finally the fact that the Kenyan economy is growing and integrating with the rest of the world (CBK, 2012).

The Central Bank of Kenya's policy is to continue to improve financial inclusion through agency banking, MFI regulation and provision of sound prudential guidelines. In order to further these goals, the government, the central bank and the banking sector have embraced technology—ATMs and mobile financial services— to deliver financial services to all, especially those at the bottom of the economic pyramid. Postal services are used to provide these financial services as is the case in Brazil and India. Kenya's mobile phone penetration grew from 15,000 users in 1999 to 24 million in 2011 (CBK Report, 2012). Fewer than 3% of households in Kenya had a cell phone in 1990 whereas by 2011, 93% of all households had mobile phones (Demombynes and Thegeya, 2012). According to the latest national survey, about 48% of all adults own a mobile phone in Kenya (FinAccess National Survey, 2009). According to Demirguc-Kunt and Klapper (2012), 12% in Sub-Sahara Africa without a formal bank account now use mobile phone financial service transactions.

The Central Bank of Kenya (CBK) describes itself as a "champion of financial inclusion innovations through agency banking and mobile financial services," and the Bank has

hosted country delegations on "agency banking, consumer protection, financial education, credit information sharing, mobile financial services and microfinance and automation of bank supervision functions" (CBK, 2012, p.62). CBK is one of 95 members of the Alliance for Financial Inclusion (AFI), a network of financial policymakers, founded by Bill & Melinda Gates Foundation in 2008 with the expressed goal of encouraging countries to adopt inclusive financial policies so as to help move people out of poverty. AFI does this by encouraging interaction among its members and knowledge exchange on financial inclusion policies, a paradigm referred to as peer-to-peer learning model. These initiatives are bearing fruit. First, the use of formal bank credit in Kenya in the entire population increased from 31% in 2006 to 38% in 2009 and Second, most money transfers are now done through M-Pesa (National FinAccess Survey, 2009). The ATM usage also increased from 7.8% of the adult population in 2006 to 13.4% in 2009. Despite all these efforts, the number of unbanked is still high in Kenya (IMF, 2008) and SMEs still face significant barriers to growth (Rosemary, 2009). More people still rely on informal financial services, networks between firms and the M-Pesa is primarily banking the already banked population. Also, Kenya has seven regulatory bodies in the financial market and there is more room for interaction to improve efficiency (Cracknell, 2012).

While close to one billion adults worldwide have no bank accounts, most are assumed to have mobile phones (Jack & Suri, 2011)[12] . The potential of mobile telephone for

[12] We are by no means suggesting that the so-called digital divide or digital chasm, for lack of better words, is completely narrowed. Despite these best efforts, the divide still exists both across and within countries. Howard and Mazaheri (2009, p. 1159) find that

revolutionizing access to financial services is illustrated by the successful story of M-Pesa in Kenya's financial landscape (Demombynes & Thegeya, 2012; Aker & Mbiti, 2010; Jack, Suri & Townsend, 2010; Mbiti & Weil, 2011; Jack & Suri, 2011; Cracknell, 2012; d'Alcantara & Gautier, 2013). Launched in 2007 by Safaricom and Vodafone M-Pesa (where M stands for mobile and Pesa is a Swahili word for money) is the most developed mobile phone payment system in the world. Currently operated by mobile phone network Safaricom, it "allows users to deposit money onto their mobile handsets, transfer e-money to another user with a simple text message, and withdraw cash at one of thousands of outlets throughout the country" (Mbiti & Weil, 2013, p. 369). It holds promises for financial inclusion, employment opportunities and poverty reduction (Kamothi, 2009; Kendall, Mylenko, & Ponce, 2010; Aker & Mbiti, 2010). For small firms and individuals, M-Pesa has generated innovative uses ranging from sending pocket money and school fees to students, to paying loans, transport fees, and other bills (Jack, Ray & Suri, 2013).

M-Pesa is succeeding in Kenya because of mobile penetration, low transaction costs and a concerted drive to increase access to financial services (Jack & Suri, 2011). Though it is not a bank, Safaricom hopes that M-Pesa would substitute for bank accounts and reach millions unbanked people (Jack, Suri, & Townsend, 2010). Citing Kimenyi and Ndugu (2009), Demombynes and Thegeya (2012) state that four factors contributed to the rapid growth in "mobile money" in Kenya, namely (1) a conducive legal and tax environment,

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"while 7 out of 10 people in the United States have reported ever using the internet by 2008, only 7 out of every 100 people reported doing so in India, and only 7 out of every 1,000 people in Mali reported doing so."

(2) private-public policy dialogue, (3) strategic and prudent macroeconomic policies, and (4) a guarantee of the existence of a competitive market, discouraging dominance by initial entrants (p. 4).

Although the adoption of mobile phone is highest among those who are young, educated, urban and wealthy, the technology is no longer restricted primarily to the elites (Aker & Mbiti, 2010)[13]. Mobile technology is a vital channel of financial inclusion (Koker & Jentzsch, 2012). While the percentage of Kenyans using formal credit sources (commercial banks, post banks or insurance) rose from 18.9% in 2006 to 22.6% in 2009, the percentage using semi-informal sources such as M-Pesa (mobile-phone based transfer service), MFIs, and Savings and Credit Cooperatives (SACCOs; considered as the largest movement in Africa), rose from 26.8% in 2006 to 40.5% in 2009 (FinAccess National Survey, 2009). These figures speak to the fact that Kenya's financial inclusion crusade is gaining ground. Access to finance in Kenya is higher than the neighboring countries in East Africa (Beck et al., 2010).

Kenya has always seen development of SMEs as a priority to achieving industrialization, employment creation, and poverty reduction (Atieno, 2009). SMEs accounted for 75% of the nation's workforce and 22% of the nation's GDP in 2008 (Atieno, 2009; Mbiti & Mainga, 2006; Ouma & Ramo, 2013). The Kenyan government shows that it values the contributions of SME to the national economy by taking a number of initiatives including the 1996 Sessional paper Number 2 on *Industrial Transformation to the Year 2020* that

[13] Mobile phone coverage in Africa grew from 10% in 1990 to 60% in 2008 (Aker & Mbiti, 2010).

emphasizes SME financing; *Economic Recovery Strategy for Wealth and Employment creation 2003-2007* which identifies SMEs as one area of facilitating economic growth and recovery; the 2005 Sessional Paper Number 2 on the *Development of Micro and Small Enterprises for Employment and Wealth Creation for Poverty Reduction* (Mbithi & Mainga, 2006), and in 2006, GoK drafted the *Micro and Small Enterprises Bill* as a step toward SME legalization in the country (Ouma & Ramo, 2013).

This study uses firm-level data to analyze access to finance for SMEs in Kenya and what banking sector is doing to expand the access frontier. To the best of my knowledge, this is the first study focusing on the question of access to finance by SMEs and channels of financial inclusion in Kenya. Other studies on this issue have not analyzed specifically Kenya (for example, Demirguc-Kunt, & Klapper, 2012; Aterido, Beck & Iacovone, 2013). The study draws on surveys and interviews with SMEs and financial sector players, asking the latter what they are doing to expand financial access, the former what is holding them back.

The data come from a 7-month field survey conducted in Kenya between March 2012 and September 2012, mainly in the greater Nairobi region. Three cities— Nairobi, Tala and Machakos— were covered when administering the questionnaire to 341 SMEs and interviewing relevant SME respondents. On the banking sector side, 12 out of the 44 financial institutions participated in interviews.

The paper is organized as follows. Section 3.2 provides the context for Kenya's financial sector development. Section 3.3 gives an overview of the current composition of the financial sector, respectively. Section 3.4 gives examples of what the banking sector is

doing to expand the access frontier. Section 3.5 analyzes the survey results of the banking sector and SMEs in Kenya. Section 3.6 presents an econometric analysis of SME access to credit. Section 3.7 draws lessons from the econometric results, and Section 3.8 concludes.

3.2 Background of Financial Sector Development in Kenya

Kenya attained independence from Great Britain in 1963 with Jomo Kenyatta as its first president. While there were some leanings toward African socialism in the early 1960s, Kenya has gravitated toward a market- based economy (Ndung'u, Mitullah & Waema, 2012). The banking sector, despite several failures over the years, has come to play an important role in the economy. While price stability, economic growth and sound macroeconomic policies have been central to Kenyan economy, successful adoption of mobile technology such as M-Pesa have made the Kenyan economy as of late, earning a champion of financial inclusion (CBK 2012).

Relative to her neighbors in the region, Kenya has a well-developed financial sector (Beck et al., 2010; Cracknell, 2012). The ratio of total financial assets to GDP is equal to 80%, 30% and 26% in Kenya, Tanzania and Uganda, respectively (IMF, 2008). Furthermore, while 18.5% and 18.1% of population in Kenya and Uganda use formal financial services, 62.2% in Uganda as opposed to 38.3% in Kenya are formally excluded from financial services (Johnson & Nino-Zarazua, 2011). In both countries, government employees are more likely to use formal services due to the fact that they are likely to have back accounts to receive salaries (see Table 1.2).

The roots of financial sector development or financial stability go back to the country's banking reform act of 1989, which drew inspiration and theoretical basis from the extant scholarship of the day. Goldsmith (1969), McKinnon (1973) and Shaw (1973) had argued that high-growth economies tend to have well-developed financial systems, and that growth tends to be weak in countries where there is financial repression. The McKinnon-Shaw hypothesis was embraced by the IMF, leading to the prescription and application of structural adjustment programs that included financial liberalization—removal of mandatory credit ceilings and directed credit allocation—as one key pillar. Liberalization, the theory predicted, would lead the interest rate spread to decline, and lower interest rates to borrowers would spur investment. This expansion of credit, all else equal, would thereby lead to expansion of growth. Despite disappointing outcomes, financial reforms in Africa did produce market-determined interest rate, a shift away from credit controls, reductions in market distortions, and strengthening of regulation and supervision (Ndikumana, 2009).

Growth did not take off as expected, but today Kenya does enjoy an improved level of financial development thanks to landmark reforms, including the 1989 Banking Act, the Capital Market Authority Act of 1989, the Treasury Bill Act of 1990, and interest rate liberalization in 1991. Some positive effects of financial liberalization were also seen in other parts of Africa. According to Aryeetey (1997), effects in Ghana have been the emergence of nonbank financial institutions (NBFIs), finance houses, discount houses, venture capital, and the stock exchange. And some of these finance houses, say in Nigeria, had success in reaching SMEs through loans, equipment leasing, and hire-purchases agreements (Aryeetey, 1997).

Following the reforms, CBK strengthened supervision, inspection and takeovers of ailing banks. It also introduced a Deposit Protection Fund covering deposits up to Ksh 100,000. Laeven (2003) finds that small firm financing constraints decreased following financial liberalization in the 13 sample countries while loss of preferential treatment led to large firms' financing constraints increasing.[14]

After the failure of several financial institutions in 1985-86, the Kenyan government took steps to improve central bank ability to regulate and supervise NBFIs, and building societies, and to impose stringent requirements on new institutions. Differential regulations on commercial banks and NBFIs were removed. The Banking Act of 1989 aimed to enhance the central bank's role through inspection, establishment of reports, auditing, provisioning requirements, capital adequacy requirements, exposure units, and assessments against compliance. Later amendments aimed to strengthen the balance sheet of NBFIs to protect small depositors, and to foster financial prudence, discipline, and better management of banking institutions (Kabubo & Ngugi, 1998). NBFIs were eventually required to convert fully to commercial banks. The restructuring was intended to promote competition, reduce government ownership and control, harmonize relations among financial institutions, and upgrade services with ATMs and promissory notes.

Despite these achievements, structural adjustment, the mantra of neoliberal policy, is widely regarded as failure in Sub-Sahara Africa. In the words of Aryeetey (1994),

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[14] The list includes Argentina ,Brazil ,Chile ,India ,Indonesia ,Malaysia ,Mexico ,Pakistan ,Peru ,Philippines ,Rep. Korea ,Taiwan ,and Thailand.

"financial reform has at best had limited developmental effects in the region."[15] In particular, financial reform did not adequately address the financial dualism (existence of organized and unorganized money markets; see Chapter 2, Section 2.5 for further analysis) or steps taken to ensure that semi-formal and informal producers have access to formal credit to expand operations. Moreover, liberalization was not properly phased. The financial sector often was liberalized before prudential supervisions and regulations were put in place. There was also an absence of institutions to reduce information asymmetries (accounting, credit information agencies), which suggests that institutional strengthening is critical to successful liberalization (Aleem, & Kesakende, 2001).

In Kenya, commercial banks and the CBK learned some helpful lessons from the reforms. NBFIs did help in mobilization of resources following liberalization, as shown through their increased liquidities between 1992 and 1995 (Kabubo &Ngugi, 1998). Though outcomes of the SAP were not immediately positive, the financial reforms tended to bring some benefits in the long-run (Chandra & Khanijo, 2009).

3.3 The Current Composition of the Kenyan Financial Sector

Kenya's financial sector comprise of the banking sector, non-bank financial sector, savings and credit cooperatives, securities market intermediaries, and insurance companies. The Central Bank of Kenya, like most central banks on the continent, is the

[15] According to Deng (1998), however, SAPs might have produced growth which was saved in traditional ways in terms of cows or other means that are not captured in conventional measurement.

main regulator of the financial sector in the country. It was created through an act of parliament and is an outgrowth of East African Currency Board created in 1966.

The composition of the financial sector has been dynamic. At independence in 1963, Kenya had 10 commercial banks. Of these, the top three— National and Grindlays Bank, Barclays Bank and Standard Bank—accounted for about 80% of all bank deposits. In the 1970s, other banks came to being; they include Cooperative Bank of Kenya, National Bank of Kenya, and Kenya Commercial Bank. Thanks to the reforms of 1989, the Nairobi Stock exchange is now the fifth largest in Africa, after those of South Africa, and Nigeria. That is, by market capitalization, the ranking runs thus: South Africa, Egypt, Morocco, Nigeria and Kenya. By 1996, Kenya had 51 commercial banks, 23 non-bank financial institutions, 5 building societies, 39 insurance companies, 3 reinsurance companies, 10 development financial institutions, a capital market authority, 20 securities and equities brokerage firms, a stock exchange, 12 investment advisory firms, 57 hire purchase companies, several pensions funds, 13 foreign exchange bureaus, and 2,670 savings and credit cooperative societies (Kabubo & Ngugi, 1998).

Today, the Kenyan financial sector comprises 43 commercial banks, one mortgage finance company, eight deposit taking microfinance institutions, two credit reference bureaus, five foreign bank representative offices, 112 foreign exchange bureaus (CBK, 2012), and the Association of Microfinance Institutions (AMFI) with 56 members

(Cracknell, 2012). Also, based on individual asset classification[16], six banks were classified as large, fifteen medium and twenty two small.

The banking sector has a footprint in eight former provinces (the country is now run through county government) in terms of ATMs, agents and bank branch networks to deliver bank services. In 2012, the banking sector added 111branches to bring total to 1,272. Because of high concentration in urban areas, 53 new branches were created in Nairobi. The network will grow because Kenya had established county governments to deliver services to 47 counties throughout the country. We thus argue that as county governments take effect, the branch network is expected to rise. Additionally, a number of ATMs increased from 2205 in December 2011 to 2381 in December 2012 (CBK, 2012). Furthermore, as of 31st December 2012, Kenyan banks had eleven subsidiaries operating in other East Africa countries with 282 branches and before-tax profits of Ksh. 5.1 billion (47% of all the profits come from South Sudan subsidiaries).

3.4 Expanding the Financial Access Frontier in Kenya

Kenya's financial sector is fortunate to be operating in an environment which is enhanced not only by information and communications technology (ICT) but also by favorable governmental policy. Scholars increasingly acknowledge the role of governments in creating a supportive policy environment for financial development (Beck, & Honohan, 2007; Beck, Maimbo, Faye & Triki, 2011). In the past two decades, the Kenyan government and the CBK have made concerted efforts to develop the financial sector

[16] Commercial banks whose assets fall below five billion Kenya shillings are considered small, a value between 5-15 medium and those above fifteen billion shillings large.

with a view to expanding access. Though these efforts have not always been successful, there are several lessons learned.

First, credit referencing bureaus now facilitate the sharing of information by institutions. Since 2010, all commercial banks and Deposit Taking-Microfinance institutions (DTMs) have been submitting both negative and positive credit information to a central unit based at the CBK and this information sharing between the banks helps banks in appraising credit worthiness (CBK, 2012). Nonperforming loans decreased by 1.4% in 2012 from Ksh 58.3 billion in 2011 to Ksh.57.5 billion due to enhanced credit appraisals. Individual banks are building strong data infrastructure, too.

Second, CBK is in the process of adopting Basel II principles in an attempt to conform to international financial standards. Almost all countries in Africa except, South Africa and Morocco, base their micro-prudential regulatory framework on Basel I (Calice, 2010). The Basel II Accord on banking regulation, reached in 2004, has three main pillars. Pillar I includes credit regulatory capital requirements, pillar II is intended to bridge economic and capital requirements, while pillar III is on market discipline. Pillar III[17] asks lenders to disclose details on risk- rating processes, risk distributions and risk -management activities and recommends different risk mitigating techniques. Conforming to international standards matters because standardization has attracted some foreign banks to Kenya. Their role in lending to SMEs is mixed, since the presence of foreign-owned

[17] Basel III concerns the needs to raising better capital quality, hence complying with more capital, more liquidity and lower risks, and has overall positive effect on the banking system (Abu Ghazaleh, N. Al-Hares, O, & El-Galfy, A., 2013).

banks can have two opposing effects. The first is a "cream-skimming" phenomenon whereby foreign banks are less likely to lend to small firms that lack adequate collateral and accounting information (ACS and Preston, 1997). The second, however, is a positive network effect as foreign banks transfer technology, import better regulation and supervision, reap economies of scale, and increase competition such that smaller banks find financing to SMEs a viable business strategy.

Market-based modern financial systems are also helping SMEs to do well in South Africa, Mauritius, and North Africa, as well as in Kenya. SMEs are now participating in regional blocs as exporters, and the growing market liberalization and use of new communication technologies are creating new opportunities for SME internationalization (Buckley, 1997; Audretsch, 2002; Fernandez, & Nieto, 2006; Ndung'u, Mitullah & Waema, 2012).

ICT is increasingly used to reach financial sector customers (Donner, & Tellez, 2008; Matambalya, & Wolf, 2001; Ondiege, 2010). Today, across the developing world, there are more people with mobile phones than bank accounts. Mobile phone banking ("m-banking") has vastly expanded access to financial services. In 2005, Vodafone teamed up with Safaricom to develop M-Pesa, a payment service that enables users to make payments on loans, transfer cash to relatives, and avoid carrying large amounts of cash for security reasons (Beck, & Honohan, 2007). Convenience, support, cost and satisfaction account for why small firms favor mobile money transfer. Some SMEs use M-Pesa to pay staff allowances and replenishments. When a truck breaks down en route from Uganda to Kenya, for example, the truck driver calls the head office in Nairobi and

money is sent to him to cover the spare parts and repair. Parents can pay school fees through their M-Pesa accounts; tenants pay electricity and water bills through M-Pesa accounts.

M-Pesa was launched in 2007 with 900,000 subscribers; that number rose to 12 million customers in 2010. In 2007, there were 450 agents for M-pesa against 600 ATMs and 350 Western Union agents across Kenya. By 2010, the number of M-Pesa agents had reached 19,500. In Addition to M-Pesa, there are other two mobile services, M-Kesho by Safaricom and ZAP by Zain. Innovative mobile technology minimizes information asymmetry and transaction costs (Matambalya & Wolf, 2001; Donner &Tellez, 2008). Because ICT use is non-rival in nature, its increased usage generates network externalities.

Through individual and collaborative efforts, banks and other alternative forms of financial service providers in Kenya have begun making specific products for SMEs. In 2010, for example, Barclays Bank, AccessKenya Institute of Certified Accountants of Kenya, Express Phone, and DHL joined forces to set up an SME account to provide cross-product services. Another example is the partnership between Western Union, UK Government and Kenyan Government to avail M-Pesa International Money Transfer service between Kenya and UK. By reducing the cost of sending money from UK to Kenya, this service boosts remittances to the country.

With increased competition some banks are seeking competitive advantage in financing SMEs (Guiso, Sapienza, & Zingales, 2004). Every financial institution is now marketing aggressively to the SME sector. Kenya Women Finance Trust (KWFT), for instance, is

developing customized SME products for women entrepreneurs across the country, in the belief that women tend to be time-poor and often face discrimination from banks which prefer dealing with husbands. There can be very strong gender biases in access to credit and many of the operators of very small SMEs are women. So, from a survey of 190 women entrepreneurs who happened to be KWFT borrowers in Kisumu District in Kenya, Ouma and Ramo (2013) find that access to microcredit by women-owned SMEs is positively related to net profit, sales and a size of the firm.

Venture capital can be a good start-up source for SME financing when an entrepreneur cannot secure funding from banks. Lately a number of equity funds have begun to participate in financing SMEs. In Kenya, they include Mirror, Fanisi, Kiboko, and Africa Technology Media and Telecoms (ATMT) Funds. Two reasons are cited for this new interest among equity funds in financing SMEs. First, there are plenty of SMEs in Kenya, which means there are enough customers to go round. Second, government interventions are promoting SMEs.

3.5 Analysis of the Survey Results

3.5.1 Data and Methodology

The data used in this essay come from the fieldwork that the author undertook in Kenya between March and September 2012. Data was collected in greater Nairobi region— Nairobi town, Tala and Machakos— with SMEs and commercial institutions as the main respondents. Face-to-face interviews were conducted with those who accepted data requests. Some respondents who needed ample time were given questionnaire to fill out

at their own pace. The author would collect responses at a later date. As was the case in South Sudan, five research assistants helped with the data collection in Kenya.

With respect to the sampling method, each street was identified and every other firm was approached, that is, we alternated between inclusion and exclusion of the firms for interviews or administering of questionnaire. Every street stands equal chance for selection into sample.

On the financial sector side, the data request letters were sent to commercial banks, central bank, and microfinance institutions. In this case, the entire population was a candidate for inclusion. The central bank, ten commercial banks, Safaricom, and a number of microfinance institutions chose to supply data upon request. Other banks such as Barclay and National declined, citing reasons from privacy to proprietary confidentiality. Throughout (three-components-research strategy), the analysis is supplemented with existing data from the Central Bank of Kenya, Kenya National Bureau of Statistics, World Development Indicators, and IMF databases.[18]

3.5.2 The Banking Sector Survey

This section gives a brief description of the characteristics of the selected banks. While the data request letters were sent to all 44 financial institutions in Kenya, I was only granted interviews with twelve commercial banks (two other banks promised but reneged on sending the data later). This is unlike in South Sudan where I managed to interview and administer the survey questionnaire to all eight commercial banks.

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[18] The three components-research strategy include a review of the existing literature, a qualitative/descriptive evaluation and econometric analysis of the survey data.

The commercial banks in Kenya are larger than banks in South Sudan in all respects. For example, while Equity employs only about 125 in South Sudan (see Table 4.1), its total employment in Kenya is 5,565 (Table 3.1). From bank total employment to loans as percent of deposits, evidence emerges that the banking system in Kenya is more developed than that of sister neighbor, South Sudan.

Table 3.2 speaks to the fact that banking sector is not static. Banks were asked to give records of changes in accounts between July 2011 and March 2012. For customer bank accounts, Chase Bank, for instance, states that it had about 500,000 individual accounts in July 2011 and that this figure jumped to 1,500,000 by March 2012. The trends shown in this table are indicative of the fact that the financial sector is expanding access frontier through the account ownership.

Of the nine banks that provided data, all except Bank of India have lent to SMEs (Table 3.3). Only eight banks were able to describe their top SMEs and they happened to be in different sectors throughout the economy (Table 3.4). But when we asked banks to rate what factors they consider while appraising SME loans, commercial banks placed on top the character of the owner, collateral requirement and capacity of the firm (Table 3.5).

Table 3.6 indicates that banks have come to appreciate the role of technology in expanding financial access, and are also seeing the benefits of partnering with development agents to pool resources and lend out to SMEs or those at the bottom of the socio-economic pyramid.

Table 3.7 is telling: commercial banks are seeing a declining trend in non-performing loans. During the interviews, some respondents credited the policy environment and central bank leadership for enhancing the business climate, noting prudential guidelines and other bank circulars. By way of example, I & M Bank reported that it has less than 1% of its loan portfolio as nonperforming between 2010 and 2012. Though Consolidated Bank started with the largest non-performing loans in 2005, the figures decreased from 98% in 2005 to 10% in 2012. This is a huge turnaround. For Equity Bank, the one bank that has provided a breakdown of its non-performing loans, it was not the case that SMEs are responsible for the bulk of the problem. Take for example, in 2009, SMEs had 8.11% of their loans non-performing and for larger businesses for the same year, the amount non-performing is 11.66%. The same story is true for 2012; SME nonperforming loan is 1.68% whereas large businesses had 2.55% of their loan non-performing.

No matter how far the CBK has come, commercial banks still have issues that need attending to if they are to augment financial deepening (Table 3.8). Banks such as Chase Bank want to see some regulations apply aggressively to MFIs and SACCOs so as to have a level playing field. Others want the CBK to maintain stable interest rate, price stability, and speedier review of guidelines or reduce the CBK rate. In order to lend to SMEs, banks would like to see more strategic partners, literacy workshops to help small businesses, records keeping, and timely loan repayment, avoidance of “bank hopping”, proper management, enabling infrastructure and transparency during loan appraisal.

As shown in Table 3.9, some banks have lent more loans to SMEs than others. Equity Bank lends to 6,312 SME firms, compared to 3,900 and 60 for I&M and Development Bank, respectively.

3.5.3 Agency Banking

The CBK published agency banking guidelines in 2010 to enable banks to operate through third party agents (Cracknell, 2012). In brief, agency banking is a correspondent banking agreement whereby bank services are sold by nonbank financial corporations on behalf of the bank. Such arrangement has greater potential to reach wider markets, especially in rural areas, where formal banks have issues to do with power shortage, bad attitude toward rural folk, poor infrastructure and other technological impediments (Dev, 2006).

Table 3.10 shows the fact that since the adoption of the agency model in Kenya, provision of financial services has expanded beyond the bank corridors. Agents who provide these services on behalf of the banks or commercial institutions or Safaricom have grown exponentially since 2007. As the above table shows, the number of agents countrywide grew from 1,582 in 2007 to 50,471in 2011, an increase of 137.7% per annum (See Table 3.10)[19]. In tandem with a banking growth, the value of transactions in Kenya shillings grew from 16.3 billion in 2007 to 1.2 trillion in 2012. Ten commercial

[19] In addition to collecting the data on agents from the Central Bank, I asked the commercial banks to provide their own data on agency distribution (Table 3.18). Of the ten interviewed banks, four disclosed such information. Equity Bank led with 6,123 agents followed by KCB with 2,573. The other two banks, Consolidated and Chase had 30 and 380 agents in 2012, respectively.

banks had grown to 12,067 agents by 30 June 2012 (CBK, 2012) from 7,999 on 30 September 2011(Table 3.11).

In addition, deposit-taking microfinance institutions have also shown interest in agency banking. As of January 2012, one DTM had acquired a license to operate agency network, but by June 2012, five DTMs had 259 marketing offices operating (CBK, 2012). While ten banks and five DTMs have contracted agents by December 2012, Equity Bank and Kenya Commercial Bank (KCB) are leading the drive to financial inclusion through agency banking (see Table 3.12) as well as Safaricom M-Pesa.

For illustrative purposes, let me provide a little background on Equity Bank and Safaricom, a leading mobile phone operator in Kenya which launched M-Pesa, a product that does not require bank accounts to operate. Safaricom innovation is forward-looking as it recently launched in 2012 M-Shauri, which allows its subscribers to save money and access short-term credit from Commercial Bank of Africa in Kenya.

3.5.3.1 Equity Bank Pioneering Mobile and Agency Banking

Equity Bank was founded as the Equity Building Society in 1984. It started in the Murang'a District as informal family business providing mortgages to low-income households. By 1993, non-performing loans (NPL) made up 54% of its loan portfolio. CBK warned Equity Bank to reform or risk closure. This led to restructuring of the board composition and leadership. Onto the management board came its current CEO and Managing Director, James Mwangi, a man with considerable banking experience. He transformed the bank through smart restructuring, introducing pro-small business and pro-low-income customer services. Today, Equity Bank boasts many achievements: bank

branch penetration, ATM penetration, listing of its stock on NSE, and the opening of branches in Uganda, South Sudan, and Rwanda, among others.

Although KCB began mobile banking in 1976 to further rural financial intermediation by making limited loans to farmers and businesspersons (David, 1981), Equity Bank is today the leader in that regard. Equity Bank has the largest customer base with 7.1million customers across the region by 2011 and has hopes to reach more millions through launching of M-Kesho (Cracknell, 2012). M-Kesho, a product developed by Equity in conjunction with Safaricom offers the Safaricom subscribers micro-savings, micro-insurance and micro-credit after being a bank member for six months. M-Kesho uses the existing infrastructure of M-Pesa. Customers do not have to walk to the agents in order to transfer money; they can do it right on their phones.

Equity Bank has an interest in serving the SME sector and it has pursued this by seeking partnerships with foreign partners. It obtained loan from China Development Bank to be used for lending directed to SME sector in 2010. Within a short time, observers have come to identify Equity Bank with innovative financial banking services and cutting-edge technology. The questions about Equity Bank that everyone grapples with include: What is behind its success? Is it managerial competency? Is it technology?

As mentioned above, some of the innovations in Kenya's fast-growing ICT industry include mobile telephone transactions, the celebrated M-Pesa, geographic penetration through bank branching, availability of ATMs 24/7 in areas deemed unreachable a decade ago, and mobile van 'village' banking (Donner & Tellez, 2008). Equity Bank and

Postal Bank in Kenya are the two leading providers of financial services to rural areas, thereby achieving geographic outreach (Beck, & Honohan, 2007).

Cracknell (2012) argues that Equity Bank achieved efficiency through delivery channels by increasing branch efficiency, designing branches for volume, through supportive infrastructures such as ATMs, point of sales (POS) devices, mobile branches, and finally investing in alternative channels such as agency banking (Tables 3.11, 3.12, and 3.13).

3.5.3.2 The Safaricom Factor

M-Pesa is the innovative brainchild of Safaricom. As of 2010, Safaricom had about 40,000 outlets countrywide. Safaricom succeeded due to high level of cooperation between regulators and government ministries. Mbiti and Weil (2011) find that use of M-Pesa increases the probability of being banked and lowers the chances of relying on informal savings sources such as rotating savings and credits associations (ROSCAS). M-Pesa E-float/cash in transactions is secure. Speed, reliability, safety and network outlets add to M-Pesa popularity (Mbiti & Weil, 2011). In the words of Mbiti and Weil (2013), "the system is safer, cheaper, and far faster than the money transfer system it replaced" (p. 369).The downside of M-Pesa is that it may weaken social ties, for example, urban migrants who use it to send money may visit rural areas less often. Safaricom through its M-Pesa and other products including M-Kesho, and M-Shauri products, is breaking down factors of exclusion such as high cost, and non-price barriers. Like Equity Bank, Safaricom is acting to remove adoption barriers, such as offering deposit of e-float (mobile money that a subscriber deposits into his or her M-Pesa account), requiring no minimum fees and making it free to register (Cracknell, 2012).

Table 3.12 presents common financial services that commercial banks provide through their agents, including cash deposit, withdrawals, bill payments and account openings or balance enquiries. While Table 3.12 presents number of transaction per type, Table 3.13 breaks down the cumulative value of transactions by bank and type of transactions. Equity Bank still leads and KCB follows. Table 3.14 is suggestive of the fact that commercial banks are hovering all over Kenya even though they are more concentrated in some regions than others. A glance at this table is instructive: being the capital city of Kenya, more financial services are located in Nairobi.

While the spread of ATMs is not exclusive to Kenya, the latter is far ahead than her neighbors in many aspects. By 2009, Kenya had 1,655 ATMs, compared to 46 in Ethiopia or 47 in Rwanda (Table 3.15). These correspond to 0.1, 3.8 and 0.4 per 100,000 people, respectively.[20]

The number of bank branches has been growing, too, but fluctuating in some years whereas ATMs grow steadily (Table 3.16). Physical bank branch acts as complementary to ATMs in some cases and substitute in others (Table 3.16). In terms of number of branches, KCB leads with 170 (Table 3.17). In all cases, commercial banks have more branches in Nairobi than in any other region. Table 3.18 gives us a number of agents of

[20] Because I do not have some values for some countries in 2010, I used the 2009 ATM figures to illustrate a point about demographic penetration. The number of ATMs in each country is divided by population times 100,000 to arrive at the penetration ratios. The population figures corresponding to each country are as follows: Ethiopia(,93,877,025) Kenya (44,037,656), Rwanda(12,012,589), Sudan(34,847,910) Tanzania(48,261,942) and Uganda (34,758,80) (Central Intelligence Agency, July 2013 estimates). The ratios correspond to each country are 0.05, 3.76, 0.39, 1.12, 1.65, and 1.54, respectively.

each bank which were interviewed and recorded. Equity Bank and KCB are still leading in that regard.

Table 3.19.A provides the number of ATMs by bank by province. Based on these figures provided, Equity Bank leads with 510 live ATMs; KCB comes second with 449. Nairobi province has the largest number of ATMs. Table 3.19.B gives the total number of ATMs by four banks in each province in 2012. Again, Nairobi leads the pack.

The central message from Table 3.20 is unmistakable: commercial banks are reaching all corners of Kenya, though not uniformly, and at the same time, the cashless economy is on the rise as ATMS and ATM cards increase. Equity Bank has its footprint all over Kenya, as shown in Table 3.20, although it has more ATM cards in Nairobi than in any other province, both in relative and absolute terms. Nairobi, for example, has 26 ATM cards per 100 people in 2009 compared to North Eastern Province where the ratio is 1.3.

By the end of 2012, only six deposit-taking MFIs were operational in Kenya. South Sudan has no deposit-taking MFIs at the moment. But in Kenya, some of the DTM MFIs are aggressive in deposit mobilization, such as Faulu Kenya with 27 branches (Table 3.21).

There are 111 foreign exchange bureaus in Kenya by 2012 (See table 3.22) compared to 75 in South Sudan as of 2011. Foreign exchange bureaus are the conduits through which the public can access hard currencies allocated to the banks by the central bank.

The financial sector in Kenya thus is playing a positive role in achieving greater financial inclusion via delivery of financial services to the poor or low-income segments of the

society at reasonable cost. Though not comprehensive, the three surveys done by the National FinAccess between 2006 and 2013 show some improvements. For example, 41.3% of the population was financially excluded, and only 18.5% were formally included according to the survey in 2006. Three years later, 33% of the population was financially excluded, and about 23% was formally included (Table 3.23). So in the words of Beck, Cull, Fuchs, Getenga, Gatere, Randa and Trandafir (2010), "access frontier has been pushed out between 2006 and 2009." The data suggest that men more than women tend to use formal bank services while women use more of informal financial services.

3.5.4 The SME Survey

This section provides an overview of the Kenya SME survey data. In sum, 341 firms were surveyed. Unlike the South Sudan survey where men make up 80% of the sample (see Table 4.15), in Kenya men only make up 56.6% of the sample (see Table 3.24).

Turning to the questions of ethnicity and nationality (Table 3.25), foreigners own less than one percent of the Kenyan SMEs compared to 30% in South Sudan, reflecting foreign entry into the local market following the CPA in 2005. Kikuyu, the largest ethnic group, make up 21.4% of the sample. The next largest groups in the sample, Kamba, Luo and Meru, make up about 18.5%, 12.3% and 7.6% of the sample, respectively. Breaking down the above table by gender, we find that there are more Kikuyu men than Kikuyu women (Table 3.26)

As is the case with many African economies, sole proprietorships make up close to half of the SMEs in the sample (Table 3.27). The next largest category is partnerships, which make up about 23% of the sample.

As shown in Table 3.28, in term of firm size, 47.7% of the sample is microenterprises (a firm whose size ranges from one to four employees). When we break down employment by gender, the women are slightly more concentrated in "microenterprise" as well as small enterprises (Table 3.29).

As a percent of the total sample, the retail sector is the largest (25.2%) and repair shops are the smallest (2.9%) based on this sample (Table 3.30). As a percent of their respective totals, there are more men than women in retail sector. Based on this sample, there are more men in retail business and repair shop sector (Table 3.31).

While a greater proportion of retail sector are in the microenterprise category, 60% of repair shops fall in small enterprise, 35.7% of agribusiness firms fall in medium enterprise and 13.3% of construction fall under large enterprise (Table 3.32).

3.5.5 Self-Appraisal on Technology and Managerial Competency

The introduction and increasing usage of new technologies –email, internet and mobile phones—are gradually changing the ways of doing business by the small and large firms (Mitullah, Ndung'u, & Waema, 2013). Increasing prevalence of ATMs or installing them at convenient places such as airport or supermarket malls has made it easier for customers to access them than go to the banks. Taglines advertising this fact are widespread: KCB-"banking as mobile as you"; Consolidated-"Growing with you, Instacash", Standard Charterer-"banking, 24 hr" and Equity Kayole Branch-"time is money, save it by using ATM."

Table 3.33 bears this phenomenon out with respect to routine cash needs: 48.7% of the sample use ATMs for routine cash while 33.7% walk to banks for habitual transactions. As shown in the said table not everyone is banked since there are some people who still prefer to keep their business cash under "mattress" in the shops, at stores or safekeeping vaults at home. As thus, 11.1% of the sample uses personal safekeeping instead of banks or ATMs for routine cash.

Table 3.34 seeks opinions on what is affecting the business performance. Close to 76% of the sample believe that they are doing well because of managerial competence and reliance on technology to some extent. While 13.8% of the sample do lay blame on managerial incompetence and neglect of adopting technology, 6.2% of the sample faults "unfavorable business environment" for firm poor performance in Kenya.

3.5.6 Credit Allocation

This survey still confirms the perception that not everyone who needs credit receives it in Kenya. Despite the significant strides made in financial inclusion strategies to reach bottom of the economic pyramid, some people are still excluded or they self-exclude from the credit market. Table 3.35 shows a success rate of loans are 66.7%. If this sample were truly representative of the firm population in Kenya, a firm that applies for loan is likely to receive a loan two-thirds of the time. As a percentage of the total sample, more than 50% have applied for loan.

Table 3.36 presents source of credit and types of lender. Over 50% of the loans come from commercial banks, whereas MFIs make up 15.9% of total loans. Informal finance — family members, friends, out-of-pocket contributions and moneylenders — make up

another 11.5% of the sample. The category "others" which includes cooperatives, SACCOs, and ROSCAs makes up the remaining 22.1%.

Turning to loan allocation on gender basis, about 57% of the loans approved went to men and the remaining 43% to women (Table 3.37). If we express loans received as percent of the gender totals, the percentages are almost even: overall, 34.0% of all women and 33.2% of all men received loans.

The greatest share of loans went to the retail sector, and the smallest to repair shops. But as a percent of total loans, construction (53.3%) and restaurant (47.4%) received the most while hotels received the least (Table 3.38).

Because the microenterprise as a category is the largest of all size classification, it received more loans in percentage terms (Table 3.39). However, as a percent of the totals in each category, medium enterprise received more loans.

In all, 47.2% of the firms did not apply for loans because of one reason or another (see Table 3.40). These firms essentially self-selected out of the credit market and are credit constrained in that regard. When asked why the firm did not apply for loans, 41.6% said they doubted approval, 18.2% thought applications were burdensome and collateral requirement strict and 22.1% believed interest rates were too high (Table 3.40). Still in the same Table 3.40, 52.8% of the firms, which we considered unconstrained, did not apply because they did not need credit.

Women are a little more constrained than men (25.4% vs. 24.3%; see Table 3.41). More women cite high interest rate, collateral requirements and cumbersome application

procedures as binding hindrances more often than men do. Men, on the other hand, are overrepresented in doubting loan approval. In all sectors, a greater percent of firms doubt that loan would be approved and they choose not to apply for loan on that basis (Table 3.41). Table 3.42 dissects why the firm did not apply, and it appears that 100% of the repair shop owners who did not apply were not credit constrained.

As Table 3.43 shows, firms are more likely to rate access to formal, microfinance and informal finance as a moderate obstacle. Going down the column, firms are more likely to cite lack of access to formal finance as a major obstacle than informal or microfinance (Table 3.43).

The statistics in Table 3.44 show that men are more likely to cite lack of access to formal and informal finance as a major obstacle to firm growth whereas women cite lack of access to microfinance as a major obstacle. More small firms are likely to cite lack of access to formal finance as a major obstacle (See Table 3.45). The same is true for large enterprises.

Table 3.46 is comforting in the sense that chances of getting loan approval outweigh the rejection; hence it is worth trying applying for loans in Kenya. As a percent of total sample, 34.1% are considered successful borrowers (they applied and received loans) and 17.1% are unsuccessful or denied borrowers. On the other hand, 23.1% and 25.8% of the sample are regarded as discouraged and non-borrowers, respectively.

In terms of firm size, more micro, small and medium enterprises identify lack of access to market as a moderate obstacle (Table 3.47). 46.2% of the large firms identify lack of

access to market as a minor obstacle. Lack of access to market is cited by 52.8% of the sample as a moderate obstacle to firm growth.

A closer dissection by gender tells us that more men (18.7%) than women (17.4%) cite lack of access to market as a major constraint (Table 3.48). It is never an obstacle according to 8.8% and 6.3% of men and women, respectively. Alternatively, 53.5% of women and 53.4% of men cite this fact as a moderate obstacle. More women than men classify it as a minor obstacle.

Reading across the column, it is visible that all sectors rank lack of access to market as a moderate obstacle (Table 3.49). For example, 70% of repair shops cite lack of access to market as a moderate obstacle while 10% and 20% cite it as minor and never an obstacle, respectively. If we take another example of the sectoral classification above, 52.3% of firms in retail consider lack of access to market as a moderate obstacle while 26.7% take it as a major obstacle. In the same sector, 12.8% and 8.1% of the firms classify it as minor and never obstacle at all.

3.5.7 Summary Statistics for Selected Indicators

Table 3.50 presents summary statistics for other selected variables in the survey. On average, a firm takes less than one year to prepare necessary paperwork and fully launch officially. The necessary paperwork, as well as the savings process or raising seed capital to start a firm, takes time. Some firms have spent four years preparing. The average firm has been in operation for over four years, since establishment. Some firms have been in operation for few months.

Since close to 50% of the sampled firms in this survey are microenterprises, it is not surprising that the mean firm size is about 16 employees and such representative firm is small enterprise based on this study classification (the mean firm size in South Sudan is five employees; see Table 4.44). The maximum firm size in Kenya sample is 333 employees. The 2012 mean revenue of over $282,000 is quite high but this is because of some outliers. One firm, for instance, reported an annual income of almost $14 million. Median firm income is $64,000. The minimum income is $80, and this is ten times less the country's GDP per capita income of $ 862. The fact that some respondents recall these figures from memory means that they are subject to failing recollection or faulty disclosure of accurate revenue from firms for fear of unknown, which may help to account for these glaring wide ranges. The mean sample level of education of the head of the enterprise of 14 years is really high. This implies that a typical firm owner, on average, has reached high school. This is higher than the education levels of firm owners in South Sudan where the mean is 11 years (see Chapter 4: Essay on South Sudan). The minimum level of education is zero (never attended school) and the maximum (up to the graduate level) number of years spent in school is 27 years.

Finally, among firms that had received loan, access to credit, the maximum is $1,167,000 and the mean loan received is $ 15,016. The loan receiving firm has 14 employees on average.

Table 3.51 presents simple correlations between firm employment, revenue and loan amount. As we can see, employment and revenue are positively correlated (r=.4). The revenue and loan amount are weakly correlated (r=.1) while employment and loan

amount are also weakly correlated (r=0.1). As far as we expect larger firms to receive loans, employment may serve as a good proxy for size than revenue.

3.6 Econometric Analysis of Access to Credit by SMEs

3.6.1 Econometric Model

This section endeavors to assess access to credit by SMEs. The key indicator is loan approval. This is the response to the question "have you been approved loan." The variable takes value of 1 if loan was approved and 0 otherwise. We test a relationship between loan approved and a range of factors, including gender, size, education and sector. A firm size is measured by the number of employees in the firm; education level is given by years of schooling completed, and the sector is a dummy representing one of the ten identified sectors, namely retail, wholesale, agribusiness, manufacturing, repair shops, business service, restaurants, construction, hotels, and a category "others" which includes firms that are not classified in these first nine sectors (dummy = 1 for sector, 0 otherwise).

In addition to these core factors, we have a number of control variables, including years in business and dummies for ethnicity (Kikuyu owner = 1, 0= other Kenyans), complaints about the judicial system, ICT use through owning cell phones and websites as well as access to market. Empirical evidence in the literature points to the fact that owning a mobile phone is associated with increased likelihood of formal financial inclusion (Jack & Suri, 2011; Johnson & Nino-Zarazua, 2011; Arnold & Johnson, 2012). The list of variables with their definitions is provided in Table 3.52.

We hypothesize that if there is a gender bias, women will experience higher credit discrimination. The firm size as measured by employment is expected to enhance credit approval, insofar as size of the firm acts as an indicator of profitability or signal to lenders that loan repayment will not be an issue (Beck et al., 2006; Beck, Demirguc-Kunt & Maksimovic, 2008; Bauchet & Murdoch, 2013). We do not expect any sectoral bias in favor of any particular sector a priori. The impact of ethnicity could be ambiguous. However, one may expect that Kikuyu SME owners could have preferential treatment in Nairobi in the banking sector where the Kikuyu are heavily overrepresented. We hypothesize that the probability of financial inclusion rises with the level of education (see FinAcess National Survey, 2006, 2009 and 2013).

We use econometric analysis to answer the following questions:

(i) What factors determine access to credit by SMEs?

(ii) Does access to credit differ between SMEs headed by men and by women as well as by firm size?

(iii) Does technology enable access to finance for all in Kenya?

The analysis is based on the following model:

$$\boldsymbol{y_i} = \mathrm{X'}_i\boldsymbol{\beta} + \boldsymbol{\varepsilon}_i \quad (1)$$

Where y is a dummy for loan approval, X' is a vector of determinants of loan approval for firm i, and ε_i is a random error term. Given that the dependent variable is a binary variable, the model above cannot be estimated with OLS because it does not meet the necessary normality conditions ((Dyankin & Moffat, 2002). Specifically, we cannot

guarantee that estimates of y_i lie within the interval {0, 1}. The binary nature of the dependent variable calls for Probit specification. The probit model is specified as follows:

$$\Pr(\boldsymbol{y} = \mathbf{1} \,/\, \mathrm{X}) = \Phi(\mathrm{X}_{\boldsymbol{i}}'\boldsymbol{\beta}) \qquad (2)$$

Where ϕ (phi) is a cumulative distribution function of standard normal distribution, $\mathrm{X}' = (x_1 \ldots x_k)$, Pr signifies probability and *i* refers to individual firm. We use the z-score to infer increase or decrease in probability (pr) by b unit. In other words, an increase in x changes Z or probit index by b standard deviation units.

Based on theory and empirical evidence on credit access to finance, we retain the base model which includes a subset of the vector z, comprising three key determinants: size, education, and gender of the owner. Other factors of interest will be tested using the general to parsimonious model selection process.

The base model is the following:

$$\Pr(loan\ approval = 1) = \Phi(\beta_0 + \beta_1 gender + \beta_2 size + \beta_3 schooling) \qquad (3)$$

3.6.2 Determinants of Loan Approval: Econometric Results

Table 3.53 presents the results of the probit regressions for determinants of loan approval. A look at the base regression is telling. Gender and the level of education of the head of the firm seem not to be significant in explaining the variation in loan approval. In the base model we see that only the size of the firm matters; its coefficient is statistically significant at the 10% level and its sign in the expected direction. In other words, increasing the size of the firm increases the likelihood of receiving loan if a firm applies.

The results confirm that as expected, an increase in the size of the firm increases the likelihood of receiving a loan (Table 3.53). This confirms the finding in the empirical literature that larger firms are less financially constrained (Beck, Demirguc-Kunt, & Maksimovic, 2005, 2008) and have a greater chance of receiving credit.

Now we present the results from the estimate of the complete model where we implement the process of the parsimonious model. First, we estimate the model including all the firm characteristics. Then we interactively eliminate the factor with the lowest significance level (higher p-value), and rerun the regression until we are left with only significant values. In the full model (see the full model one in column 2 of Table 3.53).

All other control variables, including ethnicity, years in operations and all nine sectors prove not to be significant though. But quite surprisingly, the coefficient on education is negative and significant, meaning that more educated do no necessary have higher probabilities in receiving loan. This latter finding still makes sense in so far as educated, mostly young, have no experience in running business ,have little credit history, do not have enough connections or networks in the business community, and therefore the evidence suggests that having a higher level of education does not necessarily guarantee a greater chance of securing loans from banks.

On the other hand, firms that own a website which connects them with the rest of the world and those that are able to take advantage of business networks are more likely to receive loans. The coefficients on ICT and business networking are positive both under the parsimonious and full specification models (see Table 3.53). Again these results

confirms that owning a website or networking with other businesses increases the likelihood of receiving credit once a firm applies.

3.6.3 Obstacles to Access to Finance by SMEs: Econometric Results

The previous section discussed the factors that affect the likelihood of receiving a loan. In this section, we examine how individual SMEs rate access to formal and informal finance and microfinance. The questionnaire asks whether a given firm considers access to formal finance, microfinance and informal finance (money lenders, out-of-pocket contributions, family or friends,) as a major, moderate or minor obstacle or never an obstacle to its business operations and its growth. These ordinal responses are coded from one to four, in that order. We collapsed these responses into a binary variable, whereby major and moderate obstacle was coded as 1, minor obstacle and never as 0. Then we ran regressions using the probit model, taking this as the dependent variable. Regressions for microfinance yielded no significant results, and so they are not reported here. Estimation results for formal and informal finance constraints are reported in Tables 3.54 and 3.55, respectively.

Table 3.54 reports regression results for whether firms considered access to formal finance as an obstacle or not. Like before we only report three model specifications: a base model, full model and parsimonious model. The results show that larger firms are less likely to indicate that they face obstacles in access to formal finance. The coefficient on firm size is negative and statistically significant at ten percent in all three models. The coefficients on the gender dummy variable are positive but statistically insignificant. Business networking and restaurants have coefficients that are positive and statistically

significant. Furthermore, we see that in the parsimonious model, business services (salons, printing shops, etc) are more likely to indicate that formal financing constraints affect their firm growth.

Table 3.55 reports comparable results regarding access to informal finance. While the signs are in the right direction, the coefficient on gender is statistically insignificant.

Firm size again has a statistically significant coefficient, suggesting that larger SMEs see lack of informal finance as unimportant. The same is true for firms that use business networking ties; these firms are likely to cite lack of informal finance as unimportant obstacle. Construction firms appear to be the only category that sees lack of access to informal finance as a major obstacle.

3.6.4 Credit Constrained Firms: Econometric Results

For the firms that chose not to apply for credit, the questionnaire seeks the rationale behind their actions. Some did not apply because they did not need a loan, others thought they would be rejected, or reported that collateral requirements or the interest rates are too high, or that applications are burdensome. Those that do not need loans are considered unconstrained and those that chose not to apply for one reason or another are considered as constrained.

While core independent variables remain the same as in the case of loan approval and access to formal/informal credit, the dependent variable, credit constraint, is a binary variable taking the value of zero for firms that need no loan and one for those who chose not to apply for one reason or another. Table 3.56 reports results for the credit constraint.

There is no significant gender bias. The coefficient on firm size is positive and statistically significant, meaning that as size increases firms are likely to be credit constrained. In other words, larger firms are more likely to be constrained than small firms. This is anomaly but it can be explained this way: even larger, like small firms, are likely to self-select out of credit if they see the prospect of approval as slim.

For firms that have been longer in business we find an insignificant coefficient meaning that $\frac{\partial y}{\partial X} = \mathbf{0}$ so X does not have any relationship with y.

The category "business services" includes haircut shops, beauty salons, and printing booths. Some of these business services are run by few individuals, mostly the owners, hence the size of such firms are small. While they have declined to apply for loan for one reason or another, these regression results show they are credit constrained.

Moreover, wholesalers are credit constrained as well. The coefficient on wholesale is statistically significantly and in the right direction in the full model as well as in the parsimonious model.

3.6.5 Determinants of Loan Application: Econometric Results

The survey asks the question: have you ever applied for loan before? The respondents either say yes or no. We take this as a binary dependent variable, taking the value of 1 if the answer is yes and 0 otherwise. We wanted to explore the factors that influence the decision to apply for a loan. Table 3.57 presents the results from robust probit regressions. As a firm begins to place a higher premium on internet communications, its probability of applying for loan increases. This is well documented. Owning a website

reduces search cost and asymmetric information and the users are more aware of market developments. Since the coefficient is positive and significant, owning a website is more likely to increase firm likelihood of applying for loan. In other words, firms that own a website are more likely to apply for a loan. The magnitude ranges from about 0.63 per additional website owned (parsimonious model) to 0.83 (see full model). In a model, $\boldsymbol{y}_{i=}\mathrm{aX}_{\boldsymbol{i}}$ and where X_i $\{\mathbf{1}, \mathbf{0}\}$, $\frac{dy}{d\mathrm{X}_i} = \hat{a}$ is interpreted as y is on average $.\hat{a}$ higher for units for which X=1 relative to those where X = 0**.** So in this case, loan application = 0.83 Website. Therefore, the results confirm that as expected, firms that own a website are more likely to apply for a loan.

None of the variable is statistically significant in the base equation, although firm size has the right sign. On the other hand, firms that own website, those that are in wholesale and agribusiness are more likely to apply for loan as indicated by positive and statistically coefficients on wholesale, agribusiness and website.

3.6.6 Robustness Test for Loan Approval Estimates

We examine whether loan approval estimates are robust. Robustness tests are performed to tease out selection bias in the estimates. The survey questionnaire asks a given firm if it has applied for loan and if so whether it has been approved or not. This question sequencing introduces a selection dynamic in the loan approval process but we get only to observe outcomes from those who have self-selected first to apply before we know whether they have been approved or not.

Therefore, following Heckman (1979) who first formulates selection bias as a form of omitted variable and subsequent authors such as Berinsky (2004), the argument for selection bias is motivated as follows: First, assume the outcome equation is as given in equation (1). We further assume that y is observed if and only if a certain unobserved latent variable exceeds a given threshold. Thus, let Z_i^* be a latent variable, indicating a propensity to be included in the sample, Ω_i' is a vector of covariates, α is a vector of coefficients and μ_i is a random disturbance term. The selection equation is specified as follows:

$$Z_i^* = \Omega\alpha + \mu_i \tag{4}$$

$$Z_i = \begin{cases} 1 \; if \; Z_i^* > 0; \\ 0 \; otherwise \end{cases} \tag{5}$$

The selection equation can be expressed as a probit model of the form:

$$\Pr\,(Z_i = 1) = \Phi(\Omega_i'\alpha) \tag{6}$$

For this analysis, there are some factors that may cause selection bias, for instance, larger firms may elect to apply for loans, and those whose owners are literate and technologically savvy (for example, those owning a mobile phone) are more likely to apply, hence selecting themselves into the sample. In conclusion small firms or firms owned by illiterates are more likely to self-select out and we end up not observing them in the sample, ceteris paribus.

We run several robustness tests and some of our results that are noteworthy are presented in Table 3.58. We examine the base equation against a number of likely candidates for selection dynamic. Reading out Fisher's Z transformation (/athrho) in column 1, we

cannot rule out the presence of some selection bias especially in the wholesale firms. One of the variables of interest, years in business, explains a variation in the outcome equation. The coefficient on years in business is positive and statistically significant in the base model (column1) but is insignificant in the full model (column 2). But altogether, there is no strong presence of selection bias in the model.

3.7 What Have We Learned from the Econometric Results?

From the econometric results, we find that business networking, schooling, owning a website and firm size are important factors in explaining the variations in the probability for applying for loan, receiving a loan or getting rejected, or rating lack of formal finance as a major constraint on firm performance. We highlight some of these salient findings below.

3.7.1 No Gender Bias in Access to Formal Credit

Gender seems not to be a significant determinant of loan approval and the perception of credit constraints by SME owners. This finding is similar to Aterido, Beck and Iacovone (2013) who when controlling for all individual firm characteristics, find that the gender gap disappears.

3.7.2. There is a Size Bias in Access to Credit

Larger firms are more likely to receive a loan (Table 3.53) and they are less likely to rate access to formal credit as minor or no obstacle at all (Table 3.54). Also, we see that construction firms are more likely to cite informal financial constraints (Table 3.55).

3.7.3 ICT Use, Business Networks and Perception of Financing Obstacles

It appears that firms that engage in business networks are more likely to indicate they are less financially constrained, both with regards to formal finance and informal finance. Networks facilitate and enable information to flow between firms, providing a basis for trade, credit and insurance options. This is consistent with the conclusion by Atieno (2009) that cohesive solidarity networks can substitute for market supporting institutions. Larger firms are more likely to say that they are credit constrained. This could be both a reality and a perception since there is a typical regularity in literature which argues that some firms are likely to shift the blame to financing obstacles when in fact they have some blames to carry (Beck, Demirguc-Kunt and Maksimovic, 2005). It may well be that these firms which are more exposed to credit market, are vocal about their experience; hence they are likely to state more financial obstacles than they actually face. Uses of mobile phones can have a positive impact on development through communication channels and development projects. This is consistent with findings from Aker & Mbiti (2011, p. 20-26) who conclude that phones or ICT in general connects families, brings market information, reduces search costs, improves efficiency between firms, creates additional employment, and reduces risks for the firm. They thus enhance chances of receiving loans.

3.8 Conclusion

This essay, which is a descriptive and quantitative analysis of access to finance by SMEs in Kenya, has interesting empirical findings. The essay studies access to credit by SMEs and the factors that determine whether a firm applies for loans, whether it receives credit or gets rejected, as well as how each firm characterizes the impact of access to finance on

their performance. Because this is a discrete choice model, we employ probit model as appropriate quantitative tool to analyze and gauge the impact of each factor on the likelihood of loan approval or rejection, and the firms' perception of finance as a major or minor constraint.

We highlight four main emerging findings:

- First, about 48% of businesses fall in the microenterprise category, defined as firms whose size ranges between one and four employees? About 35.6% of the sampled SMEs are small enterprises, 13% are medium enterprises, and about 4% are large enterprises.
- Second, small size is a disadvantage; there exists a size bias. The study finds that larger firms have greater chances of receiving loans than smaller SMEs and are less likely to rate lack of access to formal finance as a constraint. This is consistent with the literature which finds that the smallest firms face the most binding financial and legal constraints.
- Third, some SMES are more likely to self-select out of the credit market if they perceive that they will be rejected due to lack of collateral and credit history. Based on this analysis we could infer self-exclusion from the application behavior of the firms. Wholesalers, agribusiness and firms that own a website, for instance, are more likely to apply for a loan while other sectors are less likely to apply for credit. There is evidence in literature about 'sectoral selection' in that women tend to select themselves into firms that depend less on external finance. This state of affairs also greatly reduces any chance of women-owned firm to apply for credit (see Table 3.57).

- Fourth and finally, there is an ICT impact on access to finance. We find that firms that own a website are more likely to apply for loans while at the same time those who own cell phones are likely to be credit constrained.

The essay validates the role of three important factors with respect to access to finance. First, there is a size bias in the sense that larger firms are more likely to access credit and less likely to indicate financing constraints. The policy implication of this result is that there is need to further spread access to financial services to reach out to both the unbanked and bottom of the pyramid. This strategy could go a long way to ameliorate the size bias, since smaller firms on average are more likely to experience more severe constraints to access for formal finance.

Second, we find that firms which use business networks are more likely to face fewer financing constraint. Third, we find that firms that own a website are more likely to apply for loans. We speculate that owning website reflects a greater access to information, or that those firms with websites are more visible and that this is a bonus in the credit market.

In summary, the paper has attempted to provide evidence in favor of promoting financial inclusion and why access to finance matters a great deal for the performance of SMEs and their impact on the economy and poverty reduction. We cautiously conclude that firm size, the level of education and business networks are significant determinants of access to credit for SMEs.

Table 3.1: Characteristics of Selected Commercial Banks in Kenya, 2011 and 2012

Bank	Year of creation	No of Branches	State's share (%)	Public share (%)	Total assets (million $)	Deposits (million $)	Loans (million $)	Loan /Deposits (%)	Total Current Employment
Bank of India	-	4							
Chase Bank*	1996	22			566.3	397.6	289.2	73	400
Commercial Bank of Africa	1962	21	0	100	1,143	922	549	59.6	536
Consolidated	1989	17	100	0	180.2	1,41.3	108.2	76.6	265
Development	1963	1							
Equity Bank	1984	132	0	100	2,076	1,477	1,249	85	5,565
Family Bank*	1984	64	0	100	1.2	0.3	0.22	80	1200
Faulu	2009	33				337	422	125	800
KCB	1896	170	17.5	82.5	3940	2511	2203	88	5,000
I & M		19			890	661	550	83	550

*Means that some of the figures were provided to me in Kenya shillings and I have exchanged them to dollars using the official exchange rate of KSh.83.6 = $1 as of May 2012.

Table 3.2: Growth in Customer and SME Accounts in 2012 (in Million)

Bank Name	Customer Bank Accounts			Customer SME Accounts		
	July 2011	August 2011	March 2012	July 2011	August 2011	March 2012
Bank of India	-					
Chase Bank	0.5	0.65	1.5	0.2	0.28	0.49
Commercial Bank of Africa	0.002671	0.002815	0.00294			
Consolidated	0.033654	0.35272	0.046786	0.033653	0.03514	0.046245
Development	0.003726	0.003726	0.002666	0.000022	0.000022	0.00006
Equity Bank	5.864,51	6.000,968	6.869,205			
Family Bank	1	1	1.2	0.2	0.25	0.3
Faulu	0.358883	0.329875	0.316485			
KCB	1	1.6	1.8			
I & M	0.052641	0.053485	0.059147	0.004201	0.00431	0.00464

Table 3.3: Kenya Commercial Bank Lending to SMEs, 2012

Bank Name	Lending Size (in US$)	
	Minimum Loan (Ever Approved)	Maximum Loan (Ever approved)
Bank of India	-	
Chase Bank	24,096	11,927,710
Commercial Bank of Africa	6,024	1,313,253
Consolidated	1,000	1,500,000
Development	12,000	714,000
Equity Bank	11,893	11,892,608
Family Bank	25,000	600,000
Faulu	6,024	6,024,000
KCB	1,500	577,000
I & M	10,000	500,000

Table 3.4: How Banks Describe their Top SMEs

Bank Name	Individual Bank Assessment
Commercial Bank of Africa	Our top SMEs are in : Real estate; Building & Construction; Business services; Transport, Manufacturing and Individuals in the property development sector.
Consolidated Bank	Our three of top five SME borrowers are in retail and wholesale business; The businesses are mostly family owned; The other two are in real estate and one of them is an investment group, and Retail and wholesale sectors as well.
Development Bank	Growing and exporting of cut flowers; Provision of education services; Manufacturing; Plastic products, industrial spares, and fabrication of steel products; General trading; Building and Civil Engineering contractors & Real Estate developers; In addition to serving SMEs, DBK serves all other, and categories of corporate.
Equity Bank	Characteristics of our top SMEs : They have inadequate education; Inadequate business skills and management skills Inadequate capital; Lack of access to credit; global financial and economic crisis increases cost of financial services and a drop in demand for credit; low levels of relationship management makes it difficult for their businesses to be seen as viable for lending; They also do their businesses in unsupportive national policy and regulatory environment; Technological changes affect their business operations/whole sectors; Poor infrastructure (roads, electricity etc) also affect them so much; They have very scanty markets information; Equity does businesses in Building and Construction, and Agriculture, Mining and Manufacturing
Family Bank	Large business with organized structures.
Faulu	Bottom of the pyramid customers through group lending

	methodology.
KCB	They have: Turnover from above Kes 100, 000; Loan facility from US$ 350,000 to 36 million, and Number of employees above 20.
I & M	We serve mid and large corporate sector; We also serve agro-based exporters, and We also serve mid and large sized mortgages market.

Table 3. 5: How Kenya's Banks Rank 5 C's When Appraising SME Projects, 2012

Ranking Criterion	Major Obstacle	Moderate Obstacle	Minor Obstacle	Not Obstacle
Character of the owners	8		1	
Capacity of the firm	7	1	1	
Collateral Requirement	4	5		
Firm initial capital	2	6	1	
Macroeconomic conditions	3	5		1

Table 3.6: Products, Technology and Indicators of Performance

Name	Customized Products	Partnering Development Agencies	Role of Mobile Technology	Steps Toward Improving Customer Service	Ways to Expand Access Frontier to all ,specially SMEs
Bank of India	-				
Chase Bank	Invoice discounting; Daraja loan; Kilele planet –portal for SMEs; Taalamika – education product; Kilele current account	EIB; government of Kenya; women enterprise fund , and in discussions with about 10 others	clients able to transact through agents; Synergies i.e, post bank and chase bank; Mobile banking; Internet banking On the system we use finals to try and profile the SMEs	agency banking and Promotions on ATM utilization	through strategic partnerships that enables the bank to get cheaper lines which we can later on lend cheaply to the public i.e women enterprise fund lending at 8%
Commercial Bank of Africa	Overdrafts; Term Loans; Asset Financing; Invoice Discounting Mortgages; Construction	GOWE: (Growth Oriented Women Entrepreneurs) and GROFIN	Mobile technology has enabled the bank to tap a wider range of customers with a wide	By developing e-banking products, mobile solutions e.g. M-Pesa and partnering with other banks for provision of	Opening more branches; Developing products to suit SMEs, and Playing an advisory role to SME clients

	Loan		geographical reach; Information systems are currently not developed enough to facilitate lending to SMEs	ATM services e.g. Kenswitch, Pesapoint etc	
Consolidated Bank	LPO financing; Invoice discounting; Asset finance; Bind bonds; Guarantees; Mortgage financing	European Investment Bank (EIB); Industrial and Commercial Development Corporation (ICDC)	Mobile technology has mostly helped in money transfer services to remote areas of the country. However due to illiteracy in the rural areas it has not been possible to have a major impact as far as other banking services are concerned;	Introduction of technology driven services e.g. mobile banking, internet banking and ATMs; Increasing foot-print and service outlets by use of agents; For savings –Use of bonus interest where no withdrawals have been made over a certain time-frame, elimination of charges for savings accounts	By use of investment groups and informal merry go-round groups. Members in these groups will be required to guarantee one another; Expanding reach to the under and un-banked citizens through the use of banking agents and mobile banking services using mobile phones

			Information systems are still not developed adequately to facilitate lending in SMEs. This is especially pronounced in the area of credit rating.	and offering a good return through competitive interest rates.	
Development Bank	Trade Finance Products; Working capital facilities; Short term loans	Regional & International Financial Institutions – in lines of Credit for on lending.	Exploring a suitable core information system considering the bank's mandate /target market.	Efficient service delivery system is in place and is continuously reviewed through appropriate feedback system / surveys.	Secure appropriate lines of credit (sources of funds) to support the SMEs; Continue to develop suitable products targeting SMEs; Improve on accessibility through sustainable outreach programmes.

Equity Bank	Working capital; Asset finance; Mortgage; Development Plot purchase; Project Finance	This has been achieved through partnering with Developme nt Financial Institutions (DFI's) e.g IFC, Blue Orchard, EIB, and CDB.	The platform allows 24/7 access to banking services and also improves communicatio n between customer and bank by way of transaction alerts.	There are various initiatives that the bank has employed to ensure improved customer service, and reduce long waiting hours at bank premises. These include, Offering of financial literacy training through the Equity Group Foundation as part of the Bank's CSR, No account maintenance fees are charged to customers. Cash deposits to accounts are free irrespective of the bank channel used. Paying interest on deposit accounts with	Creation of SME centers supported by active SME business club; Re-designing & tailoring products and services; Provisional of more SME-friendly delivery channels like e-banking Provision of advisory services; Relationship management approach

				more competitive rates on the term deposits. Alternate Banking Channels - these have widened the bank network to reach greater populace. The Channels include	
Family	Asset Finance; Business loans; Trade finance; Overdrafts; Capex loans	FSD ; Euro Bank, and Africa Guarantee Fund	Increasing the reach of our customers; Reducing the costs of doing business; and Improving turnaround time in decision making	Investing in technology and Investing in Agency Banking	Seminars Being involved in their workshops Direct Marketing Referrals
Faulu	Biashara SME	AfDB	Everybody from the rich to the poor has been able to benefit from their mobile phone; our customers	Customer care – There have been a lot of trainings on how to handle customers; Customer satisfaction surveys to	Offering competitively priced loans; Training our customers on mobile banking; Training our clients on how to

			can now access money from their accounts through their phones; Currently lending to SME is not done on phone but that is the next technology; The current information system has not been designed in a way that our SME clients can pay loans through the phone but through upgrade we will be able to achieve this.	understand the areas of weaknesses; Supervision and monitoring of the branches ; We do not have challenges with long queues , most of our banking halls are not very congested	utilize their loan funds to grow business; Group lending methodology
KCB	Biashara club; Mapato account,	USAID, IFC	Great deal- mobile banking has created	Opening agency banking where clientele can get same service as	Referrals from the large corporate; The bank suppliers;

	Simba accounts		flexibility in payment that one can transfer money from phone to the account and from the account to the phone; Mobile banking has created branchless banking and is enabling the banks to reach a wider clientele who were previously using only mobile; Agent banking is also facilitated by mobile technology in that a customer does	banking; Signing in customers in different channels of transacting like mobi bank, ATM and internet banking; There are products that are tailor-made to encourage savings with interest rates and discourage frequent withdrawals (Simba Savings)	Specialized bank employees trained to deal with this segment from small to growth; Value chain from corporate (s)

			not have to come to the bank to open an account or give instructions.		
I & M	Composite loans to take care of working capital and fixed asset financing; Composite working capital facilities such as LC cum overdraft	IFC and Proparco (Proparco-French Developme nt Bank)	With the help of mobile technology, mobile banking has taken off very well. Mobile banking has become very popular in the context of domestic and international remittances. However, we have not seen any major impact on SME lending business. I & M is not into micro segment. We are more into middle	We spend a lot of time and money on training of our staff in the branches and delivery points; We run on most advanced technology platform, which ensures all our branches and departments are networked on a real-time basis. This helps us in providing anywhere and everywhere banking services to our customers; We have launched internet banking and	We are focusing more on SMEs by stipulating a specific budget for SMEs based asset financing; We are penetrating in the market in partnership with various credit insurance schemes, whereby risk perception for the Bank is minimized; We have simplified our process for SME business, with delegation of sanctioning powers to middle management and simplifying credit

			segment	mobile banking recently, which helps our customers in managing in their accounts by them. This is a major leap in terms of technology based services; We constantly undertake business process re-engineering to ensure our process are smooth and deliver services in the most efficient manner	appraisal formats

Table 3.7: Distribution of Nonperforming Loans among Businesses, 2005-2011

Chase Bank	Year	Total NPL (%)	% of NPL Due to SMEs	% of NPL Due to Large Businesses
	2008	3		
	2009	3		
	2010	3		
	2011	3		
Consolidated Bank	2005	98		
	2006	83		
	2007	53		
	2008	45		
	2009	22		
	2010	16		
	2011	11		
	2012	10		
Equity Bank	2004	10.90		
	2005	11.08		
	2006	6.95		
	2007	5.39		
	2008	5.84		
	2009	7.36	8.11	11.66
	2010	4.65	4.75	2.24
	2011	2.84	1.87	0.59
	2012	3.18	1.68	2.55
Faulu Kenya	2010	18.45		
	2011	10.41		
	2012	8.3		
I & M	2010	<1		
	2011	<1		
	2012	<1		

Table 3.8: Bank Expectations from Central Bank and SMEs

Name	Things Banks Wish to See Happen in Order to Expand Lending to SMES	Commercial bank Expectations from Central Bank of Kenya
Bank of India	-	-
Chase Bank	More training on financial literacy; More workshops to entrepreneurs on raising capital; More strategic partners who will lend funds to financial institutions and they later on lend cheaply; Cheaper sources of funds thus reducing cost of funds, and The government continues intervention in reviving various sectors.	The Kenyan central bank has come a long way and we are proud of what they have done; Islamic banking needs more scholars at CBK; Regulation of MFIs, and SACCOs to the equivalent of banks to give us all at a level playing ground
Commercial Bank of Africa	Provide accurate information; Utilization of facilities granted for the purpose intended, and Availability of industry information / Data.	Lower interest rate; More controls on inflation, and foreign bureaus etc to avoid erratic business environment.
Consolidated Bank	Create proper structures (management and governance); Keep proper records; Formalize their business (not jacks of all trades!), and Improve on financial discipline.	Maintain a stable interest and exchange rate regime; Maintain a low interest and inflation regime, and Build confidence among the public for the banking sector.
Development Bank	SMEs to maintain records and other relevant information on business activities in the prescribed form, including statutory accounts; SMEs to operate businesses on acceptable standards and practices; SMEs to honor obligations on borrowed funds, and Banks / Financial institutions to provide funds with appropriate aspects such as cost and tenor; and to offer relevant products, and Regulatory authorities to ensure conducive business	Ensure Price Stability – including cost of funds; Ensure Exchange rate stability, and Ensure effective regulations and guidelines, and monitoring of the institutions.

	environment	
Equity Bank	Better legislation to foster better business working environment (e.g. business registration, tax compliance, etc) ; information sharing; Use of technology by SMEs & government, and Adoption of new innovations suited for emerging markets.	Speedier change/review of guidelines to accommodate changes in the market e.g. new innovations, development of trading blocs like EAC, etc; and Provision of business related data or investment opportunities through some portal or any other means.
Faulu	Investing in profit making businesses – avoid miss use of loan; Timely loan repayment; Saving with Faulu; Consistency in banking – avoid bank hoping, and Transparency during loan appraisal.	Reduce MFI regulations and licensing, and Lower lending rates.
KCB	Regulation; Stable macroeconomic conditions i. e stable shilling, inflation; Government subsidies on the exports to start-ups; Government to guarantee the start-ups, and Strong enablers like the infrastructure.	Classification of the SME assets, and Reduce the BCR rate which affects the lending rates
I & M	Bookkeeping Proper management.	Continue being a stronger regulator, and Maintain stable fiscal and monetary policy environment.

Table 3.9: Kenya Banking Annual Lending and Number of SMEs Served, 2011

Bank	Variable/Year	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
CBA	Loan in million US$								12.3	6.9	8.4	13.1	
	# SMEs								2057	2541	2671	2880	
Consolidated	Loan in 000 US$	9.1	12.7	13.2	13.3	15.3	19.6	26.7	32.7	49.7	72.0	109.5	118.7
	# SMEs												
Development	Loan in 000 US$									149.2	92.1	118.6	292.9
	# SMEs									43	27	29	60
Equity Bank	Loan in 000 US$							88.8	105.8	153.8	139.3	266.1	112.7
	# SMEs							2,788	4,667	11,107	11,247	15,231	6,312
I & M													95.0
													3900

Table 3.10: Mobile Payment Statistics, March 2007- December 2011

Year	Agents	Customers(Million)	Transactions(Million)	Value(Ksh. billion)
2007	1,582	1.35	5.47	16.32
2008	6,104	5.08	62.74	166.57
2009	23,012	8.88	193.5	473.41
2010	39,449	16.45	311.05	732.22
2011	50,471	19.19	433	1,169.15

Source: Author's compilation based on CBK Industry Surveys, 2011

Table 3.11: Agency Banking, Performance and Distribution Networks across Kenya

Institution	Date of Agency Network Approval	No. of Agents Appointed	Percentage of Total agents
Equity Bank Ltd	18th May 2010	5,874	73.4%
Kenya Commercial Bank Ltd	22nd July 2010	1,380	17.3%
Transnational Bank	25th October 2010	-	-
Consolidated Bank	23rd November 2010	4	0.05%
Co-operative Bank of Kenya Ltd	20th December 2010	578	7.2%
Chase Bank Ltd	2nd February 2011	37	0.46%
Family Bank Ltd	9th June 2011	-	-
First Community Bank	21st June 2011	6	0.08%
Diamond Trust Bank	1st July 2011	-	-
Citibank	4th July 2011	120	1.5%
Total		7,999	

Source: BSD Databank and off-site surveillance Returns, 2012

Table 3.12: Agency Model as Expanding Financial Services

Institution	Number of Transactions Per Transaction Type				
	Cash Deposit	Cash Withdrawal	Bill Payment	Account/ Opening /Balance Enquiries	Total
Equity Bank	1,886,533	1,458,624	15,815	1,247,042	4,608,014
KCB	44,774	9,598	-	-	54,372
Transnational	-	-	-	-	-
Consolidated	-	-	-	-	-
Co-operative	32,251	50,743	1,513	20,945	105,452
Chase Bank	-	-	-	44	44
Family Bank	-	-	-	-	-
First Community	-	-	-	-	-
Diamond Trust Bank	-	-	-	-	-
Citibank	1,375	4	-	-	1,379
	1,964,933	1,518,969	17,328	1,268,031	4,769,261

Source: BSD Databank and Off-site Surveillance Returns, 2012

Table 3.13: Agent Transaction Types

Institution	Transaction Type			
	Cash Deposits (Ksh. Mn)	Cash Withdrawal (Ksh.Mn)	Bill Payment (Ksh.Mn)	Total (Ksh. Mn)
Equity Bank	13,473.18	8,019.31	70.35	21,562.84
KCB	332.70	57.85	-	390.56
Transnational Bank	-	-	-	-
Consolidated Bank	-	-	-	-
Cooperative Bank	242.77	297.63	2.78	543.18
Chase Bank	-	-	-	-
Family Bank	-	-	-	
First Community	-	-	-	
Diamond Trust	-	-	-	
Citibank	247.0	1.60	-	248.60
Total	14,295.65	8,376.39	73.13	22,745.18

Source: BSD Databank and off-site surveillance returns, 2012

Table 3.14: Geographical Distribution of Financial Services in Kenya

Province	No. of Transactions	Percentage of Transactions	Value of Transactions Conducted (Kshs'M)	Percentage of Value of Transactions
Nairobi	1,436,237	30%	7,457.96	33%
Central	1,062,840	22%	5,413.64	24%
Eastern	998,444	21%	4,744.56	21%
Rift Valley	447,063	9%	2,140.57	9%
Western	297,658	6%	1,032.35	5%
Nyanza	306,439	6%	1,007.97	4%
Coast	196,236	4%	807.72	4%
North Eastern	24,346	1%	140.15	1%
Total	4,769,261	100%	22,745.18	100%

Source: BSD Databank and off-site surveillance returns, 2012

Table 3.15 : East African Comparative ATM Expansion, 2004-2010

Number of ATM Machines Across The Great Lakes Region							
Country/Year	2004	2005	2006	2007	2008	2009	2010
Ethiopia	8	8	13	18	31	46	145
Kenya	320	323	617	1,012.00	1,325	1,655	...
Rwanda	2	12	12	16	22	47	...
Sudan	0	0	87	200	292	390	681
Tanzania	67	120	139	424	591	798	
Uganda	152	220	267	321	405	536	599

Source: Authors' compilation using IMF Database, 2013

Table 3.16: A Glance at Kenyan Banking Network, ATMs and DTMs Growth, 1997-2011

Year	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Branches	695	692	530	465	494	466	512	532	534	575	740	887	996	1063	1102
ATM					166		230	324	555	617	1012	1325	1717	1979	2183
DTMs													1	5	6

Source: Author's compilation using the Central of Kenya various Publications, 2012

Table 3.17: Selected Bank Branch Distribution by Provinces, 1991-2012

		The Total Number of Branch Networks Per Province Per Year, 1991-2012							
Bank Name	Year	Central	Coast	Eastern	Nairobi	Northern Eastern	Nyanza	Rift Valley	Western Province
Chase Bank (32)	2012		5		22			2	3
Consolidated Bank (17)	1991	4	2	2	4	0	0	0	0
	1992	4	2	2	4	0	0	0	0
	1993	4	2	2	4	0	0	0	0
	1994	4	2	2	4	0	0	0	0
	1995	4	2	2	4	0	0	0	0
	1996	4	2	2	4	0	0	0	0
	1997	4	2	2	4	0	0	0	0
	1998	4	2	2	4	0	0	0	0
	1999	4	2	2	2	0	0	0	0
	2000	3	2	2	2	0	0	0	0
	2001	3	2	4	2	0	0	0	0
	2002	3	2	4	2	0	0	0	0
	2003	3	1	5	2	0	0	0	0
	2004	3	1	5	2	0	0	0	0
	2005	3	1	5	2	0	0	0	0
	2006	3	1	5	2	0	0	0	0
	2007	3	1	5	2	0	0	0	0
	2008	3	1	5	2	0	0	0	0
	2009	3	1	5	3	0	0	0	0
	2010	3	1	5	4	0	0	0	0
	2011	3	1	5	5	0	0	3	0
	2012	3	1	5	5	0	0	3	0

I & M (19)	2010	0	1	0	13	0	1	1	0
	2011		2		13		1	1	
	2012		2		14		1	2	
Development Bank (1)	2012				1				
Equity Bank (142)	1991	4	0	0	2	0	0	0	0
	1992	4	0	0	2	0	0	0	0
	1993	4	0	0	2	0	0	0	0
	1994	4	0	0	2	0	0	0	0
	1995	4	0	0	2	0	0	0	0
	1996	4	0	0	2	0	0	0	0
	1997	4	0	0	2	0	0	0	0
	1998	6	0	0	2	0	0	0	0
	1999	7	0	0	2	0	0	0	0
	2000	9	0	0	3	0	0	0	0
	2001	9	0	0	3	0	0	0	0
	2002	9	0	0	3	0	0	0	0
	2003	9	0	1	4	0	0	1	0
	2004	10	0	3	5	0	0	3	0
	2005	12	1	3	8	0	1	6	0
	2006	14	1	6	10	0	1	8	0
	2007	20	4	9	16	2	3	11	3
	2008	24	5	11	23	2	7	18	5
	2009	25	6	14	26	4	7	22	7
	2010	26	9	14	29	4	7	23	8
	2011	26	11	14	34	4	9	25	8
	2012	26	12	15	40	5	10	26	8

Faulu Kenya (33)	2012	6	4	3	6		1	6	6
KCB(170)	2012	26	26	14	37	7	10	31	19
Family Bank (57)	2005	8							
	2006	10						2	
	2007	12						3	
	2008	10			15		1	5	2
	2009	15			17		2	7	3
	2010	16			20		3	8	4
	2011	18			20		3	10	4
	2012	20			20		3	10	4

Table 3.18: Distribution of Agents by Province and Selected Banks, 2007-2012

	The Total Number of Bank Agents Per Province Per Year, 1991-2012								Total
Bank Name	Year	Central	Coast	Eastern	Nairobi	Northern Eastern	Nyanza	Rift Valley	Western Province
Chase Bank (380)	2012								
Consolidated Bank (30)	2007	0	0	0	0	0	0	0	0
	2008	0	0	0	0	0	0	0	0
	2009	0	0	0	0	0	0	0	0
	2010	0	0	0	0	0	0	0	0
	2011	0	0	0	0	0	0	0	0
	2012	4	4	9	5	0	0	8	0
Equity Bank (6,123)	2010	156	30	73	103	0	36	81	39
	2011	759	244	448	595	51	279	769	237
	2012	476	109	279	440	26	117	556	220
KCB (2,573)[21]	2012	431	377	362	332	26	305	522	218

[21] After two months, the interviewee wrote back to me clarifying that they have revised their numbers. Thus, as of June 30, 2012 there were 2573 and in September the same year, that figure rose to 3900 which is equivalent to 52% change.

Table 3.19 A: Distribution of ATMs by Provinces

		The Total Number of Live ATMs Per Province, 1991-2012							
Bank Name	Year	Central	Coast	Eastern	Nairobi	Northern Eastern	Nyanza	Rift Valley	Western Province
Consolidated Bank	2005	0	0	2	2	0	0	0	0
	2006	3	1	5	2	0	0	0	0
	2007	3	1	5	2	0	0	0	0
	2008	3	1	5	2	0	0	0	0
	2009	3	1	5	3	0	0	0	0
	2010	3	1	5	4	0	0	0	0
	2011	3	1	5	5	0	0	3	0
	2012	3	1	5	5	0	0	3	0
I & M	2012		2		18		1	2	
Chase Bank[22] (200+)	2012								
KCB	2012	85	46	21	116	10	14	81	76
Equity Bank	2008	56	24	26	171	2	15	63	14
	2009	65	24	30	191	11	25	88	16
	2010	75	24	46	175	11	31	84	22
	2011	77	30	51	184	12	33	87	22
	2012	76	31	52	189	13	36	91	22

[22] Chase Bank has over 200 plus ATMs in the country. In addition, one of the bank interviewees states that "we are a partner to Kenswitch and through this partnership, clients can access up to 1000 ATMs and also a member of Pesapoint, with over 200 ATMs our own 24 hours."

Table 3.19 B: Bank Distribution of ATMs by Provinces, 2012

	The Total Number of Live ATMs and Ratios Per Province							
Bank Name	CL	CO	E	NBI	NE	NY	RV	W
Consolidated	3	1	5	5	0	0	3	0
I & M	0	2	0	18	0	1	2	0
KCB	85	46	21	116	10	14	81	76
Equity	76	31	52	189	13	36	91	22
Total ATMs	164	80	78	328	23	51	177	98
Population[23] (in '000000)	4.6	3.6	6.0	3.5	3.0	5.8	11.1	4.7
ATMs/1000000	35.62	22.05	12.96	93.21	7.65	8.79	15.88	20.95

NB: The names of former provinces are provided in short form; CL = Central; CO = Coast; E = Eastern; NBI = Nairobi, NE = North Eastern; NY = Nyanza; RV = Rift Valley; W = Western

[23] This population per province figures is based on my own projections using 1999 and 2009 census data from Kenya National Bureau of Statistics.

Table 3.20: Equity Bank Distribution and Growth in ATM Cards over the years

	The Total Number of ATM Cards Per Province Per Year, 1991-2012							
Year	CL	CO	E	NBI	NE	NY	RV	W
2006	74,368	15,476	25,705	122,698	0	11,658	89,839	3
2007	200,839	56,022	89,983	363,798	8,399	49,823	231,465	33,599
2008	372,506	109,603	163,892	644,178	19,502	108,932	422,878	84,871
2009	488,055	150,651	221,284	840,195	30,999	163,922	561,450	124,085
2010	599,333	186,225	275,456	1,014,772	38,692	207,010	685,012	157,468
2011	726,055	276,769	442,219	1,213,434	47,424	250,192	848,363	198,865
2012	805,728	311,482	490,909	1,340,725	63,105	279,693	952,844	224,124
Province Per Capita ATM Cards, 2009								
Population	4,383,743	3,325,307	5,668,123	3,138,369	2,310,757	5,442,711	10,006,805	4,334,282
ATM Cards	488,055	150,651	221,284	840,195	30,999	163,922	561,450	124,085
Per 100 people	11.1	4.5	3.9	26.8	1.3	3.0	5.6	2.9

NB: The names of former provinces are provided in short form; CL = Central; CO = Coast; E = Eastern; NBI = Nairobi, NE = North Eastern; NY = Nyanza; RV = Rift Valley; W = Western

Table 3. 21: Kenya's Deposit-Taking Microfinance Institutions

Name of DTM	Year Licensed	Number of Branches	Head Office
Faulu Kenya DTM Limited	21/05/2009	27	Nairobi
Kenya Women Finance Trust DTM Limited	31/03/2010	16	Nairobi
Rafiki Deposit Taking Microfinance	14/06/2011	3	Nairobi
Remu DTM Limited	31/12/2010	3	Nairobi
SMEP Deposit Taking Microfinance Limited	14/12/2010	6	Nairobi
UWEZO Deposit Taking Microfinance Limited	08/11/2010	2	Nairobi
Total		57	

Table 3.22: Distribution of Foreign Bureaus by City and Province, 2012

Province	City/Town	Number of Foreign Exchange Bureaus
Central		
Coast	Mombasa Malindi	10 2
Eastern		
Nairobi	Nairobi	92
North Eastern		0
Nyanza		0
Rift Valley	Eldoret Nakuru Namanga	2 2 1
Western	Kisumu	2
Total		111

Source: Central Bank of Kenya, 2012

Table 3. 23: Improvements in Formal Financial Inclusion over the Years, 2006-2009 (In %)

Year	Formal	Formal Other	Informal	Excluded
2006	18.5	7.8	32.4	41.3
2009	22.6	17.9	26.8	32.7
2013*				

Source: FinAccess National Survey 2009, and 2013

Table 3.24: Classification of SMEs by Gender

Gender	Number	%
Female	144	42.23
Male	193	56.60
Non-respondents	4	1.17
Total	341	100

Table 3.25: Classification of SMEs by Ethnicity

Ethnic Group	Number	%
Kikuyu	73	21.41
Kamba	65	19.06
Luo	41	12.02
Meru	28	8.21
Other Kenyans	115	33.72
Foreigners	4	1.17
Non-respondents	15	4.4
Total	341	100

Table 3.26: Classification of SMEs by Ethnicity and Gender (Row % in Parentheses)

Ethnic Group	Male	Female	Total
Kikuyu	50 (68.5)	23 (31.5)	73
Kamba	36 (55.4)	29 (44.6)	65
Luo	20 (48.8)	21 (51.2)	41
Meru	14 (50.0)	14 (50.0)	28
Other Kenyans	65 (56.5)	50 (43.5)	115
Foreigners	1 (33.3	2 (66.7)	3
Total	186 (57.2)	139 (42.8)	325
Non-respondents	7 (58.3)	5 (41.7)	12

Note = 4 firms which did not respond to the gender question

Table 3.27: Firm Classification by Legal Status

Firm Legal Status	Number	%
1. Sole proprietor	160	46.92
2. Private limited company	55	16.13
3. Public limited company	23	6.74
4. Partnership	78	22.87
5. Co-operative	13	3.81
6. Other Form	9	2.64
7. Non-respondents	3	0.88
Total	341	100

Table 3.28: Firm Size by Current Employment

Classification	Firm Size	Number	%
Microenterprise	1- 4	162	47.65
Small Enterprise	5- 19	121	35.59
Medium Enterprise	20 - 99	44	12.94
Large Enterprise	≥ 100	13	3.82
	Total	340	100

Missing =1

Table 3.29: SME Current Employment by Gender and Firm Size

Classification	Firm Size	Men	Women	total	As % of all Men	As % of all women	As % of all
Microenterprise	1- 4	91	70	161	47.15	48.61	47.77
Small Enterprise	5- 19	68	53	121	35.23	36.81	35.91
Medium Enterprise	20-99	26	17	41	13.47	11.81	12.17
Large Enterprise	≥ 100	8	4	12	4.15	2.78	3.56
	Total	193	144	337	100	100	100

Missing = 4

Table 3.30: SME Classification by Sector

Sector	Number	%
1. Retail	86	25.22
2. Business Service	64	18.77
3. Manufacturing	31	9.09
4. Wholesale	36	10.56
5. Agribusiness	28	8.21
6. Construction	15	4.40
7. Hotels	27	7.92
8. Restaurant/Catering	20	5.87
9. Repair Shops	10	2.93
10. Other Sector (e.g gas)	23	6.74
Non-respondents	1	0.29
Total	341	100

Table 3.31: SME Classification by Sector and Gender (on % representation)

Sector	Number	Distribution by Gender		Distribution by Gender as %	
		Men	Women	men	Women
1. Retail	86	47	39	44.56	27.08
2. Business Service	63	41	22	32.64	15.28
3. Manufacturing	31	17	14	16.06	9.72
4. Wholesale	36	21	15	18.65	10.42
5. Agribusiness	28	16	12	14.51	8.33
6. Construction	15	9	6	7.77	4.17
7. Hotels	27	12	15	13.99	10.42
8. Restaurants/Catering	19	11	8	9.84	5.56
9. Repair Shops	10	7	3	5.18	2.08
10. Other Sector (e.g gas)	22	12	10	11.40	6.94
Total	337	193	144	57.27	42.73

Note: Missing = 4

Table 3.32: SME Classification by Sector and Firm Size

Sector	Number of Employees (% in Parentheses)			
	1- 4	5-19	20-99	≥ 100
1. Retail	64 (74.42)	18 (20.93)	2 (2.33)	2 (2.33)
2. Business Service	35 (54.69)	19 (29.69)	8 (12.50)	2 (3.13)
3. Manufacturing	10 (32.26)	12 (38.71)	6 (19.35)	3 (9.68)
4. Wholesale	15 (41.67)	18 (50.00)	2 (5.56)	1 (2.78)
5. Agribusiness	2 (7.14)	15 (53.57)	10 (35.71)	1 (3.57)
6. Construction	1 (6.67)	7 (46.67)	5 (33.33)	2 (13.33)
7. Hotels	11 (40.74)	12 (44.44)	4 (14.81)	-
8. Restaurants/Catering	9 (45)	7 (35)	4 (20)	-
9. Repair Shops	3 (30)	6 (60)	1 (10)	-
10. Other Sector (e.g gas)	12 (52.17)	7 (30.43)	3 (13.04)	1 (4.35)
Total(as % of 341)	162 (47.51)	121 (35.48)	45 (13.20)	13 (3.81)

Table 3.33: Usage of ATMs, Bank Visits and Under Mattress Facilities

Facility	Number	%
ATM Withdrawals	166	48.68
Bank Visits	115	33.72
Store Safekeeping Vault	38	11.14
Both ATM Withdrawals and Bank Visits	18	5.28
Non-respondents	4	1.17
Total	341	100

Table 3.34: Firm Self-Appraisal

Overall Assessment	Number	%
Technology Adoption and Managerial Competence	259	75.95
Managerial Incompetence and technology Neglect	21	6.16
Unfavorable Business Environment	47	13.78
Non-respondents	14	4.11
Total	341	100

Table 3.35: Loan Characteristics of SMEs

Status	Number	%
Received Approvals (success Rate)	114	66.67
Denied Applications (rejection rate)	57	33.33
Total Loan Applications	171	100.00
Memorandum: Loan Application % of Total # of SMEs	171/341	50.15
Acceptance rate(Loan Approval As % of total # of SMEs)	114/341	33.43

Table 3.36: Loan Approval by Lender

Lender Type	Number	%
Commercial Banks	57	50.44
Microfinance Institutions	18	15.93
Informal Finance /Money Lenders/Family Members	13	11.50
Others	25	22.12
Total	113	100

Table 3.37: Loan Approval by Gender

Gender	Number	%	% (of gender)
Male	64	56.64	33.16
Female	49	43.36	34.03
Total	113	100	33.14

(Note: One Loan Applicant did not specify gender; missing = 1)

Table 3.38: Loan Approval by Sector

Sector	Quantity	% of the total Approved	Loans Approved as % of Sectoral Totals
1. Retail	24	21.05	27.91
2. Business Service	24	21.05	38.10
3. Manufacturing	10	8.77	32.26
4. Wholesale	10	8.77	27.78
5. Agribusiness	9	7.89	32.14
6. Construction	8	7.02	53.33
7. Hotels	7	6.14	25.93
8. Restaurants/Catering	9	7.89	47.37
9. Repair Shops	4	3.51	40.00
10. Other Sector (e.g gas)	9	7.89	40.91
Total	114	100	33.43

Table 3.39: Loan Approval by Firm Size

Size Classification	Firm Employees	Quantity	% of the total Approved Loans	As % of Firm Size Classification Total
Microenterprise	1-4	47	41.23	29.01
Small Enterprise	5- 19	35	29.82	28.10
Medium Enterprise	20-99	28	24.56	63.64
Large Enterprises	≥ 100	5-	4.39	38.46
	Total	114	100	33.43

Table 3.40: Why Firm Did Not Apply for Loan

Reason Self-Selection Out from Credit Market[24]	Number	% of Total Constraint	% of All (163)
1. Firm does not think it will be approved	32	41.56	19.63
2. Application procedures are too burdensome	14	18.18	8.59
3. Collateral requirements are strict	14	18.18	8.59
4. Interest rates are too high	17	22.08	10.43
Total Constrained Firms	77	100.00	47.24
5. The firm does not need loan (unconstrained firms)	86	-	52.76

Table 3.41: Why Firm Did Not Apply for Loan by Gender

Reasons	Men	Women	Total	As % of all men	As % of all women	% Total
1. It does not think it will be approved	21	11	32	10.88	7.64	19.88
2. Application procedures are too burdensome	7	7	14	3.63	4.86	8.70
3. Collateral requirements are strict	8	6	14	4.15	4.17	8.70
4. Interest rates are too high	8	9	17	4.15	6.25	10.56
5. The firm does not need loan	49	35	84	25.39	24.31	52.17
Total	93	68	161	48.19	17.3	100

Two did not specify gender, Missing = 2

[24] This means that the firms had wanted to apply but chose to not because of the reasons enumerated one through four.

Table 3.42: Why Firm Did Not Apply for Loan by Sector (% in parentheses)

Category	Doubted Approval	Burdensome Application	Strict Collateral	High Interest	No Need
1. Retail: quantity	12 (22.64)	2 (3.77)	3 (5.66)	5 (9.43)	31 (58.49)
2. Business Service	8 (25.81)	4 (12.90)	4 (12.90)	3 (9.68)	12 (38.71)
3. Manufacturing	3 (21.43)	1 (7.14)	3 (21.43)	1 (7.14)	6 (42.86)
4. Wholesale	2 (22.22)	1 (11.11)	1 (11.11)	-	5 (55.56)
5. Agribusiness	2 (20.00)	-	1 (10.00)	1 (10.00)	6 (60.00)
6. Construction	-	-	2 (33.33)	1 (16.67)	3 (50.00)
7. Hotels	2 (11.76)	3 (17.65)	-	4 (23.53)	8 (47.06)
8. Restaurants/ Catering	-	2 (33.33)	-	1 (16.67)	3 (50.00)
9. Repair Shops	-	-	-		4 (100.00)
10. Other Sector (e.g gas)	3 (25.00)	1 (8.33)	-	1 (8.33)	7 (58.33)
Total as % of 341	32 (9.38)	14 (4.11)	14 (4.11)	17 (4.99)	85 (24.93)

Table 3.43: Financing as Constraint to Firm Growth

Source of Credit	SMEs Identifying a Factor as a Constraint (% in parentheses)				
	Major	Moderate	Minor	Never	Total Sample
Formal Finance	70 (20.83.)	196 (58.33)	43 (12.80)	27 (8.04)	336 (98.53)
Microfinance	39 (11.75)	145 (43.67)	75 (22.59)	73 (21.99)	332 (97.36)
Informal Finance	50 (15.06)	144 (43.37)	88 (26.51)	50 (15.06)	332 (97.36)

Table 3.44: Financing Constraint to Firm Growth by SME Gender

Source of Credit	Number Identifying a Factor as a Constraint			% Identifying a Factor as a Constraint		
	Male	Female	Total	Male	Female	Total
Formal Finance	191	142	333	98.96	98.61	97.65
Microfinance	188	141	329	97.41	97.92	96.48
Informal Finance	189	140	329	97.93	97.22	96.48

Table 3.45: Financing Constraint to Firm Growth by SME Size

Source of Credit	Firm Identifying a Credit Source as a Major Constraint (% in parenthesis)			
	Microenterprise	Small Enterprise	Medium Enterprise	Large Enterprise
Formal Finance	158 (97.53)	121 (100)	44 (100)	13 (100)
Microfinance	158 (97.53)	119 (98.35)	42 (95.54)	12 (92.31)
Informal Finance	157 (96.91)	121 (100)	42 (95.54)	13 (100)

Missing = 4

Table 3.46: Credit Allocation and Types of Borrowers

Type of Borrowers	Number	% of Total Sample
Successful borrowers	114	34.13
Denied Borrowers	57	17.07
Discouraged Borrowers	77	23.05
Non-borrowers	86	25.75
Total	334	100.00

Table 3.47: Lack of Access to Market as a Constraint on Firm Performance by Size

Number Identifying Access to Market as a Constraint (% in bracket of each size)				
Firm Size	Major	Moderate	Minor	Never
1-4	28 (17.72)	92 (58.23)	25 (15.82)	13 (8.23)
5-19	25 (21.19)	65 (55.08)	19 (16.10)	9 (7.63)
20-99	7 (15.91)	18 (40.91)	15 (34.09)	4 (9.09)
≥ 100	1 (7.69)	5 (38.46)	6 (46.15)	1 (7.69)
Total(% out of 341)	61 (17.89)	180 (52.79)	65 (19.06)	27 (7.92)

Table 3.48: Lack of access to Market as a Constraint on Firm Performance by Gender

Category	Male (% in bracket)	Female (% in bracket)
Major	36 (18.65)	25 (17.36)
Moderate	103 (53.37)	76 (53.47)
Minor	32 (16.58)	31 (21.53)
Never	17 (8.81)	9 (6.25)
Non-respondents	5 (0.25)	2 (1.39)
Total (as % of 337 SMEs)	193 (57.27)	144 (42.73)

Missing = 4

Table 3.49: Lack of Access to Market as a Constraint on Performance by Sector

Category	Major	Moderate	Minor	Never
1. Retail	23 (26.74)	45 (52.33)	11 (12.79)	7 (8.14)
2. Business Service	13 (20.97)	28 (45.16)	17 (27.42)	4 (6.45)
3. Manufacturing	3 (9.68)	19 (61.29)	6 (19.35)	3 (9.68)
4. Wholesale	3 (8.57)	22 (62.86)	8 (22.86)	2 (5.71)
5. Agribusiness	4 (14.29)	17 (60.71)	7 (25.00)	-
6. Construction	3 (20.00)	9 (60.00)	2 (13.33)	1 (6.67)
7. Hotels	5 (19.23)	14 (53.85)	4 (15.38)	3 (11.54)
8. Restaurants/Catering	5 (26.32)	7 (36.84)	4 (21.05)	3 (15.79)
9. Repair Shops	-	7 (70.00)	1 (10.00)	2 (20.00)
10. Other Sector (e.g gas)	2 (9.52)	12 (57.14)	5 (23.81)	2 (9.52)
Total (As % of all 341 firms)	61 (17.89)	180 (52.79)	65 (19.06)	27 (7.92)

Missing = 8

Table 3.50: Summary Statistics for Selected Variables

Variable Name /Description	Mean	Median	St. dev.	Max	Min	Observations
Time to Start SME	0.66	0.33	0.68	4	0.08	337
Years of business Operations	4.36	3	4.48	54	0.08	340
Current Number of Employees	15.76	5	33.73	333	1	340
Employment History	15.66	5	33.92	333	1	336
Revenue in 2012 (‘000 $)	282	64	1,103	14,000	0.08	0.318
Years of Schooling of the Firm Head	14.47	15	5.05	27	0	336
Average Distance from Nairobi in Miles	1.64	0	7.69	40	0	341
Number of Employees in year when firm received loan	14.01	4	32.11	333	1	337
Revenue in year when loan was received (‘000 $)	279.2	64.0	1,089.2	14,000.0	0.12	0.32
Loan received in the latest year	15.0		88.4	1,167.1	0	0.33

Table 3.51: Correlation between Employment, Revenue and Loan Received

	Employment	Revenue	Loan Amount
Employment	1		
Revenue	0.40	1	
Loan Amount	0.08	0.11	1

N = 341

Table 3.52: Definitions of Variables in Tables 3.53 - 3.58

Variable	Explanation
approved	A dummy for whether a loan is received
Employment	Current number of employees; a proxy for firm size
Distance	Distance from Nairobi in miles
Foreign	A dummy for a foreign owned firm; SME nationality
Retail Sector	A dummy for retail firm; proxy for sectoral bias test
Wholesale Sector	A dummy for whether a firm is a wholesale
Business Conferences	Whether a firm participates in business networks to gain skills for running the business
Manufacturing	Whether a firms is a manufacturing
Agribusiness	Whether a firm is classified as agribusiness
Construction	Whether a firm is a construction company
Hotels	Whether a firm is considered a service sector specializing in lodging
Restaurant	Whether a firm specializes in food or catering service
Repair shops	Whether a firm deals in repair or maintenance business
Gender	A dummy for gender. Female = 1 ; male = 0
Ethnicity	Whether a firm is owned by an ethnic group Kikuyu
Education	Years of school of the head of the firm owner
Technology Constraint	Whether firm considers implementation of new technology as a constraint on firm growth
Collateral Requirement	Whether a firm considers collateral requirement as an obstacle to growth or not
Bureaucratic Constraint	Whether firm cites bureaucratic hurdles as obstacle to growth
Poor Judicial System	Whether SME cites poor Judicial system as harming them
Business Service	Whether a firm is a business service such as haircuts, printing shops, photocopying or not
Interest Rate Constraint	Does the firm consider interest as a constraint on growth?
Years in Business	Years business has been in operation
Launch Time	Times to start a company
Poor Infrastructure	If the firm considers poor infrastructure as obstacle
Market Access	A dummy indicating whether a firm considers lack of access to market as a constraint to growth or performance
ICT Use/Telephone	If the firm uses mobile phone for communications
Study Visits	If the firm participates in study visits to other firms or conferences to learn how to run own business
Own Website	A dummy indicating whether a firm owns a website
Business Training	If the firm has participated in skill training offered by business association, government or NGOs
Theft insurance	Whether a firm has a theft insurance/protection against theft

Source: Author's Compilation

Table 3.53: Probit Estimates of Loan Approval

	Base Equation	Full Specification	Parsimonious Model
Gender	0.008 (0.146)	0.109 (0.153)	
Employment	0.006* (0.003)	0.001 (0.004)	
School	- 0.020 (0.015)	- 0.042** (0.018)	- 0.33** (0.015)
Owning Website		0.671*** (0.255)	0.747*** (0.239)
Business Networking		0.488*** (0.164)	0.503*** (0.157)
Years in Business		0.016 (0.024)	
Ethnicity		0.204 (0.180)	
Retail		-0.238 (0.327)	
Wholesale		-0.187 (0.375)	
Business Service		0.088 (0.345)	
Manufacturing		0.145 (0.401)	
Agribusiness		- 0.178 (0.380)	
Construction		0.301 (0.481)	
Hotels		- 0.380 (0.402)	
Restaurants		0.271 (0.408)	
Repair Shops		0.163 (0.528)	
Constant	-0.205 (0.230)	- 0.187 (0.377)	- 0.206 (0.222)
Prob>chi2	0.316	0.008	0.000
Wald chi2	3.38	32.84	23.85
No. Observations	328	321	325

Note: The dependent variable is a dummy for loan approval (= 1 if approved, 0 otherwise); ***, ***, * indicate significance at 1%, 5% and 10% respectively, and standard errors are reported in parentheses.

Table 3.54: Probit Estimates of Access to Formal Financing

	Base Equation	Full Specification	Parsimonious Model
Gender	-0.005 (0.156)	-0.022 (0.160)	
Employment	-0.005* (0.003)	-0.010* (0.003)	- 0.004* (0.002)
School	0.012 (0.017)	0.021 (0.018)	
Ethnicity	0.327 (0.204)	0.266 (0.212)	
Years in Business		0.032 (0.022)	
Owning A website		0.218 (0.290)	
Business Networking		- 0.371** (0.171)	- 0.279** (0.163)
Retail		0.052 (0.338)	
Wholesale		0.345 (0.405)	
Business Service		0.427 (0.374)	0.348* (0.212)
Manufacturing		- 0.024 (0.414)	
Agribusiness		0.155 (0.388)	
Construction		0.438 (0.581)	
Hotels		0.319 (0.427)	
Restaurants		- 0.396 (0.419)	- 0. 664** (0.300)
Repair Shops		- 0.189 (0.512)	
Constant	0.633** (0.261)	0.393 (0.372)	0.943 (0.113)
Prob>chi2	0.304	0.283	0.003
Wald chi2	4.84	18.73	15.94
Observations	331	325	335

Note: The dependent variable is a dummy for financing constraint (= 1 if firm considers access to formal finance as major and moderate, 0 if they consider it minor or never an obstacle); ***, ***, * indicate significance at 1%, 5% and 10% respectively and while Standard errors are reported in parentheses.

Table 3.55: Probit Estimates of Access to Informal Financing

	Base Equation	Full Specification	Parsimonious Model
Gender	0.005 (0.141)	0.008 (0.147)	
Employment	-0.010** (0.003)	-0.007** (0.004)	- 0.007** (0.003)
School	- 0.001 (0.015)	- 0.010 (0.017)	
Ethnicity		- 0.138 (0.176)	
Years in Business		0.007 (0.021)	
Owning A website		- 0.206 (0.253)	
Business Networking		- 0.249 (0.160)	- 0.262* (0.149)
Retail		0.216 (0.316)	
Wholesale		0.004 (0.370)	
Business Service		0.423 (0.337)	
Manufacturing		0.468 (0.383)	
Agribusiness		0.189 (0.369)	
Construction		1.103** (0.497)	0.680* (0.371)
Hotels		0.212 (0.385)	
Restaurants		0.613 (0.391)	
Repair Shops		0.974* (0.551)	
Constant	0.303 (0.225)	0.238 (0.364)	0.359*** (0.093)
Prob>chi2	0.116	0.272	0.004
Wald chi2	5.92	18.94	13.14
No. Observations	333	325	335

Note: The dependent variable is a dummy for financing constraint (= 1 if firm considers access to informal finance as a major and moderate constraint, 0 if they consider it minor or never an obstacle); ***, ***, * indicate significance at 1%, 5% and 10% respectively, and standard errors are reported in parentheses.

Table 3.56: Probit Estimates of Credit Constraints

	Base Equation	Full Specification	Parsimonious Model
Gender	0.024 (0.153)	0.075 (0.161)	
Employment	0.008** (0.003)	0.007* (0.004)	0.006* (0.003)
School	- 0.030** (0.015)	- 0.054*** (0.019)	- 0.030** (0.015)
Ethnicity		- 0.155 (0.199)	
Years in Business		- 0.013 (0.023)	
Owning Telephone		- 0.530 (0.366)	
Business Networking		0.129 (0.173)	
Retail		0.022 (0.331)	
Wholesale		0.941** (0.430)	0.538** (0.279)
Business Service		0.596* (0.363)	0.397* (0.204)
Manufacturing		0.556 (0.417)	
Agribusiness		0.396 (0.399)	
Construction		0.594 (0.500)	
Hotels		0.055 (0.396)	
Restaurants		0.661 (0.459)	
Repair Shops		- 0.050 (0.527)	
Constant	1.007*** (0.234)	1.503*** (0.493)	0.359*** (0.093)
Prob>chi2	0.062	0.042	0.038
Wald chi2	7.35	26.93	10.14
Observations	333	325	336

Note: The dependent variable is a dummy for financing constraint (= 1 if firm considers access to informal finance as a major and moderate constraint, 0 if they consider it minor or never an obstacle); ***, ***, * indicate significance at 1%, 5% and 10% respectively, and standard errors are reported in parentheses.

Table 3.57: Probit Estimates of Loan Applications

	Base Equation	Full Specification	Parsimonious Model
Gender	- 0.040 (0.140)	0.009 (0.149)	
Employment	0.002 (0.003)	-0.004 (0.004)	
School	- 0.003 (0.014)	- 0.025 (0.017)	
Ethnicity		0.093 (0.178)	
Years in Business		0.025 (0.022)	
Owning Website		0.826*** (0.255)	0.631*** (0.225)
Business Networking		0.332** (0.162)	
Retail		- 0.169 (0.314)	
Wholesale		0.742** (0.368)	0.553** (0.235)
Business Service		0.307 (0.335)	
Manufacturing		0.430 (0.382)	
Agribusiness		0.629 (0.388)	0.450* (0.253)
Construction		0.302 (0.490)	
Hotels		- 0.097 (0.383)	
Restaurants		0.525 (0.405)	
Repair Shops		0.050 (0.527)	
Constant	0.044 (0.217)	- 0.118 (0.357)	- 0. 137* (0.081)
Prob>chi2	0.873	0.002	0.001
Wald chi2	0.70	37.36	15.81
No. Observations	332	324	334

Note: The dependent variable is a dummy for credit application (= 1 if firm applies, 0 otherwise); ***, ***, * indicate significance at 1%, 5% and 10% respectively, and standard errors are reported in parentheses.

Table 3.58: Robustness Test for Loan Application and Approvals

Probit Model with Sample Selection		
Outcome Equation: Loan Approval	Base Equation 1	Model 2
Gender	0.135	0.170
	(0.164)	(0.195)
Employment	0.010	0.015*
	(0.007)	(0.009)
Education	-0.016	-0.022
	(0.022)	(0.023)
Years in Business	0.043*	0.041
	(0.026)	(0.030)
Ethnicity		0.210
		(0.235)
Business Services		0.295
		(0.276)
Retail		0.450
		(0.307)
Constant	-0.422	-0.394
	(0.448)	(0.500)
Probability Chi2	0.386	0.496
Wald Chi2	4.15	6.38
No Observations	329	328
Selection Equation: Loan Application		
Education	-0.001	-0.001
	(0.014)	(0.014)
Owning Mobile phone	-0.334	-0.386
	(0.0262)	(0.264)
Wholesale	0.545**	0.508**
	(0.210)	(0.229)
Business Networking	-	-0.256
	0.194	(0.273)
	(0.293)	
Constant		0.341
	0.291	(0.333)
	(0.329)	
/athrho	1.104	0.664
	(0.834)	(0.635)
Prob>chi2	0.186	0.296
Chi2(1)	1.75	1.09

Note: Loan approval and loan applications are outcome equation and loan application are selection equation, respectively; also, ***, ***, * indicate significance at 1%, 5% and 10% respectively, and standard errors are reported in parentheses.

CHAPTER 4

LACK OF ACCESS TO FINANCE BY SMALL AND MEDIUM-SIZED ENTERPRISE AS A CONSTRAINT TO DEVELOPMENT IN SOUTH SUDAN

4.1 Introduction

South Sudan attained independence in 2011 with weak economic and financial sector development indicators (SSCCSE, 2010; Natsio & Abramovitz, 2011; Bricéno-Garmendia & Ranganath, 2011). Sudan and pre-independent Southern Sudan were locked in conflicts over resource allocation, political autonomy, and governance issues, including the tug-of-war between the center versus periphery (Deng, 1990; Nyaba, 1998; Young, 2003; Akol, 2007; de Waal, 2007; SSDP, 2011; Hale, 2012; D'Agoôt, 2013) and the role of religion in the public sphere (Ylönen, 2005; Natsio & Abramovitz, 2011; Collins, 1976). The impact of those longstanding conflicts remains partly responsible for the present-day South Sudan dismal development outcomes.

Preoccupation with the civil wars meant that economic development and access to finance for Small and Medium-sized Enterprises (SMEs) were never central issues in the political economy of Sudan and pre-independent South Sudan. For more than 50 years, South Sudan has preoccupied itself with issues of liberation at the expense of development. While Kenya and Uganda, for instance, have literacy rates of 87.4% and 66.8% respectively, South Sudan has a literacy rate of 27% (SSCCSE, 2010; Central Intelligence Agency, 2013). Saying that South Sudan is a "poor performer" is not a hyperbole, with 51% of the population below the poverty line. In addition, 83% of the population is rural (5th Population and Housing Census, 2008), only 55% has access to clean drinking water, and only 1% of the households have bank accounts (NBHS, 2009).

A World Bank report on *Doing Business in Juba,* which compares 183 economies of the world, highlights a number of issues that affect private sector development in South Sudan (World Bank, 2011). It mentions a few factors that constrain access to finance. According the report, only about 10% of total loans provided by South Sudan banking sector go to SMEs (SSDP, 2011).

The report adds that: "On the ease of protecting investors, getting credit and closing down business, Juba would rank 173rd, 176th and 183rd," (p. 8). The last rating is disquieting since the existing literature tells us that higher exit costs correspond with larger informal economies (Ayyagari, Beck & Demirguc-Kunt, 2007).

On a scale 0 to 6, Juba scores zero when it comes to credit information depth, because it does not have a public registry or credit bureaus (World Bank, 2011). As of today, there are still no credit bureaus or public registries that play a role in sharing such information on the borrowers and between lenders. Regarding cross- border trade, Juba ranks 181st, just above Central Africa (182nd) and Afghanistan (183rd). This reflects being land-locked and the fact that goods have to travel from the port of Mombasa in Kenya through Uganda (Bricéno-Garmendia & Ranganath, 2011).

Although Juba ranks ahead of Kenya and Uganda when it comes to enforcing contracts and paying taxes as well as starting a business (World Bank, 2011), institutional persistence (that institutions persist and that much of the cross country differences in economic performance could be explained by "impacts of institutions on economic development"; see Acemoglu & Robinson, 2006; Acemoglu, Johnson & Robinson, 2001) and lack of trust in disjointed systems (old Sudan laws vs. New Sudan laws) mean that

few people in South Sudan trust the country's legal system. This is why fewer people look to courts as a way to resolve disputes in South Sudan because they think that no one would care. Such a path-dependent predates the independence of South Sudan.

There is both empirical and theoretical evidence in the literature regarding institution persistence. Poor legal system according to Beck, Demirguc-Kunt & Maksimovic (2005) tends to constrain firm growth. As to the persistence of institutions, Acemoglu and Robinson (2006) cite a clear example of Southern United States. According to this hypothesis, South was relatively poor in the antebellum period and after the war, nothing much changed because low wage, low education level, labor intensive production and repressive economy like before the war still characterize southern economy (Acemoglu & Robinson, 2006). In other words, abolition of slavery and following enfranchisement had no major impact on economic institutions in Southern United States, hence the argument for persistence of institutions.

Since fewer cases pass through the courts for adjudication, the main reason for faster enforcement mechanisms may be short court caseloads. Similarly, many firms in Juba remain informal and avoid paying taxes altogether, so that tax collectors concentrate on the few registered firms. This partly explains the dominant role of the oil sector which account for 98 percent of government budget before the shutdown (SSDP, 2011).

This study is unique in that to the best of my knowledge, it is the first such study on this subject in South Sudan. Various reports done by South Sudan National Bureau of Statistics (NBS) have looked at private sector development but they have not focused on the question of access to finance and goals of financial inclusion. The World Bank report

on *Doing Business in Juba 2011* analyzes nine specific private sector development indicators, and the question of access to finance was not one of them. Other studies that do focus on access to finance do not analyze the context in South Sudan (for example, Demirguc-Kunt, & Klapper, 2012; Asiedu, Freeman & Nti-Addae, 2012; Sacerdoti, 2005; Beck, Demirguc-Kunt & Maksimovic, 2005, 2006, 2008).

This essay analyses SME characteristics with a view to understanding how SME access to finance could play a role in economic development. The data for this essay comes from 7-month field survey in South Sudan conducted between July 2011 and February 2012. This research was conducted in three of the ten states in South Sudan. The three states include Central Equatoria, Western Bahr el Ghazal and Northern Bahr el Ghazal. Five cities— Juba, Yei, Wau, Aweil and Mayom Angok— were covered in those states when administering the questionnaire and interviewing relevant SME respondents. The SME sample size is 334.

Since this study was before independence, the number of commercial banks in South Sudan was small. All eight commercial banks that were operational at the time provided data on the banking sector for the study. The number of commercial banks has increased since then to reach 20 by the end of 2011 and 25 by 3 July 2013 (Bank of South Sudan, 2013). The same is true for number of foreign exchange bureaus which stands at 80 as of 23 July 2013 .This essay does not only ask SMEs what constraints they face, but also digs deeper by speaking to financial sector players, asking what they are doing to expand the financial access frontier and what is holding them back. The aim is to hear both sides of the argument to formulate a diagnosis.

The paper is organized as follows. Section 4.1 provides the context of South Sudan's political economy. Sections 4.2 and 4.3 give an overview of the banking and SME sectors in Post-independence South Sudan, respectively while 4.4 analyses survey results of the banking sector and SMEs in South Sudan. Section 4.5 presents an econometric analysis of SME access to credit. Section 4.6 draws lessons from the econometric results, and section 4.7 concludes the essay.

4.1.1 Pre-independence South Sudan's Banking Sector, 2005-2011

Banks have a central role in financial sector development. They intermediate fund between savers and borrowers. In pre-independent South Sudan, small scale and informality of banks, political interference/poor governance of banks, and unpredictable shocks to banks, made intermediation difficult. Poor infrastructure and communications made matters worse (World Bank, 2011; Bricéno-Garmenndia, & Ranganath, 2011).

Before independence, the dual banking system in Sudan comprised Islamic banking in the north and the traditional banking system in the South. This arrangement was referred to as 'two systems, one country.' But after the July 9, 2011, South Sudan adopted a traditional banking system. During the interim period, from 2005 through 2011, a few of Khartoum-based banks opened up throughout the ten states in South Sudan, but mostly in Juba. Nonetheless, Kenya Commercial Bank was the largest of all banks with head office in Juba and branches in Rumbek, Yei, and Bentiu.

Foreign bank presence is a post-independence phenomenon in South Sudan and this is welcome news. Studies show that foreign banks bring capital, technology, expertise in banking, and independence from political elites (Beck, & Honohan, 2007; World Bank,

2008; see Chapter 3). Foreign banks are relatively large, however, and they generally stick to financing of high-income persons and large enterprises. They can have a positive side too, by forcing local banks to focus on lower- income groups, including SMEs.

4.1.2 Microfinance and Informal Finance in South Sudan

Microfinance institutions still depend on financial support from donors. Unlike the neighboring countries such as Uganda with about 18 MFIs or Ethiopia with 27, South Sudan microfinance sector came into being after the signing of the CPA in 2005. The number of MFIs is now growing and it has a huge potential to grow if conditions prove supportive. At the moment, MFIs depend on external technical and financial support from bodies such as USAID, UNDP, and UNCDF, among others.

South Sudan has a thin financial sector. At the end of 2010, South Sudan had only eight microfinance institutions, five insurance companies and eight commercial banks, three of which are foreign-owned.

There is a growing recognition in the economics discipline of importance of the financial sector for expanding access to finance for all, with far-reaching implications for poverty reduction (Andrianaivo & Kpodar, 2010; Singh & Tandon, 2012). A financial system geared solely toward money-making schemes may drag the whole economy into chaos, due to lax supervision and a culture of excessive financial deregulation, as demonstrated by the recent world financial and economic crisis.

To assess the financial sector development needs in South Sudan, an environment where no relevant data exist, I found survey methods appropriate. Examples of data I collected

include SME employment, sales, amount of credit owed to the banks, obstacles to obtaining finance, terms of loans, location of banks, regional distribution of lending, and extent of mobile phone use in financial services, among others.

Additionally, use has been made of the *2009 Republic of Sudan National Poverty Survey Questionnaire*, *the 2010 Business Survey, and 5th Population and Housing Census 2008* which provide some data on household access to finance. Through interviews, I also investigated how businessmen get finance, what sort of formulae are used for loan-making, the extent of funding gaps, and the presence of credit-rationing.

4.1.3 Difficulties in Measuring Financial Access

One difficult thing about measuring financial access is to differentiate between access to and use of financial services (CGAP, 2009). The amount of loans, from and to whom, does not tell us who chooses not to borrow or who was denied. For these reasons, we should not take observed demand for credit as equal to need for credit (Meyer & Zeller, 2002). The findings from the World Bank Investment Climate Assessment Survey (whose calculations were based on surveys from Kenya, Madagascar, Senegal and Uganda) for Africa are telling. African enterprises cite lack of access to finance as the most serious handicap to their growth (Nkurunziza, 2008). Another study finds that "more African entrepreneurs report that access to and cost of finance is the major constraint on the operations and growth of the firms than do entrepreneurs in other regions" (Beck & Honohan, 2007, p. 62).

The finance constrained category includes firms that applied for loans and were rejected, and firms that did not apply at all because they do not have sufficient collateral, find

application process too exacting, regard the interest rates too high, or fear rejection (Beck & Honohan, 2007). This could explain a paradox of excess liquidity in the banks and limited investable funds in the economy. SMEs are sometimes called the 'missing link' in access to finance. Large firms can access formal finance, while micro-firms and poor households can turn to MFIs. SMEs fall in between: they may be too big to qualify for microfinance loans, and too small to qualify for formal bank loans.

4.2 Banking Sector in Post-independence South Sudan

South Sudan's banking sector is at an early stage of development. The financial service providers are commercial banks, insurance companies and microfinance institutions. There are no securities markets to talk of, nor are there public registries or credit bureaus (World Bank, 2011). South Sudan's banking sector is poised to grow quickly, however[25]. With 20 commercial banks, South Sudan ranks third out of six countries in the region by this measure, and first in the number of banks relative to population.

While South Sudan's financial sector development is at its early phase, there is a positive prospect as evidence by entry of regional banks. This new frontier could prove potentially a growing market. There is free entry (and exit possibly despite lower ranking according to *Doing Business in Juba 2011*) from regional financial markets, as evident with Kenyan and Ethiopian commercial banks. While the financial sector is still very thin, the fact that foreign banks have opened up branches in South Sudan shows that they are a financing

[25] All the same, the ongoing crisis in South Sudan, which starts on 15 December 2013, presents significant uncertainty over the future financial sector development if it last long.

potential for SMEs which could be the engine of growth across the board. A higher number of banks per population can be a positive thing by increasing competition for resource deposit mobilization, and savings, and by bringing down lending rates to competitive levels.

4.3 SME Sector in Post-independence South Sudan

An analysis of the South Sudan National Bureau of Statistics (NBS) 2010 Business Survey provides a broad picture into South Sudan SME Sector. Of the 7333 businesses surveyed by South Sudan National Bureau of Statistics (NBS, 2010), 6,587 of the businesses fall under the category "Microenterprises." Of the remainder, 662 falls under Small enterprises; 78 under medium and only 6 are considered larger enterprises (equally to or greater than 100 employees). In terms of percentages the distributions are 89.83%, 9.03%, 1.06% and 0.08%. Hence, according to this survey, over 99% of the firms in South Sudan fall under the SME.

Furthermore, of the ten states, Central Equatoria has the largest number of the businesses surveyed. About 37% of the sample comprised firms located in Central Equatoria State. Again, of the six largest firms, four of them come from Central Equatoria State. It is logical to conclude that about 70% of the larger firms are located in Central Equatoria, mostly in Juba were the center of the government is located. While 84% of the firms were listed as restaurants or shops, Juba had 2,683 enterprises out of total 7333 firms surveyed (NBS, 2010).

In addition, all 7333 firms had combined number of employees totaling to 22,193. It is not surprising that about 10,546 or 48% of all employees from these businesses come

from Central Equatoria. This is because majority of firms come from Juba and they also happen to be largest firms compared to ones we find in other surveyed cities. Not only do more firms operate in Central Equatoria but also those enterprises create more employment opportunities than in any other states.

About14% (1,029) of the business operating in South Sudan was created between 1923 and 2004. The remaining 86% (6,304) of the firms were established between 2005 and 2010. In other words, more businesses in South Sudan came into being after the CPA. We now turn to the analysis of the detailed survey undertaken for this study.

4.4 Analysis of the Survey Results

The data on SMEs and commercial banks for this essay come from fieldwork conducted in three of the ten states in South Sudan between July 2011 and February 2012. Survey questionnaires and interviews were used to obtain the data from individual SMEs, as well as from commercial banks, and selected institutions, such as the Central Bank of South Sudan, Chamber of Commerce, Agriculture and Investment and the Ministry of Commerce, Investment and Industry.

Juba, Wau and Aweil, which are the capitals of Central Equatorial, Western Bahr el Ghazal and Northern Bahr el Ghazal states, respectively, were chosen as sites for investigation. Based on ease of mobility or proximity, two more cities (Yei and Mayom Angok) were added. Within these locations, every business or firm in the city selected stood an equal chance of being sampled, because each street was identified and every k^{th} element was sampled (k^{th} refers to a systematic sampling in which every other element is included in the sample through random walk- skip method).

4.4.1 Survey of South Sudan Commercial Banks

While there are currently 25 commercial banks operating in South Sudan, this analysis focuses only on eight banks present at the time of this research. I set up interviews and administered questionnaires to all eight banks operating in South Sudan in July 2011 through February 2012. I have also supplemented this with data from other sources such as the central bank.

Table 4.1 provides an overview of the commercial banks operating in South Sudan in 2011. At the time of this survey, all lent less than 50% of their deposits as loans. Kenya Commercial Bank (KCB) leads the pack in terms of both branches and total employment. Altogether, foreign banks (KCB, Equity, and CBE) have more employees than the local banks (Agriculture Bank, Buffalo, Ivory, MTDB and Nile Commercial Bank).

We theorize that more South Sudanese will open up bank accounts as they earn incomes from jobs following peace. Even with little individual deposits, oil transfers to the state coffers have been significant source of bank deposits until the shutdown in January 2012.

To assess how banks are working to promote financial inclusion, the survey asked all eight banks to record their account holders in two successive months: July and August 2011. As Table 4.2 shows, the number of bank accounts was growing rapidly at this time. Notwithstanding this growth, the fact remains that the bankable population in South Sudan is still insignificant. As this survey shows, those holding accounts as of August 2011 are approximately 2% of the country's population. Compared to her neighbors, South Sudan has fewer adult populations with bank accounts at formal financial institutions.

Table 4.3 reports data on the extent of bank lending to SMEs and other borrowers in South Sudan. At the time of assessment, five out of the eight banks issued loans. The other three indicated that they were not lending yet as business environment was uncertain due to impending referendum and lack of acceptable collateral and property rights laws. There is a wide range in the size of loans approved from a minimum of $3,704 to a maximum of $1,851,852.

The survey asked banks to rate what they consider the major barrier to extending credit to SMEs. The barriers listed included lack of collateral, lack of profitability, limited information, illiteracy, and distance from the bank premises. When banks were asked to state one obstacle that they thought was hindering them to extend credit to all, all eight banks chose lack of collateral.

Table 4.4 reports data on how much banks lent over the years and the number of loans to SMEs. We find here that Agriculture Bank of Sudan had issued more loans to qualified farmers and small-scale producers. Ivory Bank had made the least loans, while Equity Bank is second to Agriculture Bank of Sudan in terms of number of customers served so far.

Table 4.5 presents information on how four banks described their lending to SMEs. That the remaining four banks were silent or muted about lending to SMEs underscores the limited access to finance in the new nation.

Table 4.6 lists responses when the banks were asked to rate borrower characteristics from major to never an obstacle. All banks considered the characteristics of the owners and

collateral as important when lending to SMEs. Only three banks considered any of the five-Cs—(1) characters of the firm owners, (2) capacity of the firm, (3) collateral requirement, (4) firm initial capital, and finally (5) macroeconomic conditions not to be a problem.

Table 4.7 shows the customized products that each bank provided, and the names of development institutions partnering with them to pool resources and lend to SMEs. Banks also described what they considered to be role of mobile technology, steps taken to improve customer services, and steps they deemed necessary to expand the access frontier. For example, Agriculture Bank of Sudan lends to small producers and small farmers. It partners with NGOs, EU, IFEAD, IDA and World Bank as a way of securing loans to small-scale famers.

The Agricultural Bank of Sudan made the case that mobile technology reduces administration costs and provides real -time information to customers on loan rates, payments, and other exchanges. A number of banks see application of IT as a means to improve services and flexibility in collateral requirements as innovations to expand access to borrowers.

To find out whether SMEs have a higher default rate compared to larger borrowers, the survey asked each bank to give time series data on non-performing loans to SMEs and large business. Table 4.8 presents that information for each bank. Of all the banks that have responded, Agriculture Bank of Sudan gives the highest default rate (see for example, the default rate was 41% in 2008). But in asking what the banks would like the government or Central Bank of South Sudan to do to encourage them lend to SMEs, they

stated that they would like the government to do more in providing a conducive policy environment. Lack of legal framework affecting transactions and multiple taxations also comes up frequently in the interviews (see Table 4.9).

At the time of independence, South Sudan had eight microfinance institutions with women as the majority borrowers. An overview of their operations is reported in Table 4.10. SUMI has the largest client base and Frontier Finance has the smallest share.

To put everything in context, only 2% of South Sudan population holds accounts at formal financial institutions (we hope that growth of banking sector will improve this situation; see Tables 4.11 and 4.12). This pales in comparison to African average figures. While only 24% all adults in Sub-Sahara Africa have bank accounts, adult population with accounts at formal financial institutions in Kenya, Uganda, Tanzania, and Sudan stand at 42%, 20%, 17% and 7% respectively (Word Bank, 2012; see Table 1.2).

Also these results on the banking sector shows one common phenomenon nowadays that is commercial banks are partnering with international financial institutions to pool resources to lend to SMEs. As an illustration, the World Bank has an active policy in supporting SMEs across the globe. For instance, it approved $2.8 billion in 2004 and provided $10 billion to promote SME sector between 2000 and 2005 (Ayyagari, Beck & Demirguc-Kunt, 2007; Beck, Demirguc-Kunt & Maksimovic, 2005).

4.4.2 Survey of Small and Medium-Sized Enterprises

This section provides a descriptive overview of the South Sudan SME data. In total, 334 SME firms were surveyed. As shown in Table 4.13, 72.5% of the sample comes from

Central Equatoria State where capital, Juba, is situated. Two reasons accounted for the high representation of this one state. First, Juba is the headquarters of the government and as a previous *Business Listing Survey 2010* indicates, many registered businesses operate there.

Second, the concentration in Juba was in part due to logistics and difficulties of mobility across ten states. The remainder of the sample comes from the states of Northern and Western Bahr el Ghazal, accounting for 23% and 4.5%, respectively.

Table 4.14 provides a breakdown in terms of cities. Juba, Aweil and Wau are the capital cities of their states, namely Central Equatoria, Northern and Western Bahr el Ghazal, respectively. Two additional cities included in the sample, Yei and Mayom Angok, come from Central Equatoria and Northern Bahr el Ghazal States, respectively.

As reported in Table 4.15, men make up over 80% of firm owners in the sample. With the legacy of war and unyielding traditional values which still consider formal business a male domain, it is not surprising that less than 20% of the population engaging in commercial enterprises is female. Women in South Sudan remain concentrated in subsistence agriculture and unpaid household production and are largely "missing" in the markets. Overall, 1.5% of the sample declined to respond to the gender question.

Turning to the ethnicity and nationality of the firm owners, Table 4.16 shows that about 30% of the firms in South Sudan are owned by foreigners. This validates the long-held public view that Kenyans, Ugandans, Ethiopians, and other Africans have flocked to Juba to exploit business opportunities. Included in this category "foreigners" are Sudanese

from the North, whether they are from Darfur, the Nuba Mountains, Southern Kordofan or Khartoum.

In collecting these data, I came to the conclusion that South Sudan's government has been friendly to countries and neighbors that gave a helping hand during the dark days of the liberation struggle. In addition, the public was and remains tolerant toward foreign businesses.

While the Dinka ethnic group is about 20% of the South Sudan population (5th Sudan Population and Housing Census, 2008), they represent 33.2% of the sample. The main investigator and four assistants were all Dinka; hence Dinka respondents may have been oversampled or language barriers over English or Juba Arabic. About 9% of the respondents declined to indicate their ethnic identity, reflecting the fact that some people in social settings are uncomfortable disclosing this for fear of the unknown (unexpected reprisal following disclosing certain personal information).

Table 4.17 reports the legal status of firms in the sample. Over 70% considered themselves sole proprietors. Most SMEs in South Sudan are family or individual owned, hence the prevalence of sole proprietorship. Next in prevalence, 13.2% are private limited companies and 9.6% are partnerships. Some of these latter ones are business partnerships between South Sudanese partners and foreign nationals, an arrangement which is prevalent in fuel stations.

Table 4.18 reports firm size by current employment. The picture is consistent with the finding in Table 4.17 that most SMEs in South Sudan are sole proprietorships. About

70% of SMEs fall in the “microenterprise” category defined as a firm whose size ranges between one and four employees (small, medium and large enterprises are defined analogously, see Table 4.18). About 26% of the sampled SMEs are small enterprises, 4% are medium enterprises and only one is a large enterprise (this was a bottling water company). Assuming that this sample is reasonably representative of the population, it follows then almost all firms in South Sudan are SMEs. An examination of Table 4.19 which reports firm size by gender of the owner shows no notable difference in this respect between male-owned and female-owned firms.

Medium and large enterprises are located exclusively in Juba in Central Equatoria State, as shown in Table 4.20. Microenterprises account for more than 85% of SMEs in Northern and Western Bahr el Ghazal, whereas in Central Equatoria State they account for 64%.

Table 4.21 shows the breakdown of the firms by sector. Retailing is the largest sector in the sample. Business services (haircuts, salons, printing shops, etc), wholesalers, hotels and restaurants are also sizable by accounting for 9.3%, 9%, 6.6% and, 6.9%, respectively. While South Sudan had a comparative advantage in agriculture (abundant water, and large arable lands), agriculture is not commercialized but mainly subsistence. There was only one agribusiness firm in the sample.

Table 4.22 dissects the sample into sectors by gender of the firm owner. We find that 88.8% of all SMEs in retail are owned by men. Men dominate all other sectors except restaurants, where 54.6% of SMEs are owned by women.

Table 4.23 shows the sectoral distribution of firms by size. Microenterprises predominate in the retail, business service, wholesale, restaurant and repair shop sectors. The hotel sector has the largest share of medium enterprises.

4.4.3 SME Self-Appraisal on Technology and Managerial Competency

One of the objectives of this dissertation is to assess the role of technology in enabling access to financial services. It is on this basis that the questionnaire asked firm owners to indicate whether they frequently use ATM withdrawals, visits to the nearest bank branch, or personal safekeeping for their routine cash needs. Because there are few ATMs in Juba, many firms use banks. In our sample as reported in Table 4.24, about 7% of the respondents use ATMs, whereas over 50% and 30% visit banks and keep cash in the shop vaults, respectively (the remaining 10% of the sample did not respond). The banking sector is still weakly developed with no known financial regulator like FDIC or consumer watchdogs (see SSDP, 2011).

When asked whether the enterprise is doing well or not, 6.6% of all respondents think that managerial incompetence and neglect to adopt technology were to blame for poor performance, whereas 33% believe that they are doing well because of managerial competency and technology (Table 4.25). Regrettably, more than half of the firms blame an "unfavorable business environment" (such as multiple tax rates at point of entry, irregular enforcement or confiscatory attitude among officials) as responsible for poor performance (World Bank, 2011). Blaming outsiders for their woes has been established as one typical bias when surveying firms because some firms exaggerate or underestimate some obstacles (Ayyagari, Demirguc-Kunt & Maksimovic, 2006).

4.4.4 Credit Allocation

This survey confirms that financial access in South Sudan is limited. As Table 4.26 shows, only 46 SMEs— 13.8% of all firms in the sample—had ever applied for loans from any source. Of these, roughly, 69.6% received loans while 30.4% did not; meaning the odds of an SME applicant applying for a loan and being rejected are 30.4%.

Table 4.27 shows that about 68.8% of the loans received came from commercial banks (see Chapter 3 for similar exposition). About 13% and 19%, respectively, came from microfinance institutions and informal finance (money lenders and family members). Based on the fieldwork observations, moneylenders are not really common in South Sudan, at least as creditors for SMEs.

Of those who have received loans, 80% are men (Table 4.28). This is equivalent to 8.9% of the SMEs that are headed by men. The women who received loans amount to only 10.3% of all women in the sample.

Turning to the sectoral distribution of the loans, retail business and hotels received more than half the loans. We see that 7.5% of all firms in retail received loans, compared to 27.3% of firms in hotels (Table 4.29). Neither business service firms nor, rather surprisingly, manufacturing firms had ever received a loan even though they have applied.

As Table 4.30 shows, one-half of all approved loans were received by microenterprises, 43.8% went to small enterprise and medium enterprise category received 9.4%.

Again, expressed as a percent of each size class totals, we see a different picture: 6.4%, 16.3% and 21.4% of the microenterprise, small enterprise and medium enterprises received loans, respectively. This is not surprising because microenterprises are 70% of the sample.

Table 4.31 presents all the firms that have never applied for loan. The table identifies a category called "credit constrained" because they reported a desire for credit but have not applied for one reason or another. This category accounted for 63% of the total number of firms, of which 30% of the firms did not apply because they thought they would be denied loans, 7% thought application process is too cumbersome, 20% feared not meeting collateral requirements, and 5% considered interest rates too high. The other 37% of the firms that did not apply were not credit constrained, reporting that they did not need a loan.

Table 4.32 reports differences by gender. Similar percentages of men and women were credit constrained. Table 4.33 takes a look at why firms did not apply for loans by sector. In three sectors—business services, construction and restaurant— half or more of the firms responded that they did not need loans. Among credit constrained firms, most did not apply because they doubted approval in all sectors except retail, manufacturing and repair shops, for which collateral requirements were reported as the main reasons.

Table 4.34 shows that 71.9% of all loans approved went to firms in Central Equatoria state, the same state with the largest number of firms in the sample (see Table 4.1). The percentage of SMEs receiving loans was highest in Western Bahr el Ghazal State, but this

finding should be interpreted with caution due to the relatively small size of the sample there.

Table 4.35 compares loans across states by lender. Of all loans in Central Equatoria, 78.3% come from commercial banks, 13% from microfinance institutions and 9% from moneylenders and family members. Firms in Northern Bahr el Ghazal received smaller percentage of loans from commercial banks. The survey asked the firms to rank how each source of credit is a constraint on firm growth. As shown in Table 4.36, 35.9% rank lack of access to formal finance as a major constraint; 29.3% rank lack of access to microfinance as a major constraint, and 21.9% say the same thing for informal finance. In this analysis, as typical of African economies (Nkurunziza, 2008; Chapter 3), SMEs thus rank lack of access to formal finance as the most constraint.

Table 4.37 breaks down financing constrains by gender. It shows that 100% of all women-owned firms consider lack of access to formal finance, microfinance and informal finance as a constraint. For men, the figures for the same sources of credit are 82%, 82% and 83% respectively. The statistics in this table seem to imply that access to credit is more binding barrier for women compared to men. Besides traditions, culture and home-making/household production, it could be one reason why women are fewer in businesses in the first place.

In terms of firm size, lack of access to finance tends to become perceived as a greater constraint as size increases. This seems like an anomaly because as firm sizes increases, theory predicts that firms turn to external source of financing (Beck, Demirguc-Kunt, &

Levine, 2005; Beck, Demirguc-Kunt & Maksimovic, 2005). Intuitively, large firm exposure to external financing and fear for loan rejection could account for this anomaly.

Table 4.38 shows that 79.4%, 93% and 100% of microenterprises, small enterprises and medium enterprises, respectively, cited lack of formal finance as a major or moderate constraint, respectively. For microfinance and informal finance, the percentages were more stable, meaning they remain constant.

Table 4.39 summarizes credit access by grouping the firms into four broad categories. "Successful borrowers" are those that applied and received loans, while "denied" are those that applied and were rejected. "Discouraged borrowers" are those who chose not to apply for one reason or another, whereas non-borrowers are those who indicated no desire for loans.

Table 4.40 summaries responses to whether the firm considers lack of access to market as an additional constraint. Of the 280 firms that responded, the majority (64.3%) consider it a major constraint, while only 5% consider it not an issue. This finding is not surprising because much of South Sudan has no infrastructure and is cut off from main towns during the rainy season. Lack of feeder roads and access to major commercial centres is a major issue.

Table 4.41 dissects Table 4.40 into four categories by size. As firm size increases from microenterprise to medium enterprise, the major weight put on access to market increases from 50.2% to 71.4%. The one large firm, however, reported that it was not an issue.

Again, this is consistent with the literature, in that, larger firms report lower financing obstacles (Beck, Demirguc-Kunt, & Laeven, 2006).

More than half male SME owners (55.7%) say lack of access to market is a major constraint, compared to 44.8% of women owners, as shown in Table 4.42. It is said that firms that use more external finance tend to report greater financing obstacles (Beck, Demirguc-Kunt & Maksimovic, 2008). In this case, we can postulate that since firms headed by men are likely to seek credit, they are more likely to express greater financing obstacles.

Agribusiness, hotels and manufacturing are the top three sectors in terms of the percentage that rank lack of access to market as a major constraint on firm performance, as shown in Table 4.43.

4.4.5 Summary Statistics for Selected Variables

Table 4.44 presents summary statistics for other variables in the survey. On average, a firm takes about one year to fully officially launch. The necessary paperwork, as well as the savings process or raising seed capital to start a firm, takes time. Some firms have spent three years preparing. The average firm has been in operation for three years, and these were established following the 2005 CPA. Some firms have been in operation for less than a year.

Since many firms in this survey are microenterprises, it is not surprising that the mean firm size is five employees. The maximum is 100 employees (the same firm reported 120 employees in response to another question). The 2011 mean revenue of over $50,000 is

quite high but this is because of some outliers. One firm, for instance, reported an annual income of almost $4 million. Median firm income is $10,000. The minimum income is $318, and this is consistent with poverty levels in the country. Some firms that won oil contracts during the reconstruction era/interim period made very high annual income, and these help to account for wide range.

The mean level of education for firm owners in the sample is quite high. The mean sample level of education of the head of the enterprise is 11 years. The minimum level of education is zero (never attended school) and the maximum (up to the university level) numbers of years spent in school is 19 years. This is lower, however, than the average education level of firm owner in Kenya (14.5 years; see Essay on Kenya, Chapter 3).

While most firms are in Juba, the average firm is 140 miles away from the capital. We will test the hypothesis that the further away from Juba the firm is, the slimmer the chance of getting access to credit.

Finally, among firms that had access to credit, the minimum loan received is $100 and the maximum is $60,000.

Table 4.45 presents simple correlations among the firm's employment, revenue and the amounts of the loan received. Employment level and revenue are strongly correlated (r = .85). The loan amount is weakly correlated with employment (r = .15) and uncorrelated with revenue (r = .002). As far as we expect larger firms to receive bigger loans, this suggests that employment may serve as a better proxy for size than revenue.

4.5 Econometric Analysis of Access to Credit by SMEs

4.5.1 Econometric Model

This section endeavors to assess SME loan approval. We test a relationship between loan approved and a range of factors, including gender, size, distance, and sector. Loan approved is a dummy variable indicating whether or not credit was obtained; size is measured by the number of employees in a firm; distance is measured in miles between Juba and the SME city; and the sector is a dummy representing whether firm considers itself a retail or not (dummy = 1 for retail, 0 otherwise).

In addition to these core factors, we have a number of control variables including, the interest rate, length of schooling in years, and dummies for SME nationality (foreign owner = 1, 0= South Sudanese), ethnicity, complaints about judicial system, and bureaucratic constraints, ICT use, wholesale activity and access to market. The list of variables with their definition is provided in Table 4.52.

We hypothesize that SMEs in or closer to Juba are more likely to get credit; hence distance should have a negative impact on loan approved. If there is a gender bias, women will experience credit discrimination. The firm size or employment is expected to enhance credit approval, insofar as size of the firm acts as an indicator of profitability or signal to lenders that loan repayment will not be an issue (Beck et al., 2006; Beck, Demirguc-Kunt & Maksimovic, 2008). We do not expect any sectoral bias a priori but we hypothesize that foreign firms may have an advantage because of perceived expertise, credit history and name recognition to secure loan approval. On ethnicity, the impact could be ambiguous. Being the dominant tribe, Dinka SME-owners could have

preferential treatment in Juba in the banking sector. On the other hand, they are mostly in rural South Sudan or away from Juba which means that they have no knowledge about availability or unable to access credit. On account of distance, they have slimmer probability of accessing loan approval.

The dependent variable, loan approved, and the list of independent variables elaborated above feeds into a regression whose results help to answer the following questions:

(i) Does access to credit vary with distance from Juba?

(ii) Does access to credit differ between SMEs headed by men and by women?

(iii) Does access to credit differ between foreign-owned and South Sudanese owned SMEs?

(iv) Among South Sudanese entrepreneurs of different ethnic backgrounds, does access to credit differ?

The general estimator equation can be formulated as follows:

$$\boldsymbol{y_i} = \chi_i'\boldsymbol{\beta} + \boldsymbol{\varepsilon}_i \quad (1)$$

Where y_i is the loan approved dummy for firm i, and χ_i' is a vector of determinants of loan approved as discussed above and ε_i is a random error term. Given that the dependent variable is a binary variable, the model above cannot be estimated with OLS because it does not meet the necessary conditions ((Dyankin & Moffat, 2002). Specifically, we cannot guarantee that estimates of y_i lie within the interval $\{0, 1\}$. The binary response model calls for probit regression. The probit estimate model is specified as follows:

$$\mathbf{Pr}(\boldsymbol{y} = \mathbf{1} \,/\, \boldsymbol{x}) = \boldsymbol{\Phi}(\boldsymbol{x_i'\beta}) \quad (2)$$

Where ϕ (phi) is a cumulative distribution function of standard normal distribution, x' =($x_1 \ldots x_k$), Pr signifies probability and i refers to individual firm. We use the z-score to infer increase or decrease in probability (pr) by b unit. In other words, an increase in x changes Z or probit index by b standard deviation units.

The above equation is estimated to test whether access to loan approved or access to credit is influenced by firm characteristics, notably size, distance to Juba, gender of the owner, and sector while controlling for time to launch company, years in operations, education level, ethnicity, the interest rate, and access to market. Based on theory and empirical evidence on credit access to finance, the base model will include four key determinants (1) size, (2) distance, (3) gender, and (4) sector. Other factors of interest will be tested case by case. With these variables for base equation, we would thus like to fit this model:

$$\Pr(loan\ approval = 1) = \Phi(\beta_0 + \beta_1 gender + \beta_2 distance + \beta_3 size + \beta_4 sector) \quad (3)$$

4.5.2 Determinants of Loan Approval: Econometric Results

Table 4.46 presents the results of the probit regressions for determinants of loan approval. A look at the base regression in model 1 is telling. Gender, distance and sector of the firm seem not to be significant in explaining the variation in loan approval. However, in the first column we see that only size does matter, its coefficient being statistically significant at the 10% level and its sign in the expected direction. The likelihood of receiving a loan increases by 0.014 with a one unit increase in employment. This confirms the finding that larger firms are less financially constrained ((Beck, Demirguc-Kunt, & Maksimovic, 2005, 2008).

We see no significant gender bias. For distance from Juba, the coefficient is significant if we include all relevant variables in the model (see models 2 through 3) and it has the expected sign: as distance increases, the likelihood of getting approved diminishes.

The coefficient on ethnicity is positive and significant, suggesting that access to market interact with ethnicity to determine loan approval (see column 3). Foreign firms seem to have some advantage in getting loans when we assess the full model.

4.5.3 Obstacles to Access to Finance by SMEs: Econometric Results

The previous section discussed the factors that affect the actual loan received. In this section, we examine how individual SMEs rate access to formal finance, informal finance and microfinance. The questionnaire asks whether a given firm considers access to formal finance, microfinance and informal finance (money lenders, out of pocket contributions, family or friends,) as a major, moderate or minor obstacle or never an obstacle. These ordinal responses range from one to four, in that order. We collapsed financing constraint into a binary variable, whereby major and moderate were coded as 1 and minor and never as 0. Then we ran regressions using the probit model, taking this as the dependent variable. Regressions for microfinance yielded no significant results, and so they are not reported here. Tables 4.47 and 4.48 report estimation results for formal and informal finance constraints.

Table 4.47 reports regression results for whether firms considered access to formal finance as an obstacle or not. While only three of the six model specifications are reported here, the results show that women are more likely to indicate that they face

obstacle in access to formal finance. The coefficients on the gender dummy variable are positive and statistically significant.

The coefficient on distance from Juba is also statistically significant but in the opposite direction than expected. This is surprising, because we expected that firms would express more hardship as they move away from Juba. Nonetheless, the results would still make sense if rural firms have relied on informal sources of finance such that they do not even bother about formal finance in town. Alternatively, it may be that the majority of them have no idea of what is (or is not) available. This could explain why the further away from Juba, the more firms would indicate access to formal finance as a minor or never an obstacle.

Furthermore, wholesalers are more likely to indicate lack of access to formal finance as a constraint. This makes sense because these categories of firms, located in urban centers, may have greater need for financing. None of the other variables were statistically significant.

Table 4.48 reports comparable results regarding access to informal finance. While the signs are in the right direction, the coefficient on gender is statistically insignificant. Personal contributions, families and friends are the main sources of informal finance as there are no known moneylenders. Distance is again significant, with SMEs further away from Juba showing fewer tendencies to report this as a constraint. While this seems to contradict explanation in Table 4.47, it would still make sense because firms in rural areas do not regard both distance as a major constraint in informal finance. As for formal

finance, the fact that they have no knowledge about what is available or not available makes distance a less constraint.

These findings confirm what already exists in the literature. Studies have shown that many firms consider financing and legal constraints as the most constraining factor and mostly importantly, firms in least developed countries tend to report these financing factors (Beck, Demirguc-Kunt, & Maksimovic, 2005).

4.5.4 Credit Constrained and Unconstrained Firms: Econometric Results

For the firms that chose not to apply for credit, the questionnaire seeks the rationale behind their actions. Some did not apply because they did not need a loan, others thought they would be rejected, or reported that collateral requirements or interest rate is too high or that applications are burdensome. Those that do not need loans are considered unconstrained and those that chose not to apply for one reasons or another are considered as constrained.

While core independent variables remain the same as above, the dependent variable, credit constrained, is a binary variable taking the value of zero for firms that need no loan and one for those who chose not to apply for one reason or another. Table 4.49 reports results for the credit constraint. From these results, distance does matter. Firms away from Juba are more constrained on average. There is no significant gender bias. But more literate SMEs, wholesales and business services are more likely to be constrained due to self-selection out. Normally, we would expect SMEs owned by more literate to be less constrained because of wider networks, past credit history, higher profitability or ability to place collateral if demanded. However, there are two reasons that could account for

this anomaly. First, the initial conditions or business environment in the early days of the CPA were unfavorable to all businesses. Second, those who are more literate live in towns, near services, tend to be more vocal regarding their needs.

The category "business services" includes haircut shops, beauty salons, repair shops, and printing booths. Some of these business services are run by few individuals, mostly the owners, hence the size of such firms are small. While they have declined to apply for loan for one reason or another, these regression results show that they are nevertheless credit constrained. The retail sector is significantly constrained once we include all variables in the model. On the other hand, level of education of the SME owner is positive and statistically significant when we include all variables except collateral requirements, suggesting that literate SMEs are likely to read the probability of loan rejection and decide not to apply.

4.5.5 Determinants of Loan Application: Econometric Results

The survey asks the question: have you ever applied for loan before? The respondents either say yes or no. We take this as a binary dependent variable. We wanted to explore the factors that influence the decision to apply for a loan. Table 4.50 presents the results from robust probit regressions. As the firm size increases, the probability of SME applying for loan increases. The magnitude ranges from about 0.016 per additional employee (column 1) to 0.08(column 5).These results confirm as expected, that as firm size increases, it is more likely to apply for credit.

On the other hand, firms which cite high interest rate as an obstacle are more likely to apply (columns 2 and 5). Access to market is also statistically significant, suggesting that

firms without access to market are less likely to apply for loan (column 5). Other variables including poor infrastructure, education, launch time, bureaucratic constraint and years in business seem to have no significant effect on the likelihood to apply for loans.

4.5.6 Robustness Test for Loan Approval Estimates

We examine whether loan approval estimates are robust. Robustness test is performed to tease out selection bias in the estimates. The survey questionnaire asks a given firm if it has applied for loan and if so, has it been approved or not. This question sequencing introduces a selection dynamic in loan approval process but we get only to observe outcomes from those who have self-selected first to apply before we know whether they have been approved or not.

Therefore, following Heckman (1979) who first formulates selection bias as a form of omitted variable and subsequent authors such as Berinsky (2004), the argument for selection bias is motivated as follows: First, assume the outcome equation is as given in equation (1). We make further assumption, that variable y is observed only and only if a certain unobserved latent variable exceeds a given threshold.

Thus, let Z_i^* be a latent variable, indicating a propensity to be included in the sample, ω_i' is a vector of covariates, α is a vector of coefficients and μ_i is a random disturbance for unit i for selection equation, respectively. Along these lines, we have selection equation:

$$Z_i^* = \omega_i'\alpha + \mu_i \tag{4}$$

$$Z_i = \begin{cases} 1 \; if \; Z_i^* > 0; \\ 0 \; otherwise \end{cases} \tag{5}$$

Precisely, the selection equation is a probit:

$$\Pr(Z_i = 1) = \Phi(\alpha' \omega_i) \quad (6)$$

For this analysis, there are some factors that may cause selection bias, for instance, firms closer to Juba, those whose owners are literate and foreigners are more likely to apply, hence selecting themselves into the sample. On the other hands, firm away from Juba or illiterates are more likely select out and we end up not observing them in the sample, ceteris paribus.

We run several robustness tests and our results are presented in Table 4.51. We examine the base equation against a number of likely candidates for selection dynamic. Reading out Fisher's Z transformation (/athrho) in column 1, we cannot rule out presence of some selection bias. However, when we deselect *robust standard errors and opt for a default*, we find different results; selection bias is no longer an issue (see column 2). None of variables of interest explains a variation in the outcome equation. The same is true in column 3; we see that athrho is not statistically significant and no variables in the outcome equation are statistically significant as well. We could not include all four variables in selection equation because of failure problem. In short, though, there is selection bias it is not a big issue as the above discussion shows (Table 4.51).

4.6 What Have We Learned from the Econometric Results?

From the econometric results, we find that distance, gender and size are important factors in explaining the variation in the probability to apply for loan, receive loan or get rejected or rating lack of formal finance as a major constraint on firm performance. To some

extent, the sector and the nationality appears to be also integral to access to finance under some conditions. We highlight below some of these salient findings.

4.6.1 Radius of Finance

In terms of the actual loan received, firms away from Juba are less likely to receive credit (Table 4.46). However, when you ask the firms whether they consider access to formal and informal finance as a constraint, firms away from Juba are equally less likely to cite a constraint (Tables 4.47 and 4.48). It is also evident from the econometric results that firms away from Juba are less likely to apply. They are thus credit constrained (Table 4.49). These results are an eye opener in the sense that distance does matter. This is what I call the *radius of finance*. Firms that are in close proximity to Juba are more likely to receive loans.

At the same time, we find that firms away from Juba do not cite access to credit as a major constraint. First, they have no idea about the existence of these services, reaffirming the proverbial phrase "out of sight, out of mind". Second, such firms rely on informal finance. Therefore, in explaining or teasing out factors that affect access to finance, it is important to consider distance.

4.6.2 Gender Bias in Access to Formal Credit

While gender seems not to be a significant determinant of the actual loan approved (Table 4.46), there is a gender bias when it comes to financing obstacles. Women are more likely to say that access to formal credit is a major constraint (Table 4.47). Of course, it makes sense that they rate access to informal credit as a less constraint because this is their main source of finance (4.48). Larger firms are more likely to apply for loan

(Table 4.50). Clearly, there is a gender bias in whether firm considers lack of access to formal credit as an obstacle. There is empirical evidence in the literature that women face greater obstacle to accessing external finance (Asiedu, Freeman & Nti-Addae, 2012).

4.6.3 Firm Size and Access to Credit

In case of the actual loan approved, larger firms are more likely to receive a loan (Table 4.46) and are less likely to rate access to formal credit as minor or no obstacle at all (Table 4.47). Gender matters. Women are more likely to indicate lack of access to credit (Tables 4.47 and 4.48).

This could be both a reality and a perception since there is a typical regularity in literature which argues that some firms are likely to shift blame to financing obstacles when in fact they have some blames to carry (Beck, Demirguc-Kunt & Maksimovic, 2005). Similarly, Beck, Demirguc-Kunt and Laeven (2006) find that older, larger and foreign owned firms tend to report less financing obstacles.

4.7 Conclusion

This essay has interesting findings with regard to access to finance in South Sudan. The essay studied access to credit by SMEs and the factors that determine whether a firm applies for loans, whether it receives credit or gets rejected, as well as how each firm characterizes the impact of access to finance on their performance. Because this is a discrete choice model, we employ probit model as appropriate tool to analyze and gauge the impact of each factor on the probability of loan approval or rejection, and the firms' perception of finance as a major or minor constraint.

The essay validates the role of three important factors with respect to access to finance. There is an urban bias in the sense that firms further away from the capital city Juba are less likely to access credit. Such is the radius of finance which tends to cluster in the center. The radius of finance also makes distant firms to be less likely to rate access to credit as a major constraint, because they have no idea about the existence of formal credit services or they resort to local informal sources for financing enterprise operations.

The solutions may lie in spreading out financial services to reach both the unbanked and bottom of the pyramid in the rural areas. This strategy could go a long way to ameliorate gender bias, since women on average are more likely to experience a constraint to access for formal finance.

In terms of size, larger firms as opposed to smaller firms have an advantage in accessing credit. This is the trend the world over, and it is one reason to devise ways for expanding the access frontier for all enterprises, especially for SMEs which are financially constrained.

In analyzing the current state of SME access to finance in South Sudan, five main findings emerge:

- First, about 70% of businesses fall in the "microenterprise" category, defined as a firm whose size ranges between one and four employees (small, medium-sized and large enterprises are defined analogously. About 26% of the sampled SMEs are small enterprises, 4% are medium enterprises, and only one is a large enterprise (this was a bottling water company). Assuming then that this sample is

reasonably representative of the population, it follows then almost all firms in South Sudan are SMEs.

- Second, the access to finance is inversely related to the distance from Juba, hence validating the hypothesis of rural-urban bias in resource allocation. Findings from this field survey indicate that about 72% of all loans went to Juba. Nevertheless, we find that firms away from Juba do not cite access to credit as a major constraint. First, many of them have no idea about the existence of these services. Second, such firms rely on informal finance from friends, family members or out-of pockets, consistent with the evidence in literature. In addition, other impediments such as collateral requirement, bank bureaucracies, need for special connections or any other access issues tend to affect small firms the most. Such a firm tends instead to choose to internally or informally finance, which is in line with the pecking order hypothesis which states that firms tend to exhaust internal financing before turning to outside financing sources.
- Third, small size is a disadvantage. The study finds that larger firms have greater chances of receiving loans than SMEs. This is consistent with the literature which finds that the smallest firms face the most binding financial and legal constraints. The authors state that any improvements in legal and financial sector developments goes a great length to benefit the smallest firm the most and that firms dependent on external finance grow faster or bigger.
- Fourth, SMES are more likely to self-select out of the credit market if they perceive that they will be rejected due to lack of collateral and credit history.

Based on this analysis, wholesalers and business services, for instance, are more likely to indicate the lack of access to finance as a major constraint.

- Fifth, while gender seems not to be a significant determinant in the actual loan approvals, women are more likely to rate lack of formal finance as a major and informal finance as minor constraint. This finding is similar to what Asiedu, Freeman and Nti-Addae (2012) find that white women did not face discrimination in access to credit and paid lower interest rate than white men in 1998 in the USA. Of course, huge disparities exist in access to credit between black-owned, Hispanic-owned and white-owned businesses: the first two groups face some discrimination either due to pure prejudice or statistical discrimination. But for Sub Sahara Africa in particular, other studies show that female-owned firms are more financially constrained than male-owned firms.

Table 4.1: Characteristics of Commercial Banks in South Sudan, 2011

Name	Year of creation	No of Branches	State's share (%)	Public share (%)	Total assets (million $)	Deposits (million $)	Loans (million $)	Loan /Deposits (%)	Total Current Employment
Agriculture Bank of Sudan	1959	4	-	-	-	30	11.5	38	100
Buffalo Commercial Bank	2008	3	-	100	71.4	26.5	13	49	40
Commercial Bank of Ethiopia	2009	1	100	-	189	65	-	-	21
Equity Bank	2009	4	-	100	150	119	16	13	125
Ivory Bank	1994	9	-	100	111	104	12	12	150
Kenya Commercial Bank	2005	19	-	100	100	1000	100	10	300
Mountains Trade and Development Bank	2010	1	-	100	2	13	0	0	24
Nile Commercial Bank	2003	13	40	60	45	36	16	44	40
TOTAL									**800**

Source: Author's compilation from Survey Data, 2011.

Table 4.2: South Sudan Bankable Indicator, Growth in Customer Accounts, 2011

Bank Name	Customer Bank Accounts		
	July	August	% Change
1. Agriculture Bank of Sudan	11,000	13,000	19%
2. Buffalo Commercial Bank	1,200	1,800	50%
3. Commercial Bank of Ethiopia	437	466	6.6%
4. Equity Bank	40,000	45,000	12.5%
5. Ivory Bank	16,00	17,000	6.3%
6. Kenya Commercial Bank	52,144	55,407	6.3%
7. Mountain Trade and Development Bank	781	896	14.7%
8. Nile Commercial Bank	10,000	10,300	3%
Total	131,562	143,869	9.4%

Source: Author's compilation, 2011.

Table 4.3: South Sudan Commercial Bank Lending to Firms, 2011

Bank Name	Lending Size (in US$)	
	Minimum Loan (Ever Approved	Maximum Loan (Ever Approved)
1. Agricultural Bank of Sudan	3,704	740,740
2. Buffalo Commercial Bank	-	555,556
3. Commercial Bank of Ethiopia	-	-
4. Equity Bank	5,556	1,300,000
5. Ivory Bank	3,704	962,963
6. Kenya Commercial Bank	18,519	1,111,111
7. Mountain Trade and development Bank	-	-
8. Nile Commercial Bank	444	1,851,852
Total	31927	6,522,222

Exchange Rate 1 US$ =2.7 SSP at independence in South Sudan

Table 4.4: South Sudan Banking Annual Lending and Number of SMEs Served, 2011

Bank Name	Variable/ Year	2005	2006	2007	2008	2009	2010	2011
Ivory Bank	Loan in '000000$					0.2	0.3	0.3
	# SMEs					40	75	120
Kenya Commercial Bank	Loan in '000000$				7.4	14.8	18.5	2.2
	# SMEs	N/A						
Buffalo Commercial Bank	Loan in 000000$				0.2	1.3	2.8	0.5
	# SMEs	N/A						
Agriculture Bank of Sudan	Loan in '000000$	2.6	3.7	4.8	5.6	5.9	6.7	5.6
	# SMEs	500	500	800	1000	1100	1200	1300
Equity Bank	Loan in '000000$					0.7	2.9	4.4
	# SMEs					150	920	1,200

Table 4.5: How South Sudan Banks Describe Their Lending to SMEs

Bank Name	Individual Bank Assessment
Agriculture Bank of Sudan	Lend to small producers and farmers.
Commercial Bank of Ethiopia	We are not yet giving loans to customers, leave alone SMEs. The bank has just opened its operations in South Sudan.
Equity Bank	Top SMEs include real estate, general trade, importers and materials as well as commerce.
Kenya Commercial Bank	Some SMEs are doing very well and some fall behind; others have fallen into delinquency in their loan repayments.

Table 4.6: South Sudan Banks Ranking of 5 C's in Appraising SME Projects, 2011

	Major Obstacle	Moderate Obstacle	Minor Obstacle	Not Obstacle	Total
Character of the owners	8				8
Capacity of the firm	5	2	1		8
Collateral Requirement	3	5			8
Firm initial capital	2	3	2	1	8
Macroeconomic conditions	3	1	2	2	8

Table 4.7: Indicators of Bank Services

Name	Customized Products	Partnering Development Agencies	Role of Mobile Technology	Steps Toward Improving Customer Service	Ways to Expand Access Frontier to all ,specially SMEs
Agriculture Bank of Sudan	Small Producers' Loan and Small Farmers' Loan	Most of NGOs, EU, IFAD, IDA, and World Bank	Technology reduces the administrative costs and Provides customers with information	Application of IT, and Capacity building for the bank & customers	Flexibility in terms of collateral requirement and Provisioning of information
Buffalo Commercial Bank	N/A	Attempts to collaborate with other foreign institutions not great; their eagerness to work with local banks is minimal.	In negotiating phase with mobile operators abroad to expand outreach	Offer additional windows and add cashiers, open branches, arrange services according to customers' needs, encourage check usage instead of cash, current abnormal queuing will die out as soon as new currency exchange is over	Loan to poor borrowers through umbrella organizations
Commercial Bank of Ethiopia	N/A	N/A	N/A	Upgrading service by introducing new IT; implementing BPR (business	Has not yet introduced mobile banking

				process Reengineering); Expanding branch networks; hiring additional HR; and to encourage the culture of public savings, we pay interest on savings	
Equity Bank	Business loan; development loan; asset finance and working capital	Talking with IFC, World Bank, USAID, DFID, Norway, KEWF, and Planning discussions are on-going	It is a major role and a way to go in today's banking business	Building capacity for staff; Branch network expansion; Financial literacy on banking (trust, confidence); and Deployment of technology (e.g, ATMs)	Financing in housing sector and Agriculture
Ivory Bank	not specialized bank but commercial bank	Considering it in future	Truly connected to the internet and throughout the region	We hope to improve the technology; currently connected to Khartoum and experiencing technical problems (immediately after independence).	We are doing this through Establishing bank branches in local areas
Kenya Commercial Bank	Water, biscuit, ice manufacturing in	World Bank; Ministry of trade ; Investment; and	Very important and makes communications	Good queue management system; cross selling	Training SMEs in trade opportunities, and bank

	addition to other specialized loans	business winners	easy and quick	of products; advantage banking and E-banking.	requirements
Mountain Trade and Development Bank	N/A	N/A	N/A	Rolling out of ATMs (24 hrs.) services and embarking on training agents to tap the usefulness of technology in facilitating bank activities	At present we are not providing any kind of borrowing whether big or small, but in the future we are going to provide the poor ones against a security.
Nile Commercial Bank	Salary earners and skills for deductions 40% of salary (can be done times 12)	IFC attempt/problem of standard; line credit of $ 5 million ; and Loita Capital partners = $ 10 m.	N/A	Improving staff capacity and Giving quality service (it is measured against the service we are giving)	Different products

Table 4.8: Nonperforming Loans among Businesses, 2005-2011

Year	Total NPL (%)	% of NPL Due to SMEs	% of NPL Due to Large Businesses
(1) Buffalo Commercial Bank			
2005			
2006			
2007			
2008			
2009			
2010			
2011	13	3	10
(2) Kenya Commercial Bank			
2005	10		
2006	10		
2007	10	N/A	N/A
2008	10		
2009	10		
2010	10		
2011	10		
(3) Ivory Bank			
2008	25	18	7
2009	20	12	8
2010	18	11	7
2011	15	10	5
(4) Agricultural Bank of Sudan			
2005	15	7	8
2006	15	7	8
2007	15	7	8
2008	41	11	30
2009	30	14	16
2010	25	10	15
2011	20	10	10
(5) Equity Bank			
2011	1.02	0.6	0.52
(6) CBE, MTDB and Nile Commercial bank all responded with " N/A"			

Table 4.9: Commercial Bank Expectations from Central Bank and SMEs

Name	Things Banks Wish to See Happen in Order to Expand Lending to SMES	Commercial bank Expectations from Central Bank of South Sudan
Agriculture Bank of Sudan	Enough capital; Good agricultural practices; Land registration; Collateral, and Market information	Targeting balanced growth in money supply; Provisioning of financing to the productive sectors and provision of medium of exchange Provisioning of adequate liquidity for the economy
Buffalo Commercial Bank	The legal framework concerning banks; mortgage and regulation that affect the financial sector be revised and acted	Taxation issues be clear; Service at government officers (license, building permits, etc) should not be a subject of procrastination, and Actions to approve or reject should be fast
Commercial Bank of Ethiopia	Establish business based on feasibility study; Raise adequate capital required for the establishment of business; Build strong management team and skilled HR; Establish proper financial records (accounts)	Check the fulfillment of the minimum capital requirement for the establishment of business; Check before licensing, he physical address of the business- to inspect whether the business has office and working premise; Enforce the proper maintenance (establishment) of accounting (financial records); Initiate legislature body to introduce laws, such as foreclosure laws, which speed up loan collection process and protect lending banks; Practice proper and systematic registration of fixed assets (properties) so as to protect bankers (lenders) when they hold

		the properties as collateral Establish credit , and information center
Equity Bank	Record keeping; Sound management system; Good succession plans Relevant business plan; with a good likelihood of success; Ability to offer some form of collateral	Formulate relevant legal framework to guide secured lending; Incentives to encourage commercial banks to invest in rural areas; Financial literacy programs through mass media and public meetings; To run guarantee schemes to help banks to mitigate risk, and To bring down cost of establishment and set-up
Ivory Bank	Attract us/develop business attitude, Appreciate the value of money; Work hard and have no place to gossips all day, and work and create wealth	Ensure “no eating of people money”
Kenya Commercial Bank	Training of entrepreneurs Banking of all SMEs; Proper bookkeeping system, and Having permanently located SMEs	
Mountain Trade and Development Bank	Business must have adequate accounting records; Demonstrate history of profitability activity through documentation; Business must have accounts with us; Borrower must be recommended and his character approved, and Must have a collateral	Expedite process of repossessing a collateral (debt collection); Establish a credit referencing bureau, and Establishment of unified collateral registry
Nile Commercial Bank	Needs for plan for projects; Quality of staff;	Upgrading legal framework;

	Economic conditions;	

Table 4.10: The State of Microfinance Sector in the Republic of South Sudan as At 30th September 2011

Institution	Type	Total Clients	% of Women	Total Borrowers	Portfolio Size	Portfolio Weight	PAR>30%
BRAC South Sudan	NGO	25,026	100	16,553	4,217.968	0.284	69.02
Sudan Microfinance Institution	CLG	10,225	36	10,247	3,933,222.9	0.264	25.00
Finance Sudan Ltd	CLG	9,487	25	5,373	5,100,619	0.343	9.27
Rural Microfinance	CLS		69	1,037	547,495.5	0.037	1.79
WOYE MEI	NGO	1450	71	1,106	1,047,759	0.070	19.64
Christian Agenda for Development	NGO					0.000	0.00
Frontier Microfinance	CLS	230	80	154	27,650	0.002	0.50
Financial Development Service	CLS	Operations have been suspended in process of restarting				0.000	0.00
Total		47,444		34,470	14,874,714	1.000	
Total Portfolio ($)					5,042,276.1		
Average PAR >30							30.81

Source: Private Sector Development Department, Ministry of Commerce, Industry and Investment, South Sudan.

Note: CLS= Company Ltd by Shares and CLG =Company Ltd by Guarantees.

Table 4.11: Commercial Bank Ownership in South Sudan[26], 2013

S/N	Bank Name	Branches	Total Branches	Ownership	Operating Since
1	African National Bank	Juba	1	N	-
2	Agriculture Bank	Juba		N	
3	Buffalo Commercial Bank	Juba, Wau and Aweil	3	N	2/21/2008
4	Eden Commercial Bank	Juba	1	N	8/8/2012
5	Ivory Bank	Juba, Wau, Bentiu, Aweil, Torit, Renk and Rumbek	8	N	8/6/2006
6	Liberty Commercial Bank	Juba	1	N	2/27/2012
7	Nile Commercial Bank	Juba, Rumbek, , Wau, Aweil, Yei, Yambio, Torit, and Malakal	8	N	4/27/2006
8	Mountains Trade and Development Bank	Juba	1	N	1/25/2010
9	National Commercial Bank	Juba	1	N	11/22/2012
10	People Bank	Juba	1	N	1/24/2013
11	Kenya Commercial Bank	Juba, Yambio, Yei, Wau, Malakal, Numule, Torit, Kuajok, Rumbek,	12	F	3/6/2006

[26] South Sudan Central Bank Branches are in Wau, Yei and Malakal with headquarter in Juba.

		Aweil, Bentiu and Bor			
12	Charter One Bank	Juba	1	F	6/21/2011
13	Commercial Bank of Ethiopia	Juba, Malakal	2	F	6/18/2009
14	Equity Bank	Juba, Malakal, Kajokeji, Yambio, Wau, Nimule, Torit, Aweil, Yei, and Bentiu	10	F	4/29/2009
15	National Bank Abu Dhabi		1	F	
16	Qatar National Bank	Juba	1	F	11/1/2011
17	Stanbic Bank (CFC)	Juba	1	F	3/29/2012
18	Afriland First Bank	Juba	1	P	5/4/2012
19	International Commercial Bank	Juba	1	P	1/25/2012
20	South Sudan Commercial Bank	Juba	1	P	2011

Source: Banking Supervision Unit, Bank of South Sudan, 2013 (Note: N = national bank; F = foreign Bank and P = partly, meaning it is both foreign and locally owned).

Table 4.12: South Sudan Banking Sector Relative to East Africa, January 2013

Name of Country	Number of Banks	Population (July 2013 Estimate)	Banks per 10 million people
Burundi	10	10,888,321	9.18
Rwanda	14	12,012,589	11.65
South Sudan	20	11,090,104	18.03
Uganda	26	34,758,809	7.48
Tanzania	40	48,261,942	8.29
Kenya	43	44,037,656	9.76

Source: Author's compilation from various publications, Central Intelligence Agency, 2013

Table 4.13: SME Questionnaire Respondents by State

State	Number	%
Central Equatoria	242	72.5
Northern Bahr el Ghazal	77	23.0
Western Bahr el Ghazal	15	4.5
Total	334	100

Table 4.14: SME Questionnaire Respondents by City

State	Number	%
Juba	218	65.27
Aweil	74	22.16
Mayom Angok	3	0.90
Wau	15	4.49
Yei	24	7.19
Total	334	100

Table 4.15: Classification of SMEs by Gender

Gender	Number	%
Female	58	17.4
Male	271	81.1
Non-respondents	5	1.5
Total	334	100

Table 4.16: Classification of SMEs by Ethnicity

Ethnic Group	Number	%
Dinka	111	33.2
Bari	24	7.2
Acholi	10	3.0
Kakwa	10	3.0
Pojulu	10	3.0
Other South Sudanese	40	12.0
Foreigners	101	30.2
Non-respondents	29	8.7
Total	334	100

Table 4.17: Firm Classification by Legal Status

Firm Legal Status	Number	%
Sole proprietor	239	71.6
Private limited company	44	13.2
Public limited company	4	1.2
Partnership	32	9.6
Co-operative	8	2.4
Other Form	1	0.30
Non-respondents	6	1.8
Total	334	100.0

Table 4.18 A: Firm Size by Current Employment

Classification	Firm Size	Number	%
Microenterprise	1-4	233	69.8
Small Enterprise	5-19	86	25.7
Medium Enterprise	20-99	14	4.2
Large Enterprise	≥ 100	1	0.3
	Total	334	100

Table 4.18 B: Firm Size by Current Employment

Classification	Firm Size	Number	%
Microenterprise	1-4	6,587	89.83
Small Enterprise	5-19	662	9.03
Medium Enterprise	20-99	78	1.06
Large Enterprise	≥ 100	6	0.08
	Total	7333	100

Source: Author's construction based on South Sudan Business Survey, 2010

Table 4.18 C: Firm Distribution by State

State	Number	%
Central Equatoria	2,683	36.6
Eastern Equatoria State	259	3.5
Western Equatoria State	339	4.6
Northern Bahr el Ghazal	525	7.2
Lakes Sate	489	6.7
Warrap State	457	6.2
Western Bahr el Ghazal	1113	15.2
Jonglei State	269	3.7
Upper Nile State	894	12.2
Unity State	305	4.2
Total	7333	100.0

Table 4.19: SME Current Employment by Gender and Firm Size

Classification	Firm Size	Men	Women	Total	As % of all Men	As % of all women	As % of all
Microenterprise	1-4	191	41	232	70.5	70.7	70.5
Small Enterprise	5-19	70	14	84	25.8	24.1	25.5
Medium Enterprise	20-99	9	3	12	3.3	5.2	3.6
Large Enterprise	≥100	1	-	1	0.4	-	0.3
	Total	271	58	329	100	100	100

Table 4.20: SME Current Employment by State/Geographical Location

Classification	Firm Size	Central Equatoria	Northern Bahr el Ghazal	Western Bahr el Ghazal	Total
Microenterprise	1-4	154 (63.6)	66 (85.7)	13 (86.7)	69.8
Small Enterprise	5-19	73 (30.2)	11 (4.3)	2 (13.3)	25.7
Medium Enterprise[27]	20-99	14 (5.8)	-	-	4.2
Large Enterprises	≥100	1 (0.4)	-	-	0.3
	Total	100	100	100	100

Table 4.21: SME Classification by Sector

Sector	Number	%
1. Retail	161	48.2
2. Business Service	31	9.3
3. Wholesale	30	9
4. Restaurants/Catering	23	6.9
5. Hotel	22	6.6
6. Repair Shop	14	4.2
7. Manufacturing	8	2.4
8. Construction	6	1.8
9. Agribusiness	1	0.3
10. Other Sector (e.g gas)	35	10.5
Non-respondents	3	0.9
Total	334	100.0

[27] According to this classification, medium and large enterprises are based in Central Equatoria state, South Sudan.

Table 4.22: SME Classification by Sector and Gender

Sector	Number	Distribution by Gender		Distribution by Gender as %	
		Men	Women	men	Women
1. Retail	160	142	18	88.75	11.25
2. Business Service	31	21	10	67.75	32.26
3. Manufacturing	8	5	3	62.5	37.5
4. Wholesale	30	25	5	83.33	16.67
5. Agribusiness	1	1	-	100	-
6. Construction	6	6	-	100	-
7. Hotels	19	15	4	78.95	21.05
8. Restaurants/Catering	22	10	12	45.45	54.55
9. Repair Shops	14	13	1	92.86	7.14
10. Other Sector (e.g gas)	35	30	5	85.71	14.29
Total	326	268	58	82.21	17.79

Note: Missing = 8

Table 4.23: SME Classification by Sector and Firm Size

Sector	Number of Employees (% in Parentheses)			
	1- 4	5-19	20-99	≥ 100
1. Retail	135 (83.9)	24 (14.9)	2 (1.2)	-
2. Business Service	26 (83.9)	5 (16.1)	-	-
3. Manufacturing	3 (37.5)	5 (62.5)	-	-
4. Wholesale	21 (70.0)	8 26.7)	1 (3.3)	-
5. Agribusiness	-	1 (100)	-	-
6. Construction		6 (100)	-	-
7. Hotels	2 (9.1)	14 (63.6)	6 (27.3)	-
8. Restaurants/Catering	13 (56.5)	10 (43.5)	-	-
9. Repair Shops	14 (100)	-	-	-
10. Other Sector (e.g gas)	16 (45.7)	16 (45.7)	2 (5.7)	1 (2.9)
Total(as % of 331)	230 (69.5)	89 (26.9)	11 (3.3)	1 (0.3)

Note: missing = 3

Table 4.24: Usage of ATMs, Bank Visits and Under Mattress Facilities

Facility	Number	%
ATM Withdrawals	24	7.19
Bank Visits	173	51.80
Store Safekeeping Vault	106	31.74
Non-respondents	31	9.28
Total	334	100.0

Table 4.25: Firm Self-Appraisal on Technology and Management Experience

Overall Assessment	Number	%
Technology Adoption and Managerial Competence	110	32.93
Managerial Incompetence and technology Neglect	22	6.59
Unfavorable Business Environment	189	56.59
Non-respondents	13	3.89
Total	334	100.0

Table 4.26: Loan Characteristics

Status	Number	%
Received Approvals (success Rate)	32	69.57
Denied Applications (rejection rate)	14	30.43
Total Loan Applications	46	100
Memorandum: Loan Application % of Total # of SMEs	46/334	13.77
Acceptance rate(Loan Approval As % of total # of SMEs)	32/334	9.58

Table 4.27: Loan Approval by Lender

Lender Type	Number	%
Commercial Banks	22	68.75
Microfinance Institutions	4	12.5
Informal Finance /Money Lenders/Family Members	6	18.75
Total	32	100

Table 4.28: Loan Approval by Gender

Gender	Number	%	% (of gender)
Male	24	80	8.86
Female	6	20	10.34
Total	30	100	8.98

(Note: Two Loan Applicants did not specify gender; missing = 2)

Table 4.29: Loan Approval by Sector

Sector	Quantity	% of the total Approved	Loans Approved as % of Sectoral Totals
1. Retail	12	37.5	7.45
2. Business Service	-	-	-
3. Manufacturing	-	-	-
4. Wholesale	4	12.5	13.33
5. Agribusiness	1	3.13	100.0
6. Construction	2	6.25	33.33
7. Hotels	6	18.75	27.27
8. Restaurants/Catering	3	9.38	13.04
9. Repair Shops	1	3.13	7.14
10. Other Sector (e.g gas)	3	9.38	8.57
Total	32	100	9.67

Table 4.30: Loan Approval by Firm Size

Size Classification	Firm Employees	Quantity	% of the total Approved Loans	As % of Firm Size Classification Total
Microenterprise	1-4	15	46.875	6.44
Small Enterprise	5-19	14	43.75	16.28
Medium Enterprise	20-99	3	9.375	21.43
Large Enterprises	≥ 100	-	-	-
	Total	32	100	9.58

Table 4.31: Why Firm Did Not Apply for Loan

Reasons Firm self-Selection Out from Credit Market[28]	Number	% of Total Constraint	% of All (272)
1. Firm does not think it will be approved	82	47.95	30.0
2. Application procedures are too burdensome	19	11.11	7.0
3. Collateral requirements are strict	57	33.33	20.9
4. Interest rates are too high	13	7.60	5.1
Total Constrained Firms	171	100	62.9
5. The firm does not need loan (unconstrained firms)	101	-	37.1

[28] This means that the firms had wanted to apply but chose to not because of the reasons enumerated one through four.

Table 4.32: Why Firm Did Not Apply for Loan by Gender

Reasons	Men	Women	Total	As % of all men	As % of all women	Total
1. It does not think it will be approved	67	15	82	29.8	31.9	30.1
2. Application procedures are too burdensome	17	2	19	7.6	4.3	7.0
3. Collateral requirements are strict	47	10	57	20.9	21.3	21.0
4. Interest rates are too high	14	2	16	6.2	4.3	5.9
5. The firm does not need loan	80	18	98	35.6	38.3	36.0
Total	225	47	272	82.7	17.3	100

Table 4.33: Why Firm Did Not Apply for Loan by Sector (% in parentheses)

Category	Doubted Approval	Burdensome Application	Collateral	High Interest	No Need
1. Retail: quantity	35 (25.2)	10 (7.2)	38 (27.3)	8 (5.8)	48 (34.5)
2. Business Service	11 (37.9)	2 (6.9)	1 (3.4)	-	15 (51.7)
3. Manufacturing	1 (16.7)	1 (16.7)	2 (33.3)	-	2 (33.3)
4. Wholesale	11 (55)	3 (15)	2 (10)	-	4 (20)
5. Agribusiness	-	-	-	-	-
6. Construction	1 (25)	-	-	1 (25)	2 (50)
7. Hotels	6 (54.5)	-	2 (18.2)	-	3 (27.3)
8. Restaurants/Catering	-	1 (5.3)	6 (31.6)	1 (5.3)	11 (57.9)
9. Repair Shops	4 (33.3)	-	5 (41.7)		3 (25.0)
10. Other Sector (e.g gas)	13 (41.9)	2 (6.5)	1 (3.2)	4 (12.9)	11 (35.5)
Total as % of 334	82 (24.6)	19 (5.7)	57 (17.1)	14 (4.2)	99 (29.6)

Table 4.34: State[29] and Number of Loans Received

State	Loans received	As % of total loans received	As % of SMEs in each State
Central Equatoria	23	71.875	9.95
Northern Bahr el Ghazal	7	21.875	9.09
Western Bahr el Ghazal	2	6.25	13.33
Total	32	100	9.58

[29] Number of loans received according to cities: 1 in Wau, 2 in Aweil, 2 in Yei and 16 in Juba.

Table 4.35: Loan Received by State and Lender (percentages in parentheses)

State	Lender			
	Commercial Banks	Microfinance Institutions	Moneylenders and Family Members	Total
Central Equatorial	18 (78.26) (81.82)	3 (13.04) (75)	2 (8.70) (33.33)	23 (100) (71.88)
Northern Bahr el Ghazal	3 (42.86) (13.64	-	4 (57.14) (66.67)	7 (100) (21.88)
Western Bahr el Ghazal	1 (50.00) (4.55)	1 (50.00) (25)	-	2 (100) (6.25)
Total	22 (68.75) (100)	4 (12.50) (100)	6 (18.75) (100)	32 (100)

Note: The first figures in the cells are for row percentages; the second parentheses present column values.

Table 4.36: Financing Constraint to Firm Growth

Source of Credit	SMEs Identifying a Factor as a Constraint (% in parentheses)				
	Major	Moderate	Minor	Never	Total Respondents
Formal Finance	120 (35.9)	66 (19.8)	75 (22.5)	19 (5.7)	280 (83.8)
Microfinance	98 (29.3)	54 (16.2)	104 (31.1)	24 (7.2)	280 (83.8)
Informal Finance	73 (21.9)	103 (30.8)	89 (26.6)	18 (5.4)	283 (84.7)

Table 4.37: Financing Constraint to Firm Growth by SME Gender

Source of Credit	Number Identifying a Factor as a Constraint			% Identifying a Factor as a Constraint		
	Male	Female	Total	Male	Female	Total
Formal Finance	222	58	280	81.9	100	85.1
Microfinance	222	58	280	81.9	100	85.1
Informal Finance	225	58	283	83.0	100	86.0

Table 4.38: Financing Constraint to Firm Growth by SME Size

Source of Credit	Firm Identifying a Credit Source as a Major Constraint (% in parenthesis)			
	Microenterprise	Small Enterprise	Medium Enterprise	Large Enterprise
Formal Finance	185 (79.4)	80 (93.0)	14 (100)	1 (100)
Microfinance	196 (84.1)	70 (81.4)	13 (92.9)	1 (100)
Informal Finance	199 (85.4)	71 (82.6)	12 (85.7)	1 (100)

Table 4.39: Credit Allocation and Types of Borrowers

Type of Borrowers	Number
Successful borrowers	32
Denied Borrowers	14
Discouraged Borrowers	171
Non-borrowers	101
Total	318

Table 4.40: Lack of Access to Market as a Constraint to Firm Performance

Firms Identifying Access to Market as a Constraint (% Identifying a Factor as a Constraint in Parentheses)				
Major	Moderate	Minor	Never	Total
180 (64.3)	60 (21.4)	27 (9.6)	13 (4.6)	280 (100)

Table 4.41: Lack of Access to Market as a Constraint to Performance by Firm Size

Number Identifying Access to Market as a Constraint (% in bracket of each size)				
Firm Size	Major	Moderate	Minor	Never
1-4	117 (50.2)	42 (18.0)	18 (7.7)	8 (3.4)
5-19	53 (61.6)	16 (18.6)	7 (8.1)	4 (4.7)
20-99	10 (71.4)	2 (14.3)	2 (14.3)	-
≥ 100	-	-		1 (100)
Total (% out of 334)	180 (53.9)	60 (18.0)	27 (8.1)	13 (3.9)

Table 4.42: Lack of Access to Market as a Constraint to Firm Performance by Gender

Category	Male (% in bracket)	Female (% in bracket)
Major	151 (55.7)	26 (44.8)
Moderate	42 (15.5)	18 (31.0)
Minor	19 (7.0)	7 (12.1)
Never	11 (4.1)	2 (3.4)
Non-respondents	48 (17.7)	5 (8.6)
Total (as % of all 329 SMEs)	271 (82.4)	58 (17.6)

Table 4.43: Lack of Access to Market as a Constraint to Performance by Sector

Category	Major	Moderate	Minor	Never
1. Retail	84 (64.6)	28 (21.5)	14 (10.8)	4 (3.1)
2. Business Service	16 (61.5)	6 (23.1)	1 (3.8)	3 (11.5)
3. Manufacturing	6 (84.7)	1 (14.3)		
4. Wholesale	15 (57.7)	5 (19.2)	3 (11.5)	3 (11.5)
5. Agribusiness	1 (100)			
6. Construction	4 (66.7)		2 (33.3)	
7. Hotels	17 (85)	2 (10)	1 (5)	
8. Restaurants/Catering	10 (50)	8 (40)	2 (10)	
9. Repair Shops	5 (71.4)	2 (28.6)		
10. Other Sector (e.g gas)	21 (61.8)	7 (20.6)	3 (8.8)	3 (8.8)
Total	179 (64.9)	59 (21.4)	26 (9.4)	12 (4.3)

Missing = 3

Table 4.44: Summary Statistics

Variable Name /Description	Mean	Median	Stdev	Max	Min	observations
Time to Start SME	0.72	0.5	0.64	3	0.01	327
Years in business	3.43	3	2.09	15	0.17	333
Current Number of Employees	5.22	3	9.97	100	1	334
Employment History	5.24	2	10.64	120	1	329
Revenue in 2011 (in'000$)	50.5	10.0	249.6	3,800.0	0.3	0.251
Years of Schooling of the Firm Head	11.25	12	4.36	19	0	319
Average Distance from Juba in Miles	141	0	215	560	0	334
Number of Employees in year when firm received loan	5	2	10.	120	1	329
Revenue in year when loan was received ('000 $)	49.4	10.0	249.7	3,800.0	0.3	0.251
Loan received in latest year ('000$)	0.8	0	5.0	59.6	0	0.329

Table 4.45: Correlation between Employment, Revenue and Loan Received

	Employment	Revenue	Loan Amount
Employment	1		
Revenue	0.849	1	
Loan Amount	0.147	0.002	1

N = 334

Table 4.46: Probit Estimates of Loan Approvals

	Model (Base Equation) (1)	Model (2)	Model (3)
Gender	0.046	0.266	-0.725
	(0.251)	(0.466)	(0.812)
Employment	0.014*	0.116**	0.148*
	(0.008)	(0.051)	(0.076)
Distance	0.0003	-0.003**	-0.008**
	(0.004)	(0.002)	(0.003)
Retail Sector	- 0.111	1.107**	1.125
	(0.202)	(0.564)	(0.926)
Wholesale Sector		2.093*	1.383
		(1.181)	(1.043)
Foreign		3.361***	6.392***
		(1.082)	(2.245)
Ethnicity			2.463**
			(1.243)
Education			0.081
			(0.087)
Poor Judicial system		0.250	0.029
		(0.221)	(0.430)
Bureaucratic Constraint		0.409*	-0.160
		(0.216)	(0.312)
Technology Constraint			1.398
			(0.609)
Access to Market			-1.010**
			(0.489)
constant	-1.423***	-	-
	(0.167)	5.276***	6.843***
		(1.622)	(2.106)
Probability > chi2	0.411	0.016	0.17
Wald chi2	3.96	20.37	18.31
No. observations	329	68	60

Note: The dependent variable is a dummy for loan approval (= 1 if approved, 0 otherwise); ***, ***, * indicate significance at 1%, 5% and 10% respectively, and standard errors are reported in parentheses.

Table 4.47: Probit Estimates of Formal Financing Constraints

	Base Model (1)	Model (2)	Model (3)
Gender	0.547*** (0.202)	0.548*** (0.203)	0.546*** (0.209)
Employment	0.016 (0.014)	0.017 (0.014)	0.019 (0.015)
Distance	-0.001*** (0.0003)	-0.001** (0.0003)	-0.001** (0.0003)
Retail Sector	-0.003 (0.147)	0.053 (0.149)	0.206 (0.173)
Foreign		0.263* (0.158)	0.244 (0.187)
Credit History			0.290 (0.257)
Wholesale Sector			0.543* (0.288)
Ethnicity			-0.065 (0.186)
Business Sector			0.251 (0.294)
constant	0.099 (0.144)	-0.024 (0.162)	-0.175 (0.194)
Probability > chi2	0.003	0.003	0.004
Wald chi2	16.10	18.30	24.23
No. observations	329	329	328

Note: The dependent variable is a dummy for financing constraint (= 1 if firm considers access to formal finance as major and moderate, 0 if they consider it minor or never an obstacle), ***, ***, * indicate significance at 1%, 5% and 10% respectively, an standard errors are reported in parentheses.

Table 4.48: Probit Estimates of Informal Financing Constraints

	Base Model (1)	Model (2)	Model (3)	Model (4)
Gender	0.199	0.198	0.222	0.221
	(0.191)	(0.194)	(0.206)	(0.207)
Employment	0.004	0.006	0.009	0.009
	(0.009)	(0.010)	(0.013)	(0.013)
Distance	-0.001***	-0.001***	-0.001***	-0.001***
	(0.0003)	(0.0003)	(0.0004)	(0.0004)
Retail Sector	-0.045	0.150	0.279	0.281
	(0.147)	(0.173)	(0.182)	(0.182)
Business Sector		0.319	0.294	0.302
		(0.288)	(0.299)	(0.301)
Credit History		0.126		0.060
		(0.246)		(0.248)
Wholesale Sector		0.503*	0.616**	0.613**
		(0.277)	(0.289)	(0.289)
Ethnicity		-0.015	-0.057	-0.057
		(0.186)	(0.189)	(0.189)
Foreign		0.231	0.105	0.102
		(0.187)	(0.196)	(0.196)
Education			0.064***	0.064***
			(0.019)	(0.019)
constant	0.219*	-0.041	-0.814***	-0.816***
	(0.134)	(0.187)	(0.291)	(0.291)
Prob > chi2	0.002	0.005	0.0001	0.0001
Wald chi2	17.23	23.37	33.17	33.15
No. observations	329	328	317	317

Note: The dependent variable is a dummy for financing constraint (= 1 if firm considers access to informal finance as a major and moderate constraint, 0 if they consider it minor or never an obstacle), ***, ***, * indicate significance at 1%, 5% and 10% respectively, and standard errors are reported in parentheses.

Table 4.49: Probit Estimates of Credit Constraints

Why the firm chooses not to apply for loan

	Base Model (1)	Model (2)	Model (3)	Model (4)
Gender	-0.84 (0.195)	-0.044 (0.215)	-0.109 (0.034)	-0.07 (0.347)
Employment	0.009 (0.11)	0.004 (0.123)	0.080** (0.034)	0.072** (0.035)
Distance	0.001** (0.0004)	0.001*** (0.0004)	0.003*** (0.0005)	0.003*** (0.001)
Retail Sector	0.053 (0.152)	0.231 (0.183)	1.039*** (0.281)	1.400*** (0.431)
Business		-0.572* (0.308)		-0.464 (0.613)
Ethnicity		-0.130 (0.201)		-0.624 (0.397)
Foreign		0.277 (0.206)		0.002 (0.455)
Education		0.050*** (0.019)		0.021 (0.030)
Wholesale Sector		0.726** (0.331)		0.937* (0.538)
Collateral requirement			-0.012 (0.123)	0.024 (0.126)
Constant	0.375*** (0.140)	-0.323 (0.288)	-1.176*** (0.351)	-1,428** (0.583)
Prob > chi2	0.241	0.009	0.000	0.0002
Wald chi2	5.48	21.93	34.38	33.37
No. observations	329	317	114	111

Note: The dependent variable is a dummy for credit constraint (= 1 if firm chooses not to apply for credit for one reason or another, 0 if firm needs no loan), ***, ***, * indicate significance at 1%, 5% and 10% respectively, and standard errors are reported in parentheses.

Table 4.50: Probit Estimates of Loan Application

Whether the firm chooses not to apply for loan or not

	Base Model (1)	Model (2)	Model (3)	Model (4)	Model (5)
Gender	0.076	0.400	0.492	0.075	0.758
	(0.225)	(0.404)	(0.312)	(0.437)	(0.543)
Employment	0.016*	0.100**	0.016	0.127***	0.082
	(0.010)	(0.040)	(0.012)	(0.043)	(0.052)
Distance	0.00002	-0.003**	-0.0005	0.00004	-0.005***
	(0.0004)	(0.002)	(0.0006)	(0.001)	(0.002)
Retail Sector	-0.185	0.500	-0.599*	0.187	2.194***
	(0.190)	(0.374)	(0.308)	(0.448)	(0.644)
Ethnicity	-0.042		0.439	0.918	0.706
	(0.216)		(0.313)	(0.587)	(0.486)
Collateral requirement		0.154		0.177	0.428*
		(0.197)		(0.173)	(0.252)
Interest rate constraint		0.623**			0.667**
		(0.261)			(0.283)
Years in Business			0.055		0.247
			(0.066)		(0.218)
Education			0.066*	0.067	0.138
			(0.036)	(0.047)	(0.108)
Foreign			0.024	1.480**	3.177***
			(0.380)	(0.641)	(1.105)
Launch Time					-0.305
					(0.641)
Poor infrastructure			0.248		0.485
			(0.172)		(0.378)
Market access					-.790*
					(0.435)
Constant	-1.138***	-3.381***	-2.550***	-4.126***	-7.611***
	(0.154)	(0.759)	(0.706)	(0.938)	(1.793)
Probe > chi2	0.300	0.015	0.027	0.004	0.000
Wald chi2	6.07	15.75	18.83	22.35	42.95
No. observations	328	79	160	111	59

Note: The dependent variable is a dummy for credit application (= 1 if firm applies, 0 otherwise), ***, ***, * indicate significance at 1%, 5% and 10% respectively, and standard errors are reported in parentheses.

Table 4.51: Robustness Test for Loan Applications and Approvals

Probit Model with sample Selection			
Outcome Equation: Loan Approval	Base Equation (1)	Model (2)	Model (3)
Gender	0.121	0.099	-0.120
	(0.106)	(0.340)	(0.345)
Employment	-0.001	-0.004	-0.002
	(0.005)	(0.006)	(0.010)
Distance	0.0005	0.00005	0.001
	(0.0004)	(0.001)	(0.001)
Retail Sector	0.073	0.074	0.334
	(0.111)	(0.253)	(0.367)
Wholesale			-0.027
			(0.500)
Foreign		0.118	0.970
		(0.242)	(0.594)
Ethnicity		0.313	0.317
		(0.208)	(0.579)
Access to Market			0.201
			(0.307)
Constant	-1.423***	-1.471***	0.936
	(0.029)	(0.224)	(0.925)
Probability Chi2	0.000	0.124	0.436
Wald Chi2	1.56e+07	10.01	7.98
No Observations	314	314	314
Education	-0.008	-0.010	0.034
	(0.014)	(0.014)	(0.026)
Distance	-0.0002	-0.0001	-0.0002
	(0.0004)	(0.0004)	(0.0004)
Owning Mobile phone	0.156***	0.198**	
	(0.055)	(0.087)	
Foreign	-0.216**	-0.154	-0.154
	(0.098)	(0.177)	(0.211)
Constant	-1.095***	-1.130***	-1.470***
	(0.137)	(0.234)	(0.332)
/athrho	14.035***	12.686	-1.469
	(1.694)	(26.261)	(1.675)
Prob>chi2	0.000	0.629	0.381
Chi2(1)	68.61	0.23	0.77

Note: loan approval and loan applications are outcome equation and loan application are selection equation, respectively. Also, ***, ***, * indicate significance at 1%, 5% and 10% respectively. Standard errors are reported in parentheses.

Table 4.52: Definitions of Variables in Tables 4.46 - 4.50

Variable	Explanation
approved	A dummy for whether a loan is received
Employment	Current number of employees in a firm; a proxy for firm size
Distance	Distance from Juba in miles
Foreign	A dummy for a foreign owned firm; SME nationality
Retail Sector	A dummy for retail firm; proxy for sectoral bias test
Wholesale Sector	A dummy for whether a firm is a wholesale
Gender	A dummy for gender. Female = 1 ; male = 0
Ethnicity	Whether a firm is owned by an ethnic group Dinka
Education	Years of school of the head of the firm owner
Technology Constraint	Whether firm considers implementation of new technology as a constraint on firm growth
Competition	Whether firm considers its existence as reasons for downfall
Access to market	Whether a firm considers access to market as binding on growth
Credit History	Constructed from whether firm has received loan or not
Collateral Requirement	Whether a firm considers collateral requirement as an obstacle to growth or not
Bureaucratic Constraint	Whether firm cites bureaucracy as an obstacle to growth
Poor Judicial System	Whether SME cites poor Judicial system as harming them
Business Service	Whether a firm is a business service such as haircuts, repair shops, salon, printing shops, or not
Interest Rate Constraint	Does the firm consider interest as a constraint on growth?
Years in Business	Years firm has been in operation
Launch Time	Times to start a company
Poor Infrastructure	If the firm considers poor infrastructure as obstacle
Market Access	A dummy indicating whether a firm considers lack of access to market as a constraint to growth or performance
ICT Use	If the firm uses mobile phone for communications

Source: Author's Compilation

Table 4.53: Credit Demand and Constraints across African Enterprises

	Small	Medium	Large
Received Loan (%)	24.8	32.0	55.6
No Credit Demand (%)	34.0	39.8	32.5
Credit Constrained (%)	41.2	28.2	11.9

Source: Beck, and Honohan (2007), World Bank Investment Climate Assessment Survey.

CHAPTER 5

ENHANCING FINANCIAL INCLUSION FOR SMALL AND MEDIUM-SIZED ENTERPRISES IN SOUTH SUDAN

5.1 Introduction

In the review of the literature on SME development in Chapter 2, we learned that financial inclusion is a requisite for economic development and poverty reduction (UN, 2005; King & Levine, 1993; Government of Kenya, 2007; Classens, 2006; Beck & Demirguc-Kunt, 2008), and that SMEs face a significant number of financial access constraints, including cost of funding, poor recordkeeping, lack of credit histories and access to market, and managerial problems, among others (Mwangi & Sichei, 2011; Larossi, 2009; Mendoza & Thelen, 2008; Beck, Demirguc-Kunt & Maksimovic, 2005, 2006; Ayyagari, Demirguc-Kunt & Maksimovic, 2006; Love, 2003).The severity of these constraints varies from country to country. For example, more manufacturing firms in Kenya than in South Africa or China report lack of access to finance as severe or major impediment to firm operation (Larossi, 2009). They can also vary from region to region within a given country, as seen in Kenya's bank branch distribution (Table 5.1).

Despite these variations, the improvements that have been made in Kenya with respect to access to finance can provide important lessons for financial sector development in South Sudan. The recent FinAcess National Survey shows that usage and regional coverage of financial services has been increasing in Kenya (FSD, 2013). Use of mobile financial services more than doubled to 62% in 2013 from 28% in 2006. Bank use has increased in all regions and so did the use of MFIs. The number of Kenyans using ATM or debit cards

increased from 6% in 2006 to 20% in 2013. The majority of rural population—76%—relies on mobile financial service agents as their closest service providers.[30]

The concerted efforts by the Government of Kenya, CBK and other financial sector players are bearing fruits in Kenya. Larossi (2009) finds improvements in firm external financing from 2003 through 2007, partly due to improved fiscal management, better banking sector performance, and increased competition bringing down annual cost of borrowing in Kenya.

The analysis presented in Chapters 3 and 4 confirms some of the difficulties that face typical SMEs in developing countries such as South Sudan and Kenya. We find that size does matter, that is, larger firms have higher probabilities of acquiring loans and are least likely to rate lack of access to formal finance as a major obstacle. As discussed elsewhere in the literature (see Larossi, 2009) and confirmed by these findings, if a firm thinks that it will not receive credit, it is more likely to self-select out of the credit market. Some firms that need credit will not apply if they perceive interest rate or collateral requirement to be too high or if they doubt loan approval (see Chapters 3 and 4). In South Sudan our econometric analysis of the radius of finance also found an inverse relationship between the distance from Juba and the probability of a SME receiving credit.

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[30] This latter development meant that use of post offices; buses and *matatus* for domestic remittances have declined. This meant some people who used to work in bus remittances companies lost jobs or relocated or became agents of a Safaricom or bank.

This chapter endeavors to identify ways to enhance SME financing in South Sudan in the post- conflict, post-referendum environment. Emphasis is placed on replicating best practices, investing in new technologies, and taking a policy stance on financial inclusion, as other countries have done (AfDB, 2013; AFI, 2010). The chapter proceeds as follows: Section 5.2 examines lessons to be learned from Kenya on the financial sector and inclusive development. Section 5.3 identifies and discusses gaps in regulatory and institutional framework in South Sudan. Section 5.4 discusses strategies to enhance SME financing, including investing in ICT, leveraging oil resources for broad-based development, and embracing the financial inclusion agenda. Section 5.5 concludes the chapter.

5.2 Lessons from Kenya on the Financial Sector and Inclusive Development

South Sudan has already drawn many lessons from Kenya in other policy areas, including the mechanics and applications of constituency development funds (CDF) to address regional inequalities (see Kenya's CDF Act, 2003), Kenya's contributions to the AU initiative in training civil servants in South Sudan, the adoption of Kenyan primary and secondary school curriculums in some South Sudanese schools, the continued role of the Kenya School of Government/Kenya Institute of Public Administration in providing training to cadres of civil servants from South Sudan[31], and Kenyan manufacturers

[31] According to FSR (2012) report, Kenya has a regional footprint. Whereas South Africa's banks opened 16 subsidiaries in Sub-Sahara Africa and Nigerian banks had 44 subsidiaries in 21 SSA countries, Kenya had 11 subsidiaries at the EAC regional level, totaling to 282 branches and 31 branches happened to be in South Sudan.

supplying South Sudan with crucial good such as cement (African Business Initiative, 2011).

In addition, a good number of foreign banks in South Sudan as well as significant segment of business community come from Kenya. From the current regulatory perspective, there is non-discrimination against Kenyan commercial interests, and if anything, South Sudanese leaders seem to appreciate Kenyan's contributions in the country. Just as there is mutual accommodation and regulatory cooperation between the US and European Union (Posner, 2009), South Sudan's government looks upon Kenyan banking subsidiaries in a positive light. Building upon these foundations, we argue that South Sudan should continue to learn from Kenya's experience in promoting financial inclusion with regard to best practices that are currently lacking in the nation.

5.2.1 Transferability of "Best Practices"

While problems of access to finance also exist in Kenya (Atieno, 2009; Nino-Zarazua & Johnson, 2011; AFI, 2010; Aduda & Kalunda, 2012), the financial sector in Kenya has shown that access can be expanded through solving what I call the "distance dilemma" by leveraging new technologies. We know that expanding access over long distances is a big problem because of sparse populations and remoteness of the rural areas from financial centers. Continued refinement and clarity on regulations (CBK, 2007), lessening restrictions on bank branching and licensing to allow more dispersed ATM installation, can help by cutting down on the need for bank visits. Where the cost of installing an ATM is high, relative to person-to-person or government-to-person payments (Pickens, Porteous, & Rotman, 2009), banks should be allowed to collaborate with telephone

providers to develop applications such as M-Pesa and M-Kesho, as Kenya did. These services have made it easy to access financial services in even distant locations. Sitting in his remote village, say in Narok, a Masai person can with a click send money to relatives in Masai Mara for a bus fare back to the town. H/she can do the same thing to pay electricity bills, school fees, and for many other services which used to demand travel and the attendant transport costs (AFI, 2010; Jack, Suri, & Townsend, 2010). Services like these will fill important needs if they are introduced in South Sudan.

When the internet or phone services are not available, as in many places today in South Sudan, mobile van banking is another smart way to expand access to local remote areas. Mobile vans do not have to make visits seven days a week, but they can make frequent scheduled visits in designated areas. Some banks have done this in Kenya with great success.

Investing in appropriate best practice technologies, both by the businesses and by concerned government agencies is smart policy, too. Technology has a public-good dimension that comes with positive externalities in forms of network effects or complementarities. As in complementary investments in education and health, technology investments are plagued with free-rider problems, agency or coordination failures. Private agents undersupply such goods. Quasi-government involvement is

therefore warranted. This being said, we must not forget that sometimes government failure can exacerbate market failure (Mendoza & Thelen, 2008).[32]

Another best practice is establishment of agency banking, where agents facilitate transactions on behalf of commercial banks, or telephone service providers such as Safaricom to undertake services including deposit, withdrawal, balance inquires and mini-statements, among others (CBK, 2010; FSD, 2013).

5.2.2 Reducing Information Asymmetries

Leveraging soft networks (ICT networks such as WIZZIT, G-Cash, and M-Pesa and community networks as in Grameen Bank) using commitment mechanisms as Equity Bank does with its *jijenge* accounts (Mendoza & Thelen, 2008), and increasing the sharing of information are ways to enhance and deepen access to credit (Mwangi & Sichei, 2011). In order to expand the access frontier, countries have resorted to a variety of tools to address information needs. Kenya is using the following strategies:

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[32] The question of coordination failure is best illustrated by the where-to-meet- dilemma. That is, let us suppose two friends decide to meet in New York on January 3, 2011 at 2pm. However, they have not decided on the venue to meet. Suppose they all come to New York, start looking around in the hope they will meet in one venue by chance. In the age of technology, they can call each other on cell phones or send emails. However those means of communications are subject to failure and that may result in cancellation of the meeting. Unless by fluke, they cannot possibly choose Time Square as their chosen place to meet. In other words, even if activities with complementary benefits are well planned, they are subject to coordination failures.

(i) Adopting credit scoring to enable banks to calculate risks and compare and agree on benchmarks. This provides a degree of objectivity. The establishment of credit bureaus has gone a long way to helping Kenya in this area.

(ii) Banks providing support services in addition to credit. Loans sometimes perform poorly due to lack of knowledge about business realities.

(iii) Financial literacy has also been advocated and advanced by banks and financial service providers (Cohen & Nelson, 2011). This can help SME owners to learn basics for running an enterprise and how to enter into a relationship with a bank through credit-taking. A number of banks, including Family Bank, Faulu Kenya and Equity Bank, are now imparting financial literacy education to their current and prospective customers in Kenya.

India is also seeking for strategies to assist SMEs. The Government of India has created a Small Industry Development Institute (SIDI) in addition to its Industrial Development Bank (IDB). SIDI introduces a range of ITC services, including internet café and mobile telecommunications, and having developed this infrastructure it lets the market innovate. The IFC and other donors have committed $9 million to develop infrastructure to enable SME sector in South Sudan.

5.2.3 Development Banks

Development banks, which can be either private or publicly owned, provide medium to long-term finance and expertise to specialized sectors, for example, agriculture. Kenya has one such bank, the Development Bank of Kenya Ltd (DBK) with established

credibility in the region and providing long-term finance for "sustainable investment." None exists currently in South Sudan.

Usually, development banks have received their funding from their own governments or from bilateral and multilateral aid agencies such as USAID. They also provide technical support and expertise to their customers. Criticisms have been directed at them, however. Sometimes development banks refuse to lend to SMEs, on the grounds that administering small loans to small-scale borrowers is costly to them. Partly for this reason, as Ndikumana (2009) indicates in his survey of literature on African development finance institutions, they have fallen short in delivering the needed services. The old approach often did not integrate development finance into the national development agenda, and like other government enterprises, development banks can fall prey to rent-seeking.

Nevertheless, development banks are important in satisfying demand in certain niches. Hence, it is vital that governments create conducive environments and mandate not only financial viability but also the social mandate of expanding access and contributing to national development agenda in terms of job creation and poverty reduction.

5.2.4 Sequencing Innovation and Regulation

Over the years, the financial system in Kenya has benefitted from the responsible role that CBK has come to play in monetary policy issues, such as regulations and guidelines for the Microfinance Act (2006) and Money Remittance Regulations (2013).[33]

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[33] CBK is one of the five main financial sector regulators—Capital Market Authority, Insurance Regulatory Authority, Retirement Benefits Authority and Saccos Societies Regulatory Authority. These are active players with the expressed aim because "

Consistence, clarity and cooperation between regulators and market players have come to be associated with the CBK policy stance. Based on the interviews I conducted in Kenya, the policy stance and direction are regarded as being consistent with the bank's aim of maintaining a "stable and efficient banking and financial system" (CBK, 2010).

Many have argued that M-Pesa succeeded in Kenya because the regulators first gave it breathing space. In treating it like an infant, and refraining from choking it with regulations, including know-your-customer requirements (KYC), and taxation at the early stages, CBK seemed to have heeded the classic infant argument. The lesson for South Sudan is that entrepreneurial innovations and creativity ought to precede stiff regulation as long as there are no system-wide negative externalities.

5.2.5 Post Office Savings Bank as a Vector of Financial Inclusion

Kenya's Post Office Savings Bank (Postbank) was established in 1910. Its colonial mandate to mobilize savings remains in line with the current government's 2030 Vision. In recent years, Postbank has come to face stiffer competition from deposit-taking microfinance institutions. It has also lost some customers in the age of M-Pesa (FSD, 2013). But in an interview, one of the bank officers indicated that its advantages include reasonable and stable interest rates.

Today Kenya' Postbank boasts about 97 branches throughout the country, and it endeavors to expand the access frontiers. It does this by relying on instruments of

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achieving and sustaining macro-financial stability forms the base for sustainable, broad based economic growth and employment creation, vital for realizing the country's development agenda as outlined in the Vision 2030" (FSR, 2012, p. 10).

financial inclusion such as branch networking, ATM penetration, mobile phone deployments, agency banking, internet banking and educating the public about products it offers.

South Sudan does not currently have a functioning postal service or anything like Kenya's Postbank. South Sudan may take a leaf from Kenya's experience in the post office business. Other countries that have done well in this respect are the BRIC nations via the Postal Savings Bank of China, Brazilian model of agency banking, India's multiple partners model and Russian payment model (see Anson & Toledano, 2010).

Replicating best practices is not a new idea. In the early Meiji period, for example, Japan imported a lot from abroad. Its commercial system came from France, its criminal law from Germany, its central banking system from Belgium, and its education from America (Chang, 2003). Of course, these institutions were adapted to suit local conditions, and important new institutions were created. But best practice institutions were an important ingredient in the country's development.

Another important lesson to be drawn from East Asia is that any public policy must be characterized by flexibility, realism, and autonomy (Chang, 2003). Flexibility recognizes that mistakes do happen, and when they do, it is best to recognize and seek ways to correct them. Realism calls for avoidance of utopian prescriptions. Autonomy can be understood as independence of industry from governmental control and vice versa. These three values represent departures from what Chang (2003) calls the "market supremacy assumption" or in the words of Oliver Williamson (1975) "in the beginning, there were markets." Markets are man-made like other institutions and are therefore malleable.

Inclusive financial sector development in South Sudan will not arise spontaneously—it will require an enabling policy environment where private sector innovates and regulators prudently guide it.

5.3 Financial Regulatory and Institutional Framework in South Sudan

That South Sudan is one of the least developed nations on the face of the earth is no accident. The legacy of war (Hutchinson, 2001; Arnold, 2007; Salman, 2011) has meant that South Sudan attained statehood with dismal development indicators across the board from the financial sector to law-making to the regulatory framework to the enforcement of property rights. The economy of South Sudan is best described as "undeveloped, thin and fragile", characterized by incoherent government policy, insufficient labor demand and unskilled labor supply, making "it difficult to create conditions for diversified, inclusive and sustainable economic growth" (AfDB et al., 2012, p. 2). Consistent with this overall picture, the financial sector is beset by a weak regulatory framework. Unless the regulatory framework is strengthened and coverage of the financial system is scaled up to reach rural areas, broad access to financial services will remain limited, with little more than Juba basking in the radius of finance.

This section aims to identify the main regulatory gaps and impediments to expansion of financial frontiers and broad-based economic development by extension. We highlight seven regulatory and credit market imperfections that stand in the way of financial inclusion.

5.3.1 Lack of Clear Policy Stance on Financial Inclusion Agenda

The banking and other laws of South Sudan have no mention of the need to be forceful in pressing financial inclusion. The South Sudan Development Plan (2011) does hint at the 2040 Vision (a government blueprint for transforming South Sudan and make it a middle income by 2040) and includes a call to return to agriculture as well as to make South Sudan business friendly (African Business Initiative, 2011). But there is no explicit financial inclusion policy. Neither the CBSS nor other branches of government have publicly taken a position to advise banks to spread geographically in an efficient and equitable manner.

Once the policy stance of the government is clearly delineated, it can take appropriate measures to pass appropriate regulations and issue relevant guidelines, such as the conversion of MFIs into deposit-taking institutions as was the case in Kenya. Unless financial inclusion is stipulated as a goal to be achieved and not just regarded as a byproduct of development, one will not find much incentive on the part of the government, central bank or telecommunications industry to innovate, for example by instituting something like a post office savings bank advocating financial education.

The Consultative Group to Assist the Poor (2009 [CGAP]) finds that financial inclusion using branchless services means that traditional methods of payments, say from governments to person (G2P) becomes cheaper, through providing low-cost delivery channels. A number of developing countries, including Kenya, have made use of the geographical spread of the post office service to expand the access frontier, furthering along the financial inclusion agenda (d'Alcantara & Gautier, 2013). In order to advance

such policies, a quasi-government agency, perhaps called "National Commission for Financial Inclusion in South Sudan," could be set up to do the job.

5.3.2 Macroeconomic Vulnerabilities

The macroeconomic environment remains unstable in South Sudan due to a number of factors. First, inflation remains high. The currency, the South Sudan pound, continues to fluctuate erratically against the dollar. Unless the CBSS works hard to stabilize prices, uncertainty will continue to impact investor confidence in the economy and lead to currency flight. Absent clear management of the economy, self-inflicted crises such as the bungled currency devaluation of 2013 will continue to lead to more price instability. Such an environment is unsuitable for loan-making because credit supply tends to be adversely impacted by inflation, especially when it is unanticipated (Omran & Naceur, 2011). To lend to general public, banks have to be assured of their real rate of return to money. They cannot do that if they are in the fear of inflation erasing gains from loan portfolios or operating in a parallel markets where policymakers take black market exchange rate as charting the path (NBS, 2013). The last point is a reality in South Sudan. South Sudan officials keep track of black market data or trends because those are the ones that really matter or reflect the market conditions. For example, in October 2013, one dollar fetched 4.5SSP in the black market and 2.9SSP in the official markets.

Second, relations between Juba and Khartoum continue to create uncertainty over oil, making South Sudan's economic growth volatile (see figures 5.1, 5.2 and 5.3). As Figure 5.1 shows, South Sudan economic growth fell by 55% in 2012 when oil was shut down and bounced back to about 70% when the tap was turned back on in 2013. The same

volatility is also shown by the external trade balance, falling to -82% in 2012 and up to 346% in 2013 (Figure 5.2). The converse is equally true for current account balance and government net borrowing/lending in 2012 and 2013 (Figure 5.3). The passage of South Sudan's oil to the international market through Khartoum's territory has been and can continue to be sabotaged any time there is a disagreement between the two countries. The connection between the financial system and the oil sector is strong, since oil revenues fuel credit as well as growth.

The above two factors are compounded by unnecessary regulatory burdens arising from tax multiplicity and delays in import clearance at ports of entry. The resulting costs pass through to the consumer and currency markets. By South Sudanese authorities charging prohibitively or delaying goods entering from East Africa, they impair the cogs of trade. This fuels inflation and macroeconomic instability that can get transmitted to foreign exchange markets, again limiting credit supply. Better regulation of the imports market may go along away to stabilizing prices and creating more conducive environment for lending.

5.3.3 Poor Institutions and Lack of Land Titling

Whereas close to 90% of South Sudan is suitable for farming, only 4.5% of arable land is currently under farming (African Business Initiative, 2011). While there is a vast tract of lands in the countryside, land rights issues frequently arise in urban areas. Since there are no established proper institutions or policy frameworks that manage the land use, acquisition and transfer of ownership, there are conflictual claims to a given piece of land by many people, for instance in Juba. These conflicting claims due to institutional

vacuum usually pitted the earlier comers (war returnees) against the latecomers after the CPA. Take for example, Mr. John who returned to Juba after war in 2005 and acquired some piece of land from corrupt land dealer. However, in 2009, another man named Peter returned to Juba, and after some time he claimed that the piece of land acquired by John belonged to him. The reason is that he was the original occupant of the land before being displaced by the war. In other words, some people who returned first acquired pieces of land illegally and those who would come later would lay claim to the same pieces of land.

Therefore, both in towns and countryside, there is low utility of land for commercial purpose because a person may have his or her land, but if they cannot provide legal titles or documents to verify ownership, others may doubt what they claim. When land titles are missing, certain markets such as insurance and credit (Mendoza & Thelen, 2008) are not inclusive enough to reach all actors. Just as snake can bite a person who has no stick at hand in the moment of attack, a firm-owner or entrepreneur without evidence of owning collateral may not qualify for a loan. Even though the domain of collateral requirements and other kinds of acceptable security guarantees has expanded, land titles are still central to many loan appraisals. And collateral requirements remain significant determinant of external financing (Larossi, 2009).

After decades of displacement and destruction by wars, the majority of South Sudanese have resettled back to their ancestral lands. Some of these parcels of land are not officially recorded, although customary laws and traditions back these ownership claims. The laws of South Sudan state clearly that lands belong to the people. Chapter II, article

170 (1) of the Constitution states that "All land in South Sudan is owned by the people of South Sudan and its usage shall be regulated by the government in accordance with the provisions of this Constitution and the law" (GoSS, 2011, p. 45). Many people own parcels of lands verbally but have no title deeds, as a result of which their land cannot be viably used as collateral.

While I was doing fieldwork in connection with this research, a number of commercial bank officials complained to me that land policies are fragmentary and selectively enforced. The lack of land titles and poor land rights administration has meant that disputes arise frequently. There have been cases where land is sold to an investor, and within a short time another person comes forward to claim that the land belongs to him or her. Sometime, these cases go to courts where delays and inefficiencies are rampant. It is logical to conclude that such cases affect credit supply.

5.3.4 Lack of Clear Enforcement Mechanisms to Protect Lenders and Borrowers from Bad Deals

In the market, there must be rules to protect different parties, such as sellers and buyers, principals and agents, consumers and producers, suppliers and demanders (Dittus & Klein, 2011). Markets work best when the rules of games are laid out and there is trust among different parties (McCreevy, 2006). Rules ensure predictability and stability.

In South Sudan, however, rules are often arbitrary if they exist at all. For example, there are no clear policies on bankruptcy laws to protect lenders in the event of default, nor rules to protect borrowers in the event of harassment by a predatory lending party. At the time I was collecting data, only three banks had made loans. This vacuum in bankruptcy

law and enforcement mechanisms could be one of the weakest links in expanding financial access frontiers in South Sudan.

5.3.5 Policy on Bank Branching

At the moment, there is no clear policy on the manner and extent to which banks are advised to branch out geographically throughout South Sudan. While the choice to build a branch in one location as opposed to another is determined by business motive, it is helpful and wise for governments to have a clear position. The USA, for example, expanded bank branch networks in 1980s and 1990s by relaxing restrictions, including security guarantees, capital requirements, distance to the nearest competitor, and minimum population densities. This is one way to increase geographical coverage and bring about some equity in regional coverage. This is not likely to happen unless there is a clear policy position pushing for it.

5.3.6 Lack of Industry Surveys

The quality and frequency of the information that firms or public entities produce has a bearing on bank lending. Examples include audited accounts and surveys (Larossi, 2009). Larossi (2009) finds that 88% of firms in Kenya reported audited accounts, compared to 58% and 44% in Uganda and Tanzania, respectively. Commercial banks and the central bank in Kenya produce surveys on remittance inflows, financial sector stability, and monetary policy (see Think Business Limited, 2006, 2007, 2008, 2009, 2010, 2011, 2012; CBK, 2012, 2013; FRS, 2012) on frequent basis and provide focused press releases to media, the financial sector, and others on a range of issues, including monetary and financial matters, banking sector performance and accomplishments. Fina Bank, for

instance, reports that it is re-strategizing its SME approach (Think Business Limited, 2010, p. 80). CBK Governor Njuguna Ndung'u declares that "Banking Industry is thriving" in an interview that provided an overview of the banking system, including data on the number of banks in the country, branches, total employees, deposits, and number of ATMs (Think Business Limited, p. 8-16).

There are no widely distributed industry publications in South Sudan that deal with the banking system, hence no public information on what, if anything, the banking system is doing to expand the access frontier. On market prices, NBS is succeeding under hard circumstances to produce frequent CPI indices, as well as GDP data and other limited data. But owing to lack of openness and transparency, the results of onsite inspections of commercial banks are only available to the CBSS and not to the general public. Moreover, given the constraints that CBSS faces, inspection is generally limited. This feeds into the larger theme of "no clarity in the monetary policy management" in South Sudan.

5.3.7 Central Bank Independence and Political Interference

The Bank Act (2011, p. 7) grants independence to CBSS, stating that:

> *When exercising the powers and carrying out the tasks and duties conferred upon them by this Act, neither the Bank nor any member of the Board, or other Bank officials shall seek or take instructions from any ministry, public institutions, office, agency, or other entity or their members or officials. Government of South Sudan ministries, public institutions, agencies, offices, and other entities operating in South Sudan,*

> *their members and officials must not improperly seek to influence the Bank or any member of the Board or other Bank officials in the performance of their tasks, or interfere with the proper execution of such tasks.*

While the central bank can be as independent, like its counterparts in the West, it should not be absolved from accountability, including but not limited to testifying before the Legislative Assembly or other oversight body (GoSS, 2011). CBSS independence, including its ability to set the target level of inflation, is restrained by commonsense, because when and how the bank achieves its goals can have political consequences.

Central bank independence in South Sudan is undercut by the existence of number foreign exchange bureaus that are "zombies", displaying classical rent seeking behavior because they remain functioning due to political support. The relations between the central bank and the foreign exchange bureaus are very explicit in South Sudan. Like commercial banks, these foreign exchange bureaus receive allocation of dollars from CBSS on weekly basis at designated official target (about 2.95SSP/$1). Instead of selling these hard currencies to the public at value slightly above official rates to make normal return, they dump them in the black market where the difference or arbitrage is usually manifolds. The conventional opinion is that these foreign exchange bureaus cannot exist without this life support from CBSS. The public believes that some officials own foreign exchange bureaus and this diminishes the credibility of the central bank and raises questions as to the extent of its independence. They can easily generate public backlash with the slightest provocation.

While cooperation between agencies is permitted, and the Bank is expected to report to the Finance Minister as applicable law dictates (GoSS, Chapter 9, Section 64, 2011) there has been some cloudiness in the relationships between the Ministry of Finance and Economic Planning (MoFEP) and CBSS. This precedes independence of South Sudan in 2011. For instance, the MoFEP was responsible for designing, contracting out and executing the plan to have South Sudan Pound (SSP) printed. Critics thought the Bank of Southern Sudan (BoSS) should have been in the forefront, but the assignment was dictated by the government. Similarly, in November 2013 when CBSS devalued the currency, the National Assembly summoned both the CBSS Governor and the MoFEP Minister to testify before the assembly (the minister did not appear because he was overseas on an official trip). The message to an average person is clear: that CBSS and MoFEP are co-managers of the economy. This is a dangerous precedent because it does not acknowledge the autonomy of CBSS as the regulatory authority in monetary policy issues, including maintenance of "monetary and domestic price stability" (GoSS, 2011, p. 5).

5.4 How to Increase Financing for SMEs in South Sudan

The fact that most SMEs in South Sudan are not accessing credit is owing to both the underdeveloped nature of the financial system and the lack of concerted efforts on the part of the government and financial system to expand the access frontier. While many firms across Sub-Saharan Africa are financially constrained (Larossi, 2009; Asiedu, Kalonda-Kenyama, Ndikumana & Nti-Addae, 2013), some countries have tried to improved access by taking a number of aggressive policies. If South Sudan follows suits, its financial system can be expanded and improved.

5.4.1 Embracing the Financial Inclusion Agenda

Intentions are powerful agents of change. If the government adopts a policy stance and encourages the financial sector to work toward that goal, it can expand the access frontier and SMEs could benefit broadly (see FSD, 2013). A number of African countries have joined the Alliance for Financial Inclusion (AFI)[34]. In addition to their membership in the AFI, African central bankers met on 14-15 February 2013 in Tanzania to form Africa Mobile Phone Financial Services Policy Initiative (AMPI) to "extend financial inclusion to the continent's large unbanked populace," according to Governor Njuguna Ndung'u of Kenya Central Bank. These policymakers see AMPI as a subset or sub-network of AFI. Thus, relying on principles such as Maya Declaration and regional cooperation and networking in information sharing, AFI AMPI members will be able to share experiences and address common policy issues.[35]

Other global initiatives for financial inclusion include the Financial Access Initiative in New York, the Centre for Financial Regulation and Inclusion in Cape Town, and the G-20 Global Partnership for Financial Inclusion Principles (Dittus & Klein, 2010). Some countries have empowered their central banks to lead the charge, facilitating rolling out

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[34] African AFI Members include Tunisia, Mozambique, Angola, Morocco, Ghana, Namibia, Sierra Leone, Tanzania, Uganda, Zambia, Guinea, Madagascar, Congo (DR), Burundi, Senegal, Togo, Burkina Faso, Côte d'Ivoire, Benin, Niger, Mali, Guinean Bissau, Egypt, Kenya, Lesotho, Liberia, Nigeria, Sudan, Cameroon, Gabon, Equatorial Guinea, Chad, South Africa, Ethiopia, Malawi, Zimbabwe, and Central Africa Republic.

[35] The AFI global policy Forum met at Riviera Maya in Mexico in 2011 to discus and agree on a common set of principles that will help develop financial inclusion policy by developing country regulatory institutions; these common principles came to be known as the Maya Declaration.

of mobile deployments (mobile phone financial services), partnerships between the banks and development institutions, and setting up community banks, for examples.

This policy stance enables government to regulate prudently and encourages other players in the private sector to innovate and invest in strategic growth areas such as finance, communications and energy. We see in Kenya, for example, what it means to invest in the ICT industry. Doing so increases the access frontier, empowers the society and improves the economy in the process. For businesses, ICT reduces information asymmetries, improves credit scoring, and helps to improve the management of debt.

5.4.2 Leveraging Oil Wealth for Financial Sector Development

Baruch Spinoza famously said, "If you want the present to be different from the past, study the past" (Krieger, 2002, p. 40). This advice is relevant for South Sudanese who have not yet realized the impact of the country's oil resources. Metaphorically speaking, Spinoza is calling upon them to study what has been done with oil revenue in the years past, and what can be done to channel it to fuel broad-based economic development. It behooves the country and development economists to rethink how oil wealth has been distributed to draw lessons for the future.

South Sudan's government, the Central Bank and financial institutions so far have not enabled the channeling of oil revenues into credit, to the private sector and to the SMEs in particular, thereby failing to harness oil wealth to fuel broad-based and inclusive economic growth. Up until now, there has been no broad-based growth strategy. Instead, it can be argued that the economy of South Sudan which is primal and cash-based, suffers serious horizontal inequality—that is, economic inequality across regions and ethnic

groups—, which is a source of political instability to guard against (Stewart, 2005). As illustrated by neighboring Kenya in 2007, political and economic exclusion or the calculated dominance of one ethnic group can be a source of grievances and a trigger for political violence (Githinji & Holmquist, 2009)[36].

Despite the country's oil wealth, commercial banks (which have enough reserves at the time of field search for this dissertation) in South Sudan have not played a major role in financial inclusion. This is typical of many commercial banks in African countries which tend to hold excess reserves and safe assets such as government bonds and do not play as large of a role as financial intermediaries as they could. Given the structure of bond markets (and limited number of buyers), returns on government bonds tend to be high and are therefore attractive.

While the oil lasts, the big question remains how the oil revenue will be managed to contribute to the broad-based financial sector deepening and inclusive economic development. Studies show that financial sector development is among the important variables that determine whether the natural resources become a blessing or a curse (Humphreys *et al*., 2007; Brown, 2009). If well managed, oil revenue can become a blessing; if not, it can breed Dutch disease, rent-seeking behavior and corruption.

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[36] During this field research, I observed the paradox of Western Kenya (Nyanza and Western Provinces), with a politically active and highly educated population but poor and lacking financial services, underscoring the role of politics, culture and presence/lack of inclusion in development outcomes.

As it has been done in other countries such as Gulf States, though not with similar political settings and analogous initial conditions, I believe it is possible to channel oil resources to the productive sectors, especially through targeted lending to SMEs.

At the moment, oil revenue makes up close to 98% of the government budget, and has been the single most important source of consumption expenditure for the national government. As depicted in the Figure 5.4, oil revenue goes to pay salaries at the state and national levels, and finances public goods such as roads, airways, and defense. But as discussed in Chapter 2, South Sudan's institutions are weak, leaving much of the oil revenue to leak out, resulting in missed opportunities. Leakages include money diverted to personal private accounts in the country or going to safe havens outside the country as capital flight.

Evidence about oil having not made much difference in South Sudanese lives due to large-scale leakages can be inferred from the infamous letter that President Salva Kiir wrote to potential 75 government officials, past and present, imploring them to return stolen funds supposedly amounting to $4 billion, according the Sudan Tribune on 2 June 2012. That corruption is commonplace is indisputable and the whole world knows it, having placed South Sudan, the youngest nation, on the list of the most corrupt states, ranking number 173 out of 177 countries (Transparency International, 2013). South Sudan ranks 47 out of 53 African countries in the 2010 Mo Ibrahim Index of African Governance.

What can be done differently if oil heretofore has not brought about improvements in the daily lives of average South Sudanese (see SSCCSE, 2010)? We propose "thinking out

of the box." In particular, increasing the share of the oil revenue going to the financial sector is a powerful strategy, for maximizing the rents from oil wealth in focus of economic development. Three specific measures are proposed.

First, we propose that state put some reserves into the stabilization account, which was created before the referendum (2005-2011) but seemed to have been depleted long ago, and convince the country's financial systems and the development community to chip in if they can. This fund can then be tapped to finance lending to specific sectors including SMEs at moderate rates to fuel broad-based development.

Second, while some capital flight is inevitable, the oil sector can be enticed to retain more earnings in the home financial system. That is, the oil sector can channel resources to the financial system through depositing company oil profits, as well as paying royalties to governments in turn to pay salaries and other expenses, some of which could go into the financial system through deposits in banks.

Third, the financial system in return provides loans to the oil sector to finance further commercially viable exploration and production.

Fourth, from these bank deposits and the stabilization account, the financial system can then lend to the general public and provide specific lending facilities to SMEs. Both the general lending and focused lending to SMEs may help to bring about desirable development outcomes, namely job creation, poverty reduction and equity-enhancement, including horizontal equity across regions, ethnic groups and social classes (see Figure 5.4).

At the macro level, the causality runs both ways, from the oil sector to the financial system and the real sector, and then feeding back from the real sector to the financial system and the oil sector. The result is a shared prosperity that will be good for all.

For a good number of countries in the region, oil resources could hold key to prosperity. A number of Sub-Saharan African countries, including Kenya, Uganda, Tanzania, Ghana and Mozambique have recently discovered oil (World Bank, 2013). Thus South Sudan is not alone in confronting the challenges of how to manage these resources so as to avoid the "resource curse." What may crucially matter for South Sudan and other entrants is being transparent in oil management along the value chain (Alba, 2009; Barma et al., 2012), including extraction, taxation and investment of rents (World Bank, 2013). The value chain approach calls for transparency in contract negotiations, efficiency in tax collection, and targeted public investment using those rents to achieve certain development objectives. Being transparent will necessitate joining the league of "publish what you earn, publish what you pay" and the Extractive Industries Transparency Initiative (EITI). The EITI is a global standard that promotes revenue transparency and accountability in the extractive sector. As of this writing, only nineteen African countries are members of the EITI, with only eight in compliance. South Sudan is not yet a member.

5.4.3 Strengthening the Regulatory Framework

Good governance, especially good corporate governance, is vital for stability and the functioning of the financial sector (Ramo, 2013). Because South Sudan is starting out with a weak regulatory framework, the central bank and other actors must see to it that all

appropriate regulations are enacted and enforced uniformly. The country's circumstances call for moderation in the financial regulatory environment, wherein regulations are not too burdensome on financial providers and yet not too relaxed to risk a freefall as recently seen in the West.

The CBK is moving toward a risk-based supervisory framework, which in its own words (CBK, 2013, p. 4) "benefits institutions as regulatory effort is focused on high-risk areas and provides for more efficient supervision." A priority first is to ensure that financial services are not too big to fail, and are kept at reasonable size as a guard against systemic fraud backed by anti-money laundering schemes (CBK, 2010).

With regard to mobile financial services, both past and present experience shows common themes: (i) they tend to exhibit shock and awe that comes with new financial product, similar to the case of the derivative markets in the USA which amazed but later was blamed for mortgage-backed securization process; (b) they are characterized by complexity and multiplicity in application (c) they can yield rapid and high returns and (d) they tend to lack robust supervision of risky financial services (Stephen, 2011). It is, therefore, advisable to put consumer protection laws in place, albeit not too strict as to stifle innovations. In Kenya, the CBK and Communications Commission of Kenya (CCK) were instrumental in seeing to it that M-Pesa met certain basic requirements before its launch (AFI, 2010). Among other things, the two bodies addressed the issues as to whether M-Pesa was a banking entity or not. Because M-Pesa e-float (monetary value or credits collected and deposited in M-Pesa customer account) does not earn interest and not permitted to engage in commercial activities, it is not a bank. The CBK treaded

carefully in regulating the mobile phone financial service sector, deploying prudential regulation and supervision, consumer protection laws, and regulations to enhance competition and networking among market players. The outcome satisfied both the consumer advocates and investors in Kenya.

While the overall legal framework remains weak in South Sudan, development financial institutions (IMF and the World Bank) are working to lay some foundations for the country's investment climate. These include publications such as Doing Business in Juba (2011) and the passage of enabling frameworks, including the Investment Promotion Act, and the South Sudan Investment Authority. The IFC Investment Climate Reform Program is working with relevant institutions to advance broad-based development in non-oil sector, and hopes to increase access to finance for SMEs (African Business Initiative, 2011).

5.5 Conclusion

South Sudan achieved independence with dismal economic indicators and weak institutional regulatory frameworks. The regulatory and institutional gaps in the financial sector development in South Sudan include lack of policy clarity, lack of a government policy stance in favor of financial inclusion, poor property rights enforcement, macroeconomic vulnerabilities, and information and data problems. Building on "best practices" that can be learned from Kenya, the country can make progress by reducing information asymmetries, investing in ICT, establishing development banks, leveraging postal service as a vector of financial inclusion, sequencing regulations, and declaring a clear policy stance on financial inclusion. By channeling oil to productive sectors, as

shown in the loop diagram in Figure 5.4, South Sudan has an opportunity to make inroads in the financial inclusion agenda.

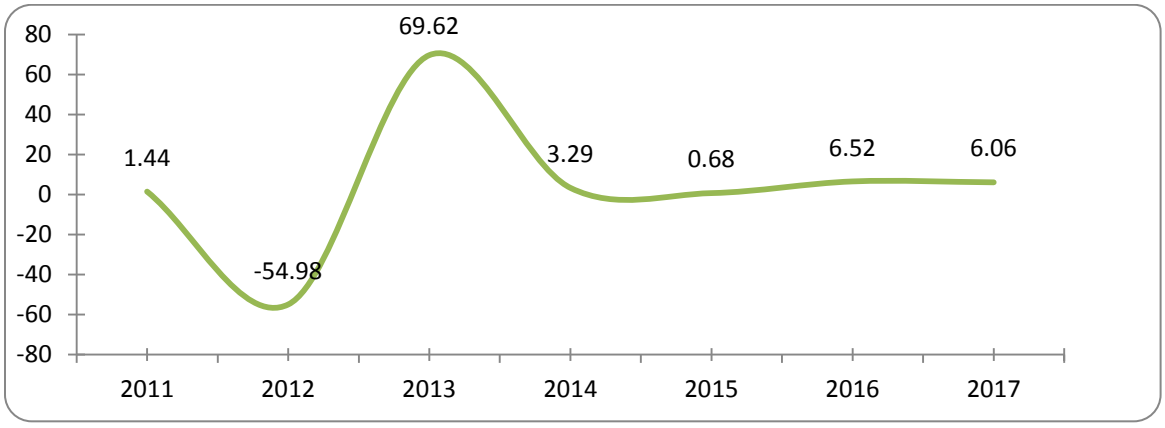
Priming the pump in the financial inclusion ecosystem can bring large dividends as shown in the cases of India's Self Help Group-linkage initiative, Bangladesh's Grameen Bank and M-Pesa in Kenya. Nonetheless, heterogeneity in approaches, models and strategies means that there is no single silver bullet method when it comes to expanding access to financial service. Even as South Sudan learns from these best practices, it must adapt them to its own circumstances & capacities, and in line of its specific development needs.

Table 5.1: Kenya's Bank Branch Distribution per Region, 2008

Province	No. of branches	% branches	Adult Population (Million)	% below poverty line	% banked
Nairobi	353	40.00	1.88	34	38
Central	100	11.30	2.23	30	24
Coast	111	12.51	1.61	70	15
Eastern	75	8.50	2.75	51	15
North Eastern	10	0.01	0.59	74	0.1
Nyanza	61	6.90	2.45	48	12
Rift Valley	137	15.50	4.09	49	20
Western	40	4.60	1.81	52	11
Total	887	100	17.41		

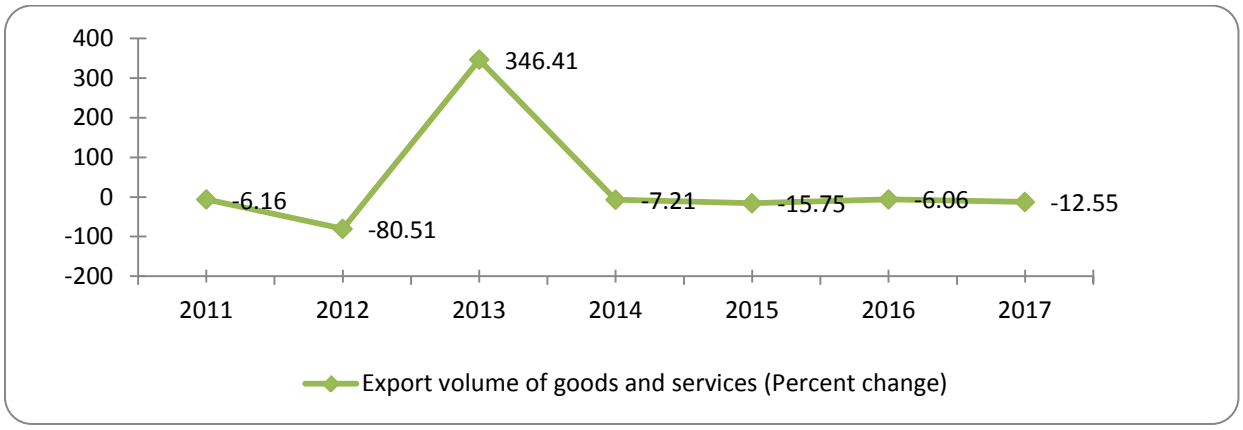
Source: Central Bank of Kenya and FinAcess Survey 2007.

Figure 5.1: Real GDP Growth in South Sudan (Annual %)



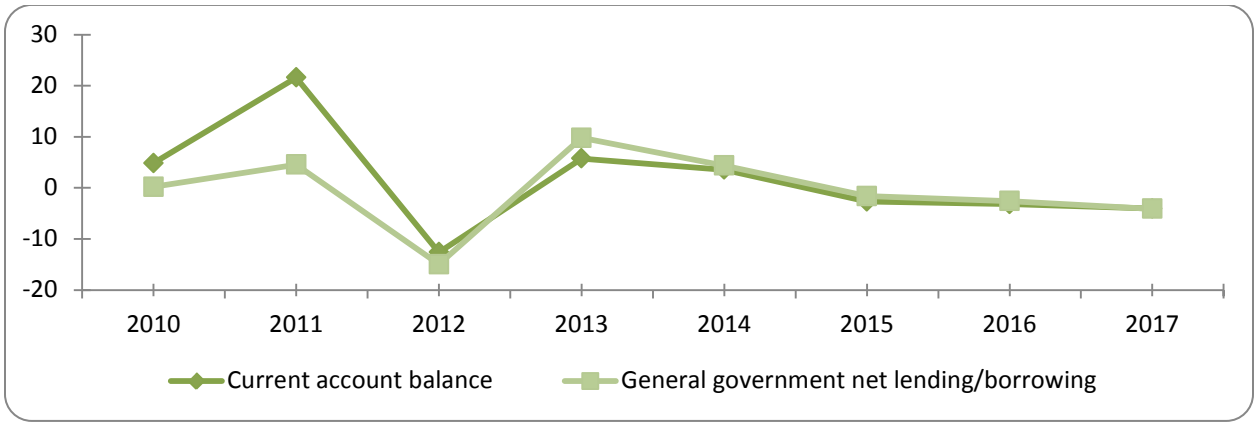
Source: IMF

Figure 5.2: External Trade



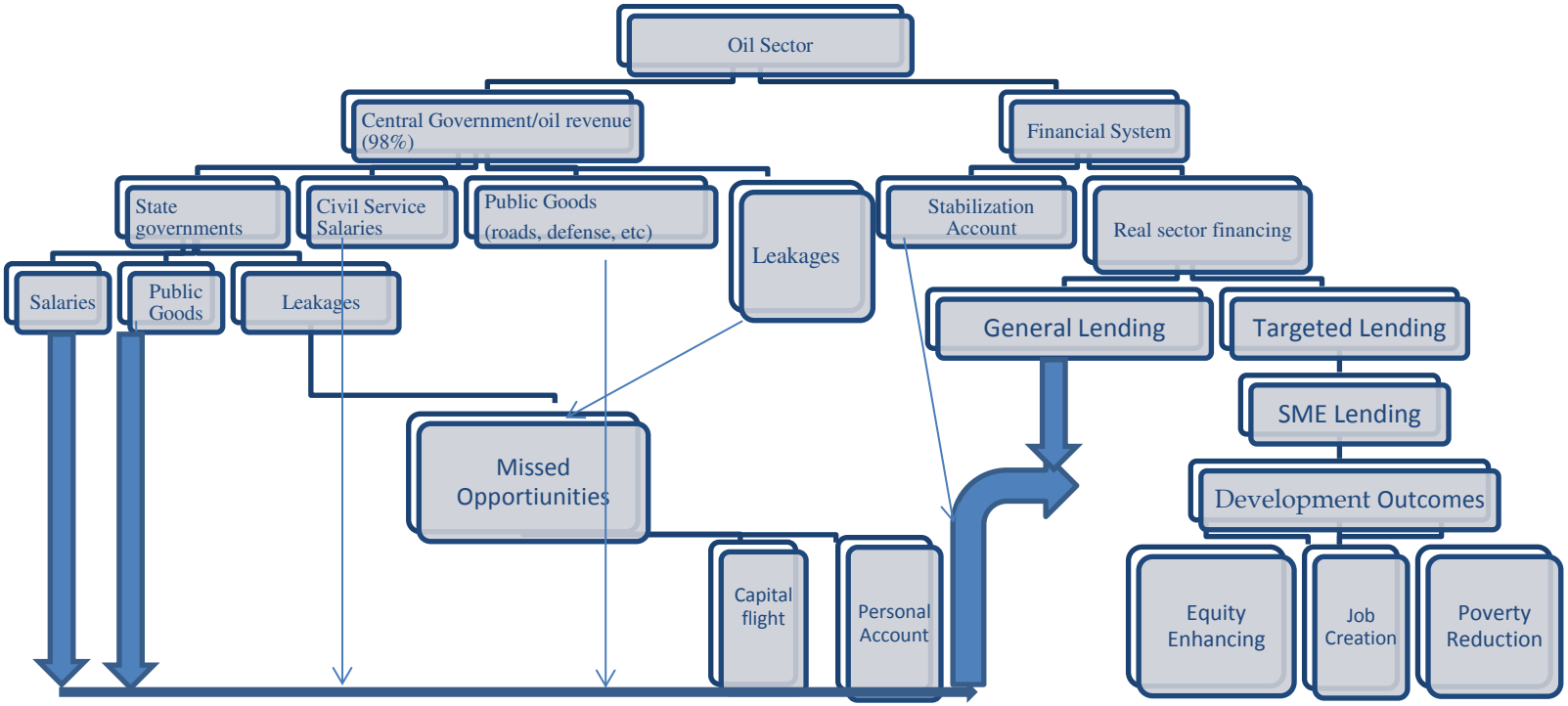
Source: IMF World Economic Outlook, 2012

Figure 5.3: Capital Account Balance and General Government Net Lending/Borrowing (Unit is % of GDP)



Source: IMF World Economic Outlook 2012

Figure 5.4: Analytical Framework of Potential Contribution of the Oil Sector to Financing SMEs



Source: Author's construction

CHAPTER 6

CONCLUSION

6.1 Introduction

This dissertation set out to explore solutions to potential obstacles to SME growth, probing to what extent SMEs have access to finance in South Sudan and Kenya as well as how technology and financial sector development are expanding the access frontier in Kenya. The overarching question throughout this study has been, "What can South Sudan learn from Kenya's experience in financial sector development?"

The aims of this study were three-fold. The first was to examine the literature to develop an understanding of why SMEs in general, and especially in the least developed and post-conflict settings, face problems in gaining access to finance. For this reason, expanding the financial access frontier and placing more emphasis on financial inclusion seem to be paying off, as seen in Kenya. The second aim was to explore the replicability of Kenyan "best practices" in South Sudan. All evidence points to the fact that Kenya is relatively developed compared to other countries in Great Lakes Region. Hence, we advanced the argument that it can be a model from which South Sudan can learn best practices in financial sector development. The third aim was to lay the groundwork for a financial inclusion agenda for South Sudan, which has not been done before. The dissertation aimed to contribute to knowledge in these regards.

As discussed in Chapter 1, the study is significant in light of the recognition in contemporary development theory and practice that institutions do not arise from thin air, in the absence of active policy. Hence the appropriateness of the financial inclusion

agenda championed by central banks across the African continent. The second reason for this study's significance is the recognition that SMEs are dynamic and central to the poverty agenda.

With regard to methodology, in an attempt to answer the research questions, we reviewed the relevant literature and undertook 15-month field research in South Sudan and Kenya. The data collected in Kenya come from three regions (Nairobi, Tala and Machakos), while the data for South Sudan come from three states (Central Equatoria, Western Bahr el Ghazal and Northern Bhar el Ghazal). We used Probit models to analyze the data from the two countries in the first two essays of the dissertation. The third essay is a qualitative analysis, identifying gaps in the financial sector regulatory and institutional framework, drawing lessons from Kenya, and recommending a number of options to enhance SME financing in South Sudan.

The remainder of this chapter proceeds as follows. Section 6.2 recaps key results from each essay, as well as caveats underscoring certain limitations. Section 6.3 discusses lessons and policy implications. Finally, Section 6.4 considers possibilities for future work.

6.2 Key Results

The first essay (Chapter 3), *Financial Sector Development and Small and Medium-sized Enterprises in Kenya*, examined financial sector development and SMEs in Kenya. The overall conclusion drawn from this essay is that the financial sector, in collaboration with the telecommunications industry and the CBK, is doing a great deal to expand the financial access frontier. The introduction of agency model (a corresponding banking

arrangement whereby bank services are sold through third party or by non-bank financial corporations on behalf of the bank), the M-Pesa (a mobile money services revolutionized by Safaricom in Kenya) and the race to serve the bottom of the pyramid, as exemplified by Equity Bank, have expanded access to financial services as shown by FinaAccess Surveys in 2006, 2009 and 2013. From econometric analysis of the Kenyan data, four key findings emerge.

- First, small size is a disadvantage. We find that larger firms are more likely to receive credit than smaller ones, which make up close to 95% of all sampled firms in Kenya. Unlike the smaller firms, larger firms rate lack of access to formal financial services as a minor or never an obstacle.
- Second, we find that SMEs are more likely to self-select out of the credit market if they perceive collateral requirements to be too strict, interest rates too high or application procedures too cumbersome.
- Third, there is an ICT impact on access to finance in Kenya. Firms that own a website are more likely to apply for loans than those that do not. The same is true for firms that enjoy business networks: firms that network with others are more likely to indicate that they are less financially constrained with regard to formal and informal finance. We argue that networks facilitate and enable information flow between firms, facilitating trade, insurance, investment and credit.
- Fourth, we find no gender bias in access to formal credit: our results show no evidence that gender is a significant determinant in loan approval and in the perception of credit constraints by SME owners.

The second essay (Chapter 4), *Lack of Access to Finance* by *Small and Medium-sized Enterprise as a Constraint to Development in South Sudan,* explored the role of financial sector in financing SMEs in South Sudan. The essay noted that South Sudan came onto the scene as an independent nation with dismal development indicators, after years of neglect and warfare under Khartoum regimes. Analysis of the data and econometric investigation yield in a number of key findings:

- First, as in the Kenyan case, there is size bias in access to credit. That is, larger firms are more likely to receive credit, and more likely to rate lack of access to formal credit as a minor or no obstacle at all.
- Second, there is also some gender bias in access to formal credit. Whereas gender seems not to be a significant determinant in the actual loan approval, there is gender bias in financing obstacles. Unlike men, women SME owners are more likely to say that access to formal finance is a major constraint.
- Third, there is an issue of the radius of finance, in the sense that access to finance is inversely related to distance from Juba: firms away from Juba are more likely to receive little or no credit, while those that are in close proximity to Juba are more likely to receive loans. Although firms located out of Juba are less likely to receive loans, when we ask whether they consider access to formal credit to be a major obstacle, firms away from Juba are not more likely to consider it a major constraint.

The third essay (Chapter 5), *Enhancing Financial Inclusion for Small and Medium-sized Enterprises for South Sudan,* focused on the issues of regulatory and institutional gaps and strategies to develop the financial sector in South Sudan. The essay drew a number of

lessons to be learned from Kenya: to transfer "best practice" technologies, reduce asymmetric information, establish and invest in a development bank, sequence innovations and regulation, and use post office savings banks as a vector of financial inclusion. In addition to identifying these lessons from Kenya, Chapter 5 discussed the prevailing regulatory and institutional gaps in South Sudan, including the lack of clear policy on a financial inclusion agenda, macroeconomic vulnerabilities, lack of land titles, poorly defined and enforced property rights, lack of industry-wide data, and political interference with the central bank's independence. In order to address these challenges and to enhance SME financing in South Sudan, the chapter advocated strategies to expand the access frontier, including taking an explicit policy stance on the financial inclusion agenda, leveraging oil wealth for the financial sector development, strengthening the regulatory framework through good governance and credible enforcement, ensuring that financial institutions are not too big to fail, and promoting institutional cooperation among government agencies; the central bank, commercial banks and telecommunications industry.

As discussed extensively in Chapter 1, analyzing access to finance in sub-Saharan Africa is difficult due to the rudimentary nature of the data. In relying on my own data, three biases could not be completely wished away. First, we could not rule out survivor bias. Firms that went out of business before data collection could not have been included in the sample. Second, I covered a few areas both in Kenya and South Sudan; hence the representativeness of the sample is an open question. Third, I relied on the assistance of nine research assistants in both countries, and their own biases as to where or which firm to approach for selection into sample might have influenced the final representativeness

of the sample. Fourth, I ended up with a smaller sample of banks in Kenya than in South Sudan where the entire population of banks is fully covered. It is, therefore advisable to interpret the findings in this dissertation with these caveats and limitations in mind.

6.3 Lessons and Policy Implications

Based on the results presented in this dissertation, a number of lessons can be drawn with policy implications for South Sudan. Here we highlight six pertinent lessons and their policy implications.

6.3.1 Firm Size as a Constraint to Access to Finance

As the extensive review of the literature indicates, and our econometric results confirm in the essays on South Sudan and Kenya, firms continue to face differential degree of access to finance. In both Kenya and South Sudan, small firms continue to face significant hardships accessing finance. They also express greater awareness of financing obstacles. These are important realities that authorities should acknowledge, while they work to alleviate financing gaps and promote financial inclusion.

6.3.2 Institutional Cooperation

As discussed in Chapters 2 and 3, cooperation among agencies has been shown to work elsewhere. We gave, as an example, the cooperation of the USA and EU in transatlantic regulation. We specifically noted that M-Pesa succeeded in Kenya because of the conducive policy environment in which it is operating, emphasizing that this policy environment is a byproduct of cooperation between the CBK and other stakeholders in Kenya. It is, therefore, prudent that South Sudan policy-makers orient institutions to be

more cooperative -- independent and competitive, but not to the point of assured mutual destruction.

6.3.3 Proper Sequencing of Innovation and Regulation

In addition to regulatory and institutional cooperation, the success of M-Pesa is a result of conscious effort by the regulatory agencies to give innovation breathing space. The CBK decided early on not to choke M-Pesa with prohibitive taxation but instead opted for exemptions. Early subsidization of innovators and cautious taxation can be vital for the successful development of any meaningful financial product. In developing financial products at their initial stage, it is healthy to rethink about merits of the proverbial infant industry argument.

6.3.4 Persistence of Differential Access to Finance

While the central bank, the banking sector, the telecommunication industry and other players are working diligently in Kenya to expand the access frontier, as evident by the results of the successive FinAccess Surveys from 2006 through 2013, SMEs continue to face constraints in accessing financial services. This reflects the fact that there are no silver bullets in resolving the question of access to finance for all. The relevant institutions must continue to make efforts, both across the regions and within groups. It is, therefore, imperative that South Sudanese authorities should not expect quick fixes, even if financial inclusion were to be declared as the number one priority item for the government tomorrow. Financial inclusion is a process and it cannot be mystically achieved, as the saying goes, Rome was not built in a single day.

6.3.5 The Radius of Finance

As demonstrated in Chapter 4, firms away from the capital city continue to face difficulties in access to credit in South Sudan. This is a fact that cannot also be wished away. It must be tackled through active policy interventions in the credit market, including investments in infrastructure and energy. Through the central bank, the government can advise commercial banks to make financial inclusion a priority and encourage the establishment of community banks throughout the country, similar to the agency model or Self-Help Group Initiatives in India.

6.3.6 Self-Exclusion from the Credit Market

The analysis in the first and the second essays confirms that firms will not bother to apply for credit if they think that they will be rejected due to lack of collateral and credit history. Firms which otherwise qualify could self-select out of credit markets, especially if they perceive strict collateral requirements, cumbersome loan application processes, or high interest rates. The implication is that simplification of collateral requirements, know-your customer (KYC)[37], charging stable interest rates (price stability), streamlining ID requirements, and eliminating minimum balances could reduce self-exclusion in the credit market.

6.4 Future Work

The data for this analysis come from a fairly small sample in both countries. Future works should increase the sample size and extend the sample to at least five, or better yet all, states in South Sudan. For Kenya, too, it will be interesting to increase the sample

[37] These requirements exert undue burdens on poor customers.

size and to extend it to more counties and a larger number of commercial banks. Given the importance of the issue of financial inclusion for broad-based economic development, it is hoped that this dissertation will help to inspire such research.

APPENDIX A

INFORMED CONSENT LETTER[38]: SEEKING SME CONSENT TO ADMINISTER QUESTIONNAIRE

I[39] deeply and sincerely appreciate your willingness to participate in this study.

The purpose of my research is to gather opinions and experiences about small businesses so as to gauge the easiness or difficulty in accessing finance from formal commercial banks, informal banks, non-bank financial and microfinance institutions operating in South Sudan and Kenya today.

This study intends to document any obstacles to business growth. The study expects to disseminate findings as a way to inspire policy and seek means to alleviate these impediments to business growth through public policy or public- private partnerships.

This examination involves dealing with people and businesses and I must disclose that there are no known risks associated with sharing vital information with this researcher, who with all honesty, promises not to use your name or anything that will identify you as an entity when writing up this research. Every bit of your information will be kept confidential because I will be the only one having access to the data.

Therefore by voluntarily participating in this study, you will be contributing towards improvements in existing literature on the access to finance for all. Should you have questions or concerns, please do not hesitate to contact me. My phone number is (+ 1) 211/254-XXX-XXX.

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[38] I would like to speak to the general manager or owner of your enterprise. Proceed to questions if interview is granted; if an appointment then: write down the name, date, and time of appointment; if you get refusal: note the reason for refusal.

[39] My name is James Alic Garang, a South Sudanese PhD student in the Department of Economics, University of Massachusetts at Amherst, USA. I am conducting a research *on "Access to Finance by Small and Medium-Sized Enterprises"* in South Sudan and Kenya.

APPENDIX B

SME SURVEY QUESTIONNAIRE

Instructions

This survey is designed to allow you to register your opinions regarding your firm or business and its external financing possibilities. Please review each of the following statements and circle or register the response that best represents your opinion about your organization and the overall financial sector in South Sudan or Kenya.

1. What is your position in the enterprise? (please circle one only)
   (a) Sole owner
   (b) Joint owner
   (c) Member of management team
   (d) Family member of owner(s)

2. What is the present legal status of the enterprise? please circle one only)
   (a) Sole proprietor
   (b) Private limited company
   (c) Public limited company
   (d) Partnership
   (e) Co-operative
   (f) Other

3. What is the gender of the head of this enterprise?
   (A) Male
   (b) Female

4. What is name of the ethnic group of the head of the enterprise?

5. How long did it take you to formally start the enterprise? (Just indicate only time involved in obtaining licensing or necessary steps to launch the business)
   (a) _____ Months (b) _____ Years

6. How long have this enterprise been in business or operational?

7. How many employees does this enterprise have as of to date?

8. List down the number of years of schooling of the head of this enterprise

9. What sector of the economy best describes your enterprise?
   (a) Retail

(b) Business Service (such as haircuts, printing, fuel station, etc)
(c) Manufacturing (electronics, chemical industry, etc)
(d) Wholesale
(e) Agribusiness (for example, tea growers, coffee processing)
(f) Construction
(g) Hotels
(h) Restaurants/catering
(i) Repair
(j) Other sector (Name it)

10. Does your enterprise have any branches or joint ventures located abroad?
(a) Yes (b) No

11. If your enterprise has branches abroad, please complete this table.

Name of the Country	List names of Location (s) in the country

Key Obstacles to Doing Business in South Sudan and Kenya

12. To what extent has the lack of formal finance (credit from licensed and regulated commercial banks) affected growth of your business?

Check one only ✓	Major Obstacle	Moderate Obstacle	Minor Obstacle	Not Obstacle

13. To what extent has the lack of informal finance affected growth of your business?

Check one only ✓	Major Obstacle	Moderate Obstacle	Minor Obstacle	Not Obstacle

14. To what extent has the lack of microfinance finance affected growth of your business?

Mark one only ✓	Major Obstacle	Moderate Obstacle	Minor Obstacle	Not Obstacle

15. Which of the following has been the major constraint on your business performance since the time it was formed? Check any that applies by ranking them from major to least obstacle.

✓ (Mark it)	Major Obstacle	Moderate Obstacle	Minor Obstacle	Not Obstacle
Lack of business credit				
High interest rate				
Taxation				
Corruption/rent-seeking				
Too much competition				
Unfair competition from foreign owned enterprises				
Inflation				
Poor infrastructure				
Poor judicial system				
Lack of skilled labor				
Implementing new technology				
High collateral requirements				
Bureaucratic constraints (licensing requirements, reporting, controls, health and labeling requirements				

16. To what extent has the lack of access to market been a problem to your business?

Mark one only ✓	Major Obstacle	Moderate Obstacle	Minor Obstacle	Not Obstacle

Credit Allocation and Type of borrowers

To distinguish between use and access (or successful borrowers, non-borrowers, denied borrowers and discouraged borrowers) each SME respondent is asked to answer the following:

17. Have you ever applied for loans before?

(a) Yes (b) No

18. If the answer is yes in "17" above, have you received approval?

(a) Yes (b) No

19. If you applied and received approval, who was your lender?

Name of the Lender	✓ (Mark it)
Commercial Bank	
Microfinance Institution	
Cooperative Bank or Societies	
Moneylenders/Family Members	

20. What was the reason or use for the loans? Check any that applies to you.

Reason for the loan	✓ (Mark it)
Working capital	
Expenditure on stationery/office materials	
Purchases of new equipment	
Own consumption	
Workers' training/skill upgrading	

21. Was the interest on the loan fixed or variable?

Interest rate	✓ (Mark it)
Fixed interest rate	
Variable interest rate	

22. If it is a fixed interest rate, what is it?

Interest rate	%
Fixed interest rate	

23. If it is a variable interest rate, what was it then and now?

Interest Rate	%
Variable Interest Rate in the past	
Variable Interest Rate in now	

24. For a variable interest rate, what was it based on?

25. If the answer to "17" is "No", then why did the firm not apply for loan? Check one only.

Reason for not applying	✓ (Mark it)
The firm does not need loan	
It does not think it will be approved	
Application procedures are too burdensome	
Collateral requirements are strict	
Interest rates are too high	

26. If you applied and was rejected, what was the main reason the loan application was rejected? Check one only.

Reason for loan denial	✓ (Mark it)
Perceived lack of profitability	
Lack of acceptable collateral	
Inadequate credit history of the firm	
Incomplete application	

27. How many commercial banks do you have credit line with?
    (a) None
    (b) only 1 bank
    (c) 2 or 3 banks
    (d) 4 or more banks
    (e) I do not know

28. How many informal banks do you have credit line with?
    (a) None
    (b) only 1 bank
    (c) 2 or 3 banks
    (d) 4 or more banks
    (e) I do not know

29. How many microfinance institutions do you have credit line with?
    (a) None
    (b) only 1 bank
    (c) 2 or 3 banks
    (d) 4 or more banks
    (e) I do not know

30. What is the term for the largest loan you have ever received from any commercial bank during the last six years?
    (a) Less than 1 month
    (b) 1 to 6 months
    (c) 6 months to 1 year
    (d) 2 to 4 years
    (e) More than 4 years

31. What is the term for the largest loan you have ever received from any informal bank during the last five years?
    (a) Less than 1 month
    (b) 1 to 6 months
    (c) 6 months to 1 year
    (d) 2 to 4 years
    (e) More than 4 years

32. What is the term for the largest loan you have ever received from any money lenders during the last five years?
    (a) Less than 1 month
    (b) 1 to 6 months
    (c) 6 months to 1 year
    (d) 2 to 4 years
    (e) More than 4 years

33. What is the term for the largest loan you have ever received from any microfinance institutions during the last five years?
    (a) Less than 1 month
    (b) 1 to 6 months
    (c) 6 months to 1 year
    (d) 2 to 4 years
    (e) More than 4 years

34. Which of the following forms of information communication technology does your enterprise use? More answers are allowed.

ICT Items	✓ (Mark it)
Mobile phones	
Standalone Personal Computers (PCs)	
Email	
Intranet	
Own website	
Fax machines	
Landlines	

35. Have any of these people been a source of knowledge/skills for your enterprise?

Sources of Skills and Knowledge for Enterprise	✓ (Mark it)
Family members	
Independent auditors	
Consultants	
Clients/suppliers	
Trade associations	
Training centers/public universities/government authorities	
None of the above	

36. Has your enterprise been involved in any of the following activities? Check any that applies.

Economic Activities	✓ (Mark it)
Trade fairs	
Study visits	
Business conferences/Networking	
others	

37. When starting this enterprise, where did the initial fund come from? Rank them from major to the least obstacle.

Source of initial capital	Major	Moderate	Minor	Not Source
Commercial banks				
Microfinance				
Moneylenders				
Family members				
Friends				
Personal contributions				

38. For your cash needs, which one do you use the most?
    (a) Withdrawals from ATMs
    (b) Make visits to the banks to withdraw money
    (c) Personal vault, home safekeeping or shop-drawer for all cash needs

39. How frequent do you use mobile money transfer service to do these transactions? (Skip if these does not apply to your enterprise). Check any that applies.

Mobile Money Transactions	Major	Moderate	Minor	Never
Pay employees				
Pay vendors/suppliers				
Pay overhead costs				
Pay taxes				
Pay staff allowances				

40. Which of the following statements is true about your business enterprise appraisal?
    (a) Managerial competency and adoption of technology are behind the success of this enterprise.
    (b) Managerial incompetency and neglect of technology are behind the failure of this enterprise.

(c) My business is not improving because of unfavorable business climate in South Sudan (or Kenya).

41. Which of the following insurance policies do you have? Check any policy that you have purchased.

Type of Insurance Policy	✓ Mark with a tick
I. Life Insurance	
II. Property Insurance (shop, car, land)	
III. Theft Insurance	
IV. Fire Casualty	

42. What other financial services do you want the commercial banks or Central Bank of South Sudan or Kenya to provide for your business needs?

43. What is your annual employment history over the years? (South Sudan data time series runs from 2005 to 2011; Kenya 1991 to 2012.

Year	Number of Paid Employees Per Year	Comment

44. List down your yearly gross revenue in dollars (time series like in # 43)

Year	Annual Gross Sales in Dollars	Comment (optional)

45. List the total amount of size loan borrowed in each column (like in # 43):

Year	Loan Size Per Year in Dollars	Comment (optional)

46. Of the total yearly amount of loans received/borrowed, how much is due to each institution? (fill in like in # 43)

Year	Loan from formal banks	Loans from Microfinance institutions	Loan from Moneylenders	Loan from family members and friends

47. Can you breakdown the total liabilities due to banks and other sources as follows?

	Terms of the loan structure		
	Short term (90 days to 3 years)	Medium Term (3-5 years)	Long-term (6-15) years
Value	$	$	$

APPENDIX C

SURVEY QUESTIONNAIRE FOR COMMERCIAL BANKS

(Some of these questions were also modified for the interviews for Microfinance institutions both for South Sudan and Kenya. I have also removed tables in some questions for the sake of space).

1. What is the total estimate of your bank customer base (all accounts) in each of these three periods?

Year	July 2011	August 2011	March 2012
Customer /Client Base (All Account holders)			

2. What is your total estimate of SME accounts in each of these three periods?

Year	July 2011	August 2011	March 2012
SME Accounts Only			

3. What is the size of your loan to each SME[40] borrower?

   - ❖ Estimate of minimum loan (ever approved: USD_____
   - ❖ Estimate of Maximum Loan (ever approved): USD_____

4. Describe your top five SME borrowers. In addition to serving or not serving SMEs, which category of the economy do you serve the most?

5. Which of these 5 C's do you consider most important when appraising SME projects? Rank them accordingly.

✓ (Mark it)	Major Factor	Moderate Factor	Minor Factor	Not Factor
Character of the owners				
Capacity of the firm				
Collateral requirement				
Firm initial capital				
Macroeconomic conditions in country				

6. List some of your customized SME products

[40] SME stands for Small and Medium-Sized Enterprises. In term of size, small business has about 5 to 50 employees; medium 51 to 200 employees.

7. In what ways are you planning to expand the access frontier especially to SMEs and poor borrowers?

8. What role has mobile technology played in terms of helping you to expand access frontiers and in reducing horizontal inequality? Are information systems developed enough to facilitate lending to SMEs?

9. List the development agencies or institutions you have collaborated or continue to partner with in pooling resource and lending to SMEs.

10. What is your bank doing to improve the customer service in general, reduce long waiting hours at bank premise and to encourage the culture of public savings?

11. What has been the major barrier to extending credit to SMEs? Check only one.

Obstacles	✓ Mark it
Lack of collateral	
Lack of profitability	
Limited information	
Illiteracy	
Distance	

12. How many branch networks does your bank have in each province in Kenya over the years? (Table by province by years from 1991 through 2012)

13. Please fill in the table about the total annual lending to all SMEs and their numbers (Period: 1991-2012 in Kenya and 2005-2011 for South Sudan).

Year	Total Annual Loan ($) to SMEs	No. of SMEs served Each Year

14. How many ATMs do you have in each province in Kenya over the years? (The Total Number of Live ATMs Per Province Per Year, 1991-2012)

15. How many ATM Cards do you have in each province in Kenya over the years? (The Total Number of ATM Cards Per Province Per Year, 1991-2012)

16. How many bank agents do you have in each province in Kenya over the years? (The Total Number of Bank Agents Per Province Per Year, 1991-2012)

17. SME Geographical Distribution (those you serve; give a number only)

Province in Kenya	Current Number of SMEs
e.g. Central	5

18. How much credit does Government of Kenya owe you?

- ❖ Amount: $_____

19. Nonperforming loan (NPL) and percent due to SMEs and big businesses, 1991-2011.

Year	Total NPL (%)	% of NPL Due to SMEs	% of NPL Due to Large Businesses

20. Please fill in the following table appropriately; that is fill only the columns that correspond to the name of your bank, for example, ABC Bank.

Characteristics of Commercial Banks in Kenya, 2011

Name of Bank	Year of creation	No of Branches	State share (%)	Public share (%)	Total assets (million $)	Deposits (million $)	Loans (million $)	Loan /Deposits (%)	Total Current Employment
ABC Bank (Kenya)									

21. SME Money Demand through ATM withdrawal and at-the –Bank-Window, 1991-2012.

Year	Central Province		Coast Province		Eastern Province		Nairobi Province		Northern Eastern		Nyanza Province		Rift Valley Province		Western Province	
	Teller	ATM	Teller	Walk	Teller	ATM	Teller	ATM	Teller	ATM	Teller	ATM	Teller	ATM	Teller	ATM

22. Do you have excess reserves? If you do, why do banks hold excess reserves instead of lending to SMEs? Why is the cost of borrowing high in Kenya for SMEs?

23. List the top five things you would like to see happening so as to improve the business environment and to enable you to lend to small businesses which are job creators (i.e. what would small businesses do in order to help your bank lend to them?)

24. What would you like the Central Bank of Kenya to do to improve the business climate in Kenya? List at least three of those enabling factors.

25. Which of the following accounts does your bank pay interest on?

Account Name	Check if it applies
Savings Accounts	
Checking Accounts	
Business Accounts	
Other Accounts (Name them here)	

APPENDIX D

POLICY QUESTIONS FOR THE CENTRAL BANK OF KENYA

(The same questions were modified to suit interviews for the South Sudan Central Bank)

1. Is an extension of credit to SMEs by financial institutions (such as commercial banks) one of the objectives of the CBK?

2. What is CBK doing to encourage the development of inclusive financial sector and to motivate banks to lend to all businesses, more importantly small businesses which are the job creators? (I am interested in identifying the barriers to SME lending).

3. How and in what practical ways is the role of technology factoring into this endeavor of inclusive and financial sector development as well as reduction of horizontal inequality? Are information systems developed enough to facilitate lending to SMEs?

4. Write the number against each name to indicate their totality in the Kenyan Financial Sector.

S/N	Name of the Institution	Number	Comment
1	Commercial Banks		
2	Microfinance institutions		
3	Insurance companies		
4	Re-insurance companies		
5	Loan savings and credit associations		
6	Cooperative Banks		
7	Housing/Mortgage Societies		
8	Foreign Exchange Bureaus		
9	Western Union Companies		
10	Dahabshiil Companies		
11	Amal Express Money Transfer Companies		
10	Moneygram Companies		
11	SACCOs		

5. Can you also please provide me with the official listing of all exchange bureaus operating presently in Kenya as well as their central functions? I also want to ask about exchange rate policies and their impact on SMEs. I don't know the current situation, but for some time, there were fears that the shilling was overvalued - which would add pressures to SMEs competing with imports (but possibly benefit other SMEs - e.g. retailers selling imported goods).

6. What are your current top 5 challenges in the conduct of monetary policy with regard to credit expansion?

7. What financial and monetary lessons can South Sudan learn from Kenya's long innovative experience and inclusive financial sector development initiative?

8. What is the Kenyan experience with agency model banking and is it something that you can recommend to South Sudan?

9. Questions on a few specific issues that could affect credit to SMEs:
   I. What is the current situation with non-performing loans throughout the commercial banking sector, since this was a major problem in Kenya in the past (and froze a lot of lending)?

   II. What about excess reserves held by the commercial banking sector? Do these exist? How big are they? Why do banks hold excess reserves instead of lending to SMEs?

   III. Tell me more about the growth areas of credit expansion. Is credit channeled to productive uses, including SMEs? Or is it primarily financing consumer spending, real estate investments, etc?

   IV. Please comment on the role of SACCOs in financing the smaller-scale end of the SME spectrum.

10. Can the Bank also grant me an access to publications giving an overview of the banking/financial sector in Kenya or commercial banks /financial sector lending to SMEs by sectors and regions? These may give me more information than I might gather from interviews with the financial sector in general).

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