

Impediments to the Evolution of Mobile Money and Financial Inclusion in South Sudan

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James Alic Garang

Bank of South Sudan-Ebony Centre Joint Research Team
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Abstract

This paper examines the constraints both to the evolution of mobile money and the broader banking sector provision of financial services in South Sudan, focusing on the conflict and state of financial inclusion during the 2011-2021 period. While mobile money has gained momentum in the region and beyond, its introduction in the South Sudanese market is recent, and adoption has been much slower, and differentiated, with customers more likely to have a mobile money account if they are better educated, live in the city, are male, and wealthy. A key contributor is the rudimentary level of South Sudan's financial sector development, which feeds into financial exclusion, and the impact of preceding conflicts. Broadly, the paper confirms the longstanding view that economic disruption associated with the civil war and lack of supportive infrastructure are central barriers to expansion of financial services across the country. In conclusion, sustained stability and improved general infrastructure could enhance expansion of financial services and broader inclusion in South Sudan.

Keywords: Mobile money; Mobile financial services; Financial inclusion; South Sudan

1. Introduction

Political oppression dating back to the 1890s through independence in 2011 and bouts of post-independence internal conflict account for South Sudan's dismal economic development (D'Agoot, 2013; Garang, 2015; Garang, 2021; Nyaba, 2015). The major impediments to effective financial development include financial illiteracy, poor property rights, missing markets, unreliable electricity, and macroeconomic instability, among others. Limited telecommunication infrastructure, and the near absence of digital transformation, including lack of digital platforms, digital businesses, and digital financial services (DFS) remain huge impediments to the inclusive financial sector in South Sudan. Insecurity in some parts of the country remains an obstacle to operating mobile money and expanding the reach of traditional banks in vast swaths of the country. Further, long distance from financial centres and lack of agents in some locations exclude large segments of the rural population as 83% dwell in rural areas (Garang, 2015; Haider, 2021; SSCCE, 2009).

Several anomalies undergird the state of financial sector in South Sudan. The business case for financial inclusion remains weak as banks have historically focused on foreign exchange and money transfer services rather than intermediating funds to the private sector and households. Traditional local banks, which have a greater mandate to create a national infrastructure, lack the capital and capacity to compete with resident international banks. They have difficulty identifying creditworthy customers and viable projects, contributing to limited access to finance even when banks have huge liquidity sitting at the Bank's vault.

While there were eight commercial banks and eight microfinance institutions (MFIs) operating in South Sudan at independence in 2011, the banking sector size rose to 30 banks by the end of 2013 but declined during the war years, and it rose again to 31 by 2023. The number of foreign exchange bureaus (forex) also declined, falling from 96 by 2015 to 44 by November 2019 and it gradually picked up to 66 by 2021 (Table 1a). The war reduced lending to households, led to loan losses, decapitalized local banks, and contributed to bank closures. The central bank rescinded the operating licenses of two local banks in 2023. Recurrent wars and communal violence displace labour, destroy capital, interrupt communications, and impede the development of inclusive financial systems. Critically, wars delay the development of inclusive

financial systems, which is a key ingredient for equitable economic growth and development (Collier, 1999; Garang, 2015; Humphreys, 2003; Mehrotra and Schanz, 2020; Imai and Weinstein, 2000; World Bank, 2019).

After signing the Revitalized Peace Agreement in 2018, two mobile money (MM) providers were launched in 2019, underscoring that the war might have repressed their earlier emergence. Effective MM companies aim to support all customers by offering diverse services such as person to person (P2P) money transfers, payment for utility bills, merchant payments, and taxes. However, a large segment of South Sudan's population does not utilize these services. More competition in the industry remains key to ensuring better quality services and affordable prices.

This paper provides an understanding of mobile money evolution and the role of conflict and other factors inhibiting financial inclusion in South Sudan, while contributing to guiding policy in this area. First, it highlights impediments to the mobile money evolution before and after the conflict, while assessing the impact of the conflict on financial services. Second, it offers suggestions to enhance access to finance through mobile money and banking services. To the best of our knowledge and given the criticality of the topic and lack of data in this area, this is the first study exploring the evolution of mobile money and assessing the state of financial inclusion in the country. It explores two related research questions: (i) How did the conflict impede financial inclusion; and (ii) what promises does mobile money hold for South Sudan?

The paper proceeds as follows: Section 2 provides a background to the issues; Section 3 focuses on the literature; Section 4 takes up methodology and data; Section 5 covers the status of the MM and financial services in South Sudan, while drawing lessons from Kenya, a key pacesetter; and Section 6 discusses areas for consideration. Finally, Section 7 concludes with policy implications.

2. Background to the Conflict, Mobile Money, and Financial Inclusion in South Sudan

Even before the conflict, South Sudan faced a challenging policy context. While some laws were passed, there was a failure to pass financial sector legislation, notably the Microfinance Bill 2010 and the Insurance Bill 2010. Second, a lack of national payment policy and infrastructure has contributed to payment system challenges and a lack of interoperability. Third, a key digital finance policy, such as the mobile money guidelines need to be updated. Fourth, liquidity management infrastructure is poor, with few bank branches located outside Juba. Fifth, Know-Your Customer (KYC) faces challenges with a lack of a national identification and an absence of clarity on acceptable alternative forms of identity to support tiered KYC. Sixth, the banking sector faces acute constraints in its business case, as noted earlier. Where the plan to expand exists, there is a limited number of Bank of South Sudan (BoSS) branches (now 5) considering that they play an important role in liquidity management.

The impact of the conflict in South Sudan includes loss of lives, closure of commercial bank branches, and closure of BoSS branches, which affected liquidity. The London School of Hygiene and Tropical Medicine estimated that between 180,000 and 400,000 people might have died (Le Quach et al., 2018). Second, the resumption of war in mid-2016 quickly spread insecurity across South Sudan, severely affecting economic activity while exacerbating the humanitarian crisis and food insecurity, prompting real disposable income to decline by 70% since independence (IMF, 2019; 2022). This decline translated into a marked rise in poverty, with the poverty headcount ratio reaching 82% in 2016 from 50% in 2012 (World Bank, 2018). Finally, the conflict led to a credibility gap. The authorities found it difficult to stick to the basics of public fiscal management, thereby dispensing with budget at times and spending resources outside appropriations (Mayai, 2020). Rent-seeking that perfected agency creation as an instrument to extract rents from the

state, and fiscal indiscipline, also reinforced the credibility issues with the donors (Garang, 2021).¹

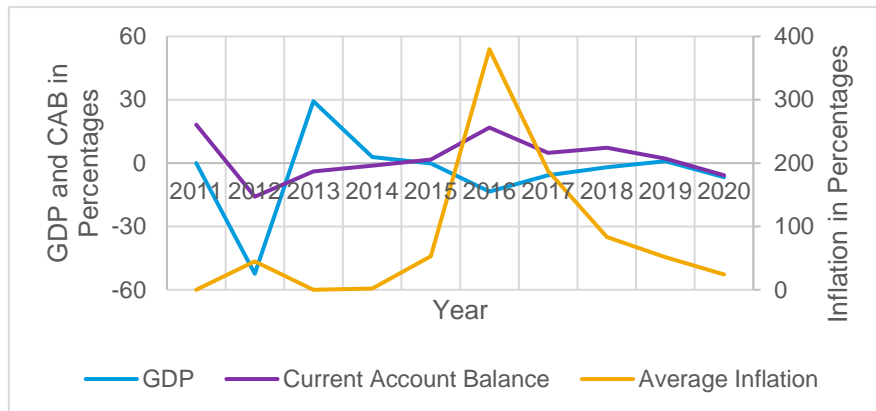
Following independence, regional investments came in and the banking sector soared. Money transfer services became the banks' core business model, including the reliance on the lucrative letter of credit programme for authorized dealers (Garang, 2021). Banks traded in the gap between formal and informal exchange rates. Local money transfer companies focused on transfer of local currency (SSP) between states within South Sudan. Some banks and non-bank financial institutions (NBFIs), however, went out of business following the 2013 conflict. The forex increased following the 2018 peace agreement and the restart of external financing from international financial institutions, including the IMF in November 2020. However, the ability of forex and commercial banks to exploit the gap between the formal and informal exchange rates was temporarily curtailed in July 2022 when the rates were harmonized, eliminating a high premium.

Amidst the above developments, the regulatory environment has been less supportive. According to the Integrated Business Establishments Survey 2019, businesses cite lack of access to finance as a major obstacle to establishment (Aruai, Arden and Goltz, 2021). Other obstacles include lack of power, insecurity, and corruption. These firms tend to be young and mostly based in Juba. Further, the large interest rate spread between borrowing and deposit is also emblematic of such constraint (IMF Financial Access Survey, 2021). Lack of financial inclusion predates the conflict in South Sudan. Atil (2009) reports that only 10% of the population owned bank accounts before independence, while Garang (2014) finds that only about 3% owned bank accounts by 2014. At the end of 2020, account ownership rose modestly to 5.7% for current accounts and 6.1% for savings accounts (Table 1a). Yet, the conflict from 2013-2018 fragmented telecommunication services by destroying cell towers for some operators, disrupting investments, and decreasing clientele base (World Bank, 2019). The conflict also worsened macroeconomic indicators, including GDP, inflation, current account, oil production,

¹ The recent government's focus on foreign exchange and public financial management (PFM) reforms under the Staff-Monitored Programme (SMP) led to a re-engagement with development partners. The FX reforms have been declared a tremendous success, rebuilding some credibility with the donors, and leading to the conclusion of the First SMP Review in October 2021.

government spending, and domestic revenue during the war period. GDP, for example, declined to -5.5% in 2017 from 29.3% in 2013, while annual inflation climbed momentarily to 380% in 2016 from about zero per cent in 2013 (Figure 1).

Figure 1: South Sudan key economic indicators, 2011-2020



Source: IMF (2021), *World Economic Outlook*

The quality of governance in the context of the perception index (CPI, 2018) also worsened, especially by 2018, alongside debt sustainability and quality of life, which affects individual “functioning.”

Table 1a: Indicators of financial sector development and inclusion in South Sudan, 2013-2021

Indicator	Year								
	2013	2014	2015	2016	2017	2018	2019	2020	2021
M2/GDP (as %)	26	35	74	187	325	474	454	825	1,282
Banks	26	27	28	28	27	27	26	30	31
Banking Branches	61	88	72	75	65	61	65	94	86
Number of ATMs	44	67	65	54	32	31	43	50	49
Account Holders	211,428	332,779	451,999	492,262	516,622	522,516	678,265	535,074	580,472
of which SMEs	63,428	63,472	35,721	89,660	133,442	49,895	64,085	83,884	140,476
Households	148,000	269,307	416,278	402,602	383,180	472,621	614,180	450,495	439,996
Deposit Accounts	212,962	362,369	508,570	631,774	618,235	575,262	735,809	607,945	710,439
of SMEs	63,889	75,689	40,199	132,106	160,095	58,278	78,704	85,507	176,836
Households	149,073	286,680	468,371	499,668	458,140	516,984	657,105	522,438	533,603
Total Borrowers	9,015	14,101	10,161	7,730	4,501	3,657	3,658	5,952	4,829
of SMEs	3,003	491	2,918	401	477	1,252	984	1,656	1,137
Households	6,012	13,610	7,243	7,329	4,024	2,405	2,674	4,296	3,692
Total Loans	11,014	14,123	10,937	8,193	4,581	4,115	3,687	7,817	4,255
Of SMEs	4,008	491	3,353	456	480	1,367	1,002	2,159	731
Households	7,006	13,632	7,584	7,737	4,101	2,748	2,685	5,658	3,524
M2(in million SSP)	6,714.39	7,858.30	16,111.30	41,591.95	69,547.66	105,00.23	13,906.42	208,667.63	323,742.46
Real GDP (million SSP)	19,419.03	22,549.77	23,007.38	22,145.66	21,333.20	22,148.36	24,259.31	24,999.9	25,249.2
No. of MFIs	8	7	7	7	7	7	7	7	7
No. of Forex Bureaus	-	96	96	-	76	-	44	64	66
No. of Insurance Firms	-	-	-	-	-	-	-	-	36*
No. of Mobile Money	-	-	-	-	-	-	2	3	4

Source: Bank of South Sudan; Author's compilation (2021)

Note: While most data in this table—total borrowers, ATMs, bank branches, forex bureaus—show deterioration and support the central argument of the effects of war on financial inclusion, a few exceptions exist, including the number of account holders, which almost tripled during this period. It is improving partly due to population growth. *There are 88 insurance firms operating in South Sudan, but only 36 firms are registered and regulated by Central Equatoria Insurance Authority. There is no data on bank assets as % of GDP. It is not easy to verify why deposit accounts are higher than holders, hence it requires another survey. That said, officials from the Bank think that some individuals or firms may have several account numbers in different banks or institutions with very small amounts of money.

Table 1b: ATM penetration, and other indicators of financial inclusion in Kenya, South Sudan, and Uganda 2010-2021

Stat e	Indicator	Year											
		2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Kenya													
	Borrowers	1,793,664	1,990,360	2,051,658	3,061,209	4,349,400	6,181,433	7,811,887	7,112,179	7,180,959	8,347,331	11,400,000	.
	Banks	43	43	43	43	43	43	42	42	43	41	39	39
	Branches	1,063	1,163	1,272	1,342	1,443	1,523	1,514	1,518	1,505	1,490	1,502	1,459
	ATMs	2,091	2,205	2,381	2,487	2,613	2,718	2,656	2,825	2,833	2,459	2,412	2,366
	MFIs	3	6	8	9	9	12	13	13	13	14	14	14
	MM Outlets	39,449	50,471	76,912	113,130	123,703	143,946	165,908	182,472	205,745	224,108	282,929	298,272
	Insurance corporation	45	47	49	49	49	49	53	53	53	53	56	56
South Sudan													
	Borrowers	.	5,134	7,949	10,009	14,133	10,681	7,752	4,501	3,657	3,658	5,952	4,829
	Banks	8	10	17	26	27	28	28	27	27	26	26	27
	Branches	31	32	38	61	88	72	75	65	61	65	69	66
	ATMs	.	35	38	44	67	65	54	32	31	43	46	52
	MFIs	.	.	.	.	.	.	.	.	.	6	6	6
	MM Outlets	.	.	.	.	.	.	.	.	.	.	.	8024
	Insurance corporation	.	.	.	.	.	.	.	.	.	.	.	.
Uganda													
	Borrowers	307,241	330,489	308,441	346,026	396,878.7	497,788	676,651.7	671,151	1,572,386	1,674,947	1,454,512	.
	Banks	22	23	24	25	25	25	25	24	24	25	25	.

Branches	394	396	466	520	558	578	573	554	562	585	579	.
ATMs	599	663	748	893	851	922	942	910	940	958	966	.
MFIs	3	4	4	3	4	4	5	5	5	5	4	.
MM Outlets				53,560	79,002	109,458	132,937	159,790	184,529	212,517	263,698	.
Insurance corporation	.	.	.	.	.	.	.	.	.	.	.	.

Sources: IMF (2022), Financial Access Data

Key: The data in Table 1b comes from the IMF Financial Access Data (2022), which shows missing data for some countries, and indicators.

The conflict decidedly affected key indicators of financial inclusion (Table 1a). Access to finance, for example, saw a decline, when we divided by population the number of banks, total borrowers, and deposits, among others. A careful analysis of the data indicates that this resulted in about 4 per 10 million people in 2019 from nine per 10 million people in 2013 (Table 1a). The parallel market rate of foreign exchange (US dollar vs South Sudan pound) doubled in 2017-2018, reflecting worsening economic conditions and flight to safety in the hard currency. Gross reserves also declined from about US\$ 2 billion in 2012 to about US\$ 33 million in 2018, which was less than 1 month of import cover (Atem, 2018; Garang, 2015 IMF, 2019). The M2/GDP rose, indicating growth in money supply relative to production. The overall credit to GDP, which was low to begin with, saw some decline (*we do not have data in banking sector assets to GDP to arrive at a definite conclusion*). Finally, the credibility of the financial system was eroded when the government used public savings in the form of bank deposits, in hard currency. It accelerated the banking sector crisis from 2015-2017. The BoSS, however, had planned in 2021 to allow banks to have access to their FX blocked accounts.²

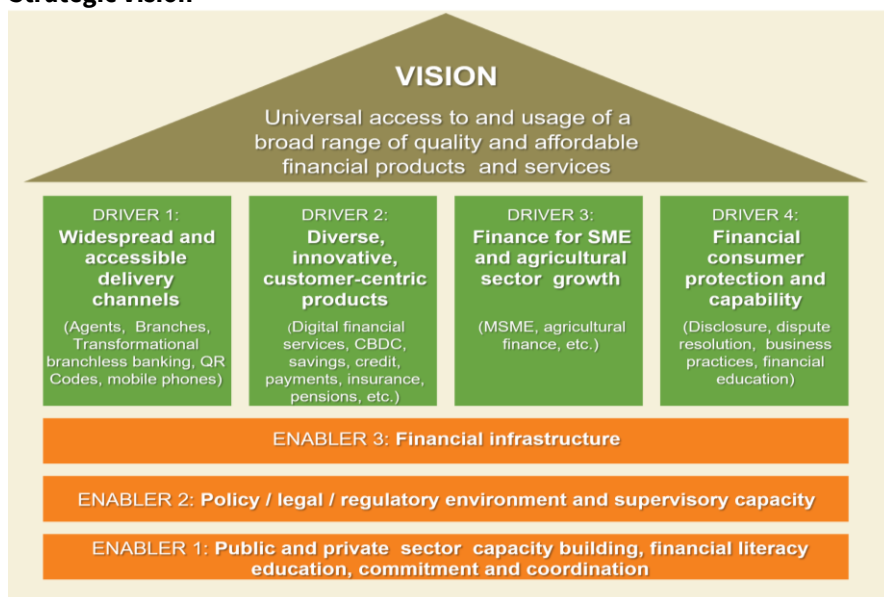
A 2018 World Bank paper on the National Financial Inclusion Strategies (NFIS) from 34 countries identifies policy areas of concern that merit prioritization. While South Sudan was not covered in the paper, it can draw some policy insights from other countries' experience, including in drivers, infrastructure, and coordination around financial inclusion. Given the above analysis and subsequent strategic policy areas, the National Payment System (NPS)-Project team proposes several policy areas and objectives to achieve effective systems. This NPS project relates to achieving South Sudan's National Financial Inclusion Strategic Vision (Figure 2).

The four drivers identified include efforts to ensure widespread and accessible delivery channels; innovative customer centric products; finance for SMEs, and agriculture; and financial consumer protection and capability. Three identified enablers include financial infrastructure; policy, legal, regulatory environment, and supervisory capacity; public-

² From 2013-2018, financial service providers became guarded about lending, on the account that individuals with no collateral and proper documents could move from one town to another without stricter enforcement.

private sector capacity building, financial literacy, commitment, and coordination. To this end, the South Sudan authorities issued the framework for Financial Regulations (2017), with the focus on enhancing competition in providing mobile money services and promoting financial inclusion.

Figure 2: Objectives for South Sudan’s National Financial Inclusion Strategic Vision



Source: Proposed Bank of South Sudan Financial Inclusion Framework, 2022

Generally, “Mobile money is a recent innovation that provides financial transaction services via mobile phone, including to the unbanked global poor” (Aron, 2018). Overall, individual uses of MM mostly include transferring money to relatives, regional remittances, buying airtime, enhancing payment confidentiality, reducing risks, and theft of cash. In some instances, mobile money has also emerged as a facilitator of economic recovery and tools to aid disbursement of humanitarian assistance. Physical barriers, however, constrain MM service in South Sudan, including insufficient energy and network infrastructure, which contributes to low mobile phone penetration. Few bank branches result in long distances between financial centers and difficulties in liquidity management. MM operators also face public distrust, compounded by low literacy rates, which influence usage of services, and cash security risks in the countryside where violence can emerge from time to time, putting firms and agents at risk. In addition, the World Bank (2019)

identified money laundering risks from several politically exposed people, underscoring the lack of strong laws in this area.

Broadly, MM operations provide a close alternative to bank deposits, indicating that credit intermediation could move away from banks towards non-deposit taking institutions. Second, some challenges with market contestability exist. Therefore, new digital forms of money will have an impact on market structure in payments (IMF, 2021). Ultimately, network externalities tend to favour prime movers, indicating that those with pre-existing networks on which to distribute their digital money, such as mobile network operators (MNOs), have an advantage. That said, the actual impact is likely to be small in South Sudan given the minute size of MM footprint. This is on the account that there are only a few active providers, with exceedingly small local transfers primarily in South Sudan pounds. There, the implications of MM on the conduct of the monetary policy and financial stability are currently negligible.

Despite these limited developments regarding DFS, questions arise, if any short-term gaps in coverage would be uncovered by mobile money, which could be covered by more traditional, low-tech forms of financial intermediation in South Sudan? For example, if local money transfer companies, which already have elementary infrastructure, became regulated by the BoSS, they could serve more remote communities with a broader range of financial services.

Finally, the paper did not find any evidence indicating that the pandemic has affected the uptake of or financial inclusion in South Sudan (Table 1a). The lockdown was largely ignored, and many households operated as if the pandemic was non-existent. Without any social safety nets, save a few managed by NGOs, households had to fend for themselves during the general lockdowns.

3. Literature Review of Financial Inclusion and Mobile Money Landscape

According to experts, financial inclusion means that households and businesses have access and can effectively use appropriate financial services. It remains key to enhance access to finance for all (Aduda and Kalunda, 2012; Johnson and Williams, 2016; Ajide, 2017). It allows economic actors to engage in productive endeavours, including by

investing in education and health, saving for retirement, accumulating for social obligations such as weddings, exploiting opportunities, and mitigating against risks (Demirguc-Kunt and Klapper, 2012; 2013; Hayem et al., 2013; World Bank, 2014; Beck, 2016; Demirguc-Kunt, Klapper and Singer, 2017; Demirguc-Kunt, Hu and Klapper, 2019), and “That access to formal financial instruments/products reduces poverty, stimulates investment and creates growth, particularly in rural areas” (Van Hove and Dubus, 2019, p. 1).

Where financial exclusion dominates, individuals find themselves involuntarily locked out of financial systems, contributing to slower aggregate growth and persistent inequality, dubbed as a poverty trap (Aghion and Bolton, 1997). Commercial banks elsewhere find it difficult to expand access to finance on the account that small size, volatility, informality, and poor governance place constraints on the commercial viability of financial institutions in developing countries (Beck and Cull 2013; IMF, 2021; Garang, 2014; 2015). The situation is more acute for Small and Medium-sized Enterprises (SMEs), which typically cite geographical distance from financial centres, stricter collateral requirements, and information asymmetry as key impediments (Garang, 2015). The situation becomes even worse in the context of a conflict. Examples from other jurisdictions also confirm that wars affect financial inclusion. Gupta et al. (2007) argued that armed conflicts and terrorism in low-income countries impose fiscal challenges in the countries they examined, again concluding that in 22 conflict episodes, armed conflicts weakened financial regulation, impacting financial sector development. Further, Ades and Chua (1997) found that political instability in one country has adverse effects on the neighbouring countries, arguing that conflict lowers growth by disrupting trade and increasing military spending, with negative implications on financial inclusion. Ajide (2017) examined the factors affecting financial inclusion in a panel of 18 SSA countries from 2004-2010 and concluded that the key determinants of financial inclusion include institutional quality, GDP, and inflation.

Mawejje and McSharry (2021), using the synthetic control method, showed that conflict had a significant economic cost on South Sudan, estimated at US\$ 81.1 billion from 2012-2018. The estimate is higher than Frontier Economics estimates of 2015, ranging from US\$ 22-28 billion for a five-year period. They identified channels through which conflict affected the economy, namely exports and investment, underscoring that the conflict disrupted oil production, reduced exports, and delayed

firm investment decisions. Deng, Hussein and Mayai (2018) also concluded that a violent conflict is a binding constraint to growth in South Sudan.

Despite these challenges, digital innovations such as mobile money and payment cards can enhance financial inclusion (Stephens, 2012; De Sousa, 2015; Mohamed et al. 2017; Ebong and George, 2021). In the FinScope 2020 survey, Access to Finance Rwanda (AFR) concluded that commercial banks and mobile money remain among the biggest drivers of DFS. AFR reported that about 94% of banks and 85% of MM operators provided electronic services in Rwanda (Finscope, 2020). This high level of services is unavailable for South Sudan. The GSMA (2022) also indicates that MM continues to grow rapidly worldwide, providing diverse ranges of financial products to millions of households and end-users, including by transforming financial services. In the words of Mats Granryd, Director General of GSMA, “Mobile money is not just good business, it is also the key to advancing financial inclusion globally” (GSMA, 2022, p. 2). He emphasized that “mobile money has transformed the lives of millions of people globally. Today there are 1.35 billion registered mobile money accounts processing US\$ 1 trillion in transactions annually. That is almost US\$ 2 million per minute of transactions, 24 hours a day, 7 days a week, 365 days a year. Truly remarkable” (p.2). It shows a tenfold increase from 134 million in 2012 to 1.35 billion registered MM accounts worldwide by 2021.

These figures continue to rise, as indicated by GSMA 2023 report, showing that there were 4.4 billion mobile internet users in 2022 globally, which is equivalent to 55% mobile penetration. It is also reported that mobile penetration is reaching saturation in most markets around the globe, particularly among adult and urban populations and indicating that many new subscribers will likely be young consumers and rural dwellers in every region. Therefore, several studies indicate that financial inclusion has benefited from the deployment of digital money in recent years (GSMA, 2020; GSMA, 2022; GSMA, 2023; IMF, 2021; TTL, 2022). Sub-Saharan Africa is a leader in MM, accounting for almost half of mobile money accounts worldwide.

Benefits of MM aside, recent literature raises other issues, particularly on the link between financial inclusion, mobile money, and economic growth or welfare. For example, some countries such as Kenya and Uganda in recent years have planned to introduce digital taxes, thereby taxing digital services. While digital financial service taxes are aimed at

enhancing revenue, they have been examined to have negative effects on MM (Mpofu, 2022). In addition, other researchers have also highlighted areas that need further scrutiny. According to Ahmad, Green and Jiang (2020), these areas include the mechanics around the take-up of mobile money; drivers of financial inclusion; whether there exists a substitutability between mobile money and conventional finance; and the role of regulatory structures governing institutions that provide mobile money services. The history of mobile money is short, and more efforts are needed to learn to properly distil its attributes. Users of some MM are also likely to rely on formal banking sectors.

Mobile money is transforming lives and economies (Donovan, 2012; Mpofu, 2022); its consistent use to access social and economic services can foster financial inclusion (Amoah, Korle and Asiama, 2020) and enhancing revenue collections. Further, policies directed at financial inclusion have welfare implications, including by reducing unemployment, especially among youth (Koomson, Martey and Etwire, 2023). In analyzing the role of MM in financial inclusion, Ahmad, Green and Jiang (2020) considered market structure, pricing, and regulatory implications of MM as key channels to transmit information. Phones improve access to information and firms' communication with suppliers and clients. Mobile phones accelerate the search and the transmission of information, allowing the households to make informed decisions and securing improved access to financial services, boosting savings and smoothing consumption. Given that MM spans finance and telecommunications, these two different sectors present different regulations, which should inspire inclusiveness, while minimizing fraud and risks (Amoah, Korle and Asiama, 2020).

MM provides potential benefits by addressing market failure and bringing other tangible benefits (Aron, 2018). It reduces transactions cost of sending and receiving money. It enhances savings through digital money; empowers women and changes bargaining power within the family; and reduces asymmetric information and improves transparency.

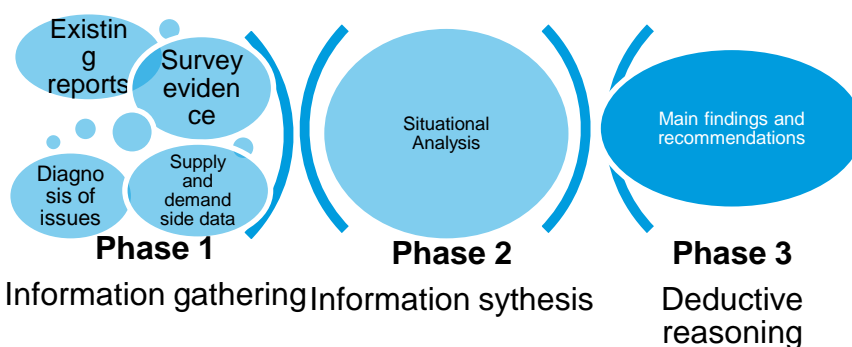
From the literature, effective MM companies strive to support all customers through offering diverse services such as person to person (P2P) money transfers, payment for utility bills, merchant payments, and taxes. The introduction of mobile money in South Sudan has allowed development organizations to distribute cash assistance through mobile channels. Humanitarian organizations have gradually substituted in-

kind donations for cash disbursements, as preferred by beneficiaries. However, a large segment of South Sudan's population does not utilize these services due to several reasons cited earlier: unavailability in some locations; unaffordability; and lack of power coverage in some localities, among others. In addition, providing cash assistance through mobile money requires access to mobile phones, connectivity, and digital literacy among affected communities.

4. Methodology and Data Sources

The paper adopts mixed methods (Figure 3) to answer the question on what impedes MM and whether it holds promise for South Sudan in advancing financial inclusion. In phase 1, the author reviews the existing literature and conducts a short survey with selected mobile money agents. In phase 2, the author analyzes the primary and secondary data collected, relying on situational analysis, and presenting available statistics in a tabular format to discern patterns. In phase 3, the author uses deductive reasoning to inform findings and draws policy implications. The methodology here reflects in part a lack of data, including data quality, data accuracy, and data consistency problems, which the BoSS noted and the limited rollout of mobile money in South Sudan.

Figure 3: Capturing methodology in a diagram



Source: Author's (2022) construction

The paper has a narrow scope, covering the period from 2011-2021 and examines impediments to financial inclusion and mobile money in South

Sudan. Of importance, South Sudan became independent in 2011, with own data as a separate country. The year 2021 is the third one after the conflict and a year after the pandemic. Three complementary datasets are used in the analysis:

- (i) The first data covers financial sector indicators, sourced from the Bank of South Sudan (2020). The key variables include data on indicators of financial inclusion such as automated teller machine (ATM) penetration, account ownership, size of banks, and MM operators, and it informs the findings (Table 1a).
- (ii) The second data come from IMF Financial Access Data (2021), and World Development Indicators (2021), displaying macroeconomic indicators, including GDP, and inflation.
- (iii) Finally, a limited survey questionnaire (2022) was administered to select firms and end-users and public and private institutions such as National Communication Authority and Trinity Energy Ltd. Information on survey data includes the firm year of establishment, employment, income, and location. The sample of consumers and MM operators was small. The data sources are complementary and the rationale for conducting a small-sample survey of firms is to capture some idiosyncratic data that could not be gleaned from other sources.

5. State of Mobile Money and Financial Services in South Sudan

The history of financial services and mobile money in South Sudan is both short and intricate. It can be analyzed through four prisms:

- (i) Formal banking and non-banking sector services
- (ii) Local money transfer company services
- (iii) Licensed mobile money financial services
- (iv) Unlicensed mobile financial services

First, households and corporates have limited access to formal financial services from the banking sector, as data from the Financial Access Survey shows (Table 2). In terms of banking size, South Sudan in 2021 had 27 commercial bank and 8 MFIs compared to 39 banks and 14 MFIs in Kenya (Table 1b).

Table 2: Financial access survey indicators of financial inclusion, 2012-2020

Year	2015	2016	2017	2018	2019	2020
Number of ATMs per 100,000 adults	1.05	0.86	0.51	0.49	0.67	0.70
Number of commercial bank branches per 100,000 adults	1.62	1.65	1.46	1.38	1.41	1.45
Number of depositors with commercial banks per 1,000 adults	74.17	79.67	81.72	81.82	104.95	81.47
Number of borrowers from commercial banks per 1,000 adults	1.73	1.24	0.71	0.57	0.57	0.91
Outstanding deposits with commercial banks (% of GDP)	36.70					
Outstanding loans from commercial banks (% of GDP)	2.81					
Outstanding small and medium enterprise (SME)	1.42					

Source: IMF Financial Access Data (2021)

This existence notwithstanding, many households, especially those in rural areas, do not have bank accounts due to limited branch networks. As indicated earlier, account ownership stood at 5.7% for current accounts and about 6.1% for savings accounts (Table 1a) at end 2020. Many households are, therefore, classified as financially excluded.

Second, several local money transfer companies are unregulated by the BoSS. They are found in all states, and most of their cash is outside the banking system. We note that the importance of money transfer companies is not about monetary policy transmission, but that they have 500+ branches across the country, compared with 66 bank branches, which is a symptom of a clear market need, which is not substantively met through the formal banking sector. They operate manually: a customer goes to agent A, fills in the form, and provides cash and fees. Clients receive the basic details and give them to receiving relatives and the latter go to another agent at their respective payout locations. While it appears simple, this manual operation carries some risks, including robbery, unavailability of cash in payout locations and

the transport cost. We illustrate sample statistics of just 6 firms, including their employment, and incomes (Table 3).

Table 3: A glance at local money transfer companies in South Sudan, 2006-2021

Company Name/S/N	Year of Establishment	Employment	Annual Income (in SSP million)	Lists of Locations Served by One Company
1	2014	250	35	Juba Town, Wau, Wanyjok, Yei, Yirol, Aweil, Ariath, Bor, Rumbek, Gokrial, Bentiu, Malakal, Nimule, Marialbaai and Torit
2	2007	200	55	Aweil, Wau, Wanyjok, Yei, Nimule, Malakal, Torit, Juba, Bentiu, Rumbek, Gokmachar, Ariath, Akuemkou, Wunrok, kuacjok, Marialbaai, Akon, Panriang
3	2016	40	25	Wau, Ariath, Kuacjok, Akuemkou, Wanyjok, Paloch, Gokrial, Aweil, Marialbai, Gokmachar, Nyamelel, Juba town
4	2015	100	25	Malakal, Bentiu, Aweil, Maban, Wau, Tonj, Kuacjok, Yei, Juba Town, Biemnhom, Torit, Anet, Akuem, Marialbaai and Wanyjok
5	2018	50	20	Aweil, Ariath, Gokmachar, Wunrok, Wau, Bentiu, Juba town, Malakal, Yirol, Tonj, Renk, Maban
6	2012	85		Anet, Aweil, Juba Town, Wau, Akon, Gokrial, Turalei, Kuacjok, Renk, Bor, Wanyjok, Nimule, Malakal, Tonj

Source: Author's Compilation (2022)

Notes: We conducted a sample survey covering about 10 firms but only 6 ended up providing data which is presented here. Therefore, this is just a sample, and companies self-reported. The list is not comprehensive, leaving more money transfer companies out there. For sensitivity or proprietary considerations, we deleted the names of the companies, replacing them with serial numbers 1,2,3.

Nonetheless, from the survey questionnaire conducted for this paper, customers indicated that they use money for dissimilar purposes, including for consumption, and education. This knowledge has the potential to inspire business solutions. This would be the equivalent of “Send Money Home” in Kenya, payroll services in Afghanistan, or betting in Uganda. It is a case of application in which the government can pay salaries through mobile accounts to those with access and scale up operations if justified. The current m-Gurush Ltd explores this option with legislature.

The third channel relates to unofficial mobile money, which existed before South Sudan gained independence in 2011. Households have on occasions used M-Pesa or in recent years Uganda MTN to transfer money to relatives in Kenya or Uganda. At times, some individuals take MM account with either Kenyan or Ugandan SIM cards to make transfers from South Sudan, thereby eluding national laws and regulations. The BoSS is aware of this loophole and plans to expedite the adoption of the NPS and creating the national gateway. Still, these unregistered services support a niche market that formal banks are not reaching, underscoring unlicensed MM providers operate outside the BoSS’ purview and other regulators such as the National Communication Authority (NCA). The unregistered services show the potential of hybrid solutions for financial inclusion. This can also counter the lack of traditional banking infrastructure, especially outside Juba, by bringing local money transfer companies into local solutions backed by MM across the EAC region.

Finally, 2019 saw the dawn of formal MM when the BoSS licensed two mobile money providers: m-Gurush (mobile money in Juba Arabic) and NilePay (we have no available details on Nilepay’s subscribers). In 2020-2021, additional mobile money providers, Capital Pay Ltd and MTN South Sudan Ltd were licensed, bringing the total to four. As of September 2022, m-Gurush, and MTN MM were operational, with m-Gurush riding on the platform of Zain, and MTN Mobile Money riding on the MTN platform. Relatedly, there are three active MNOs and two dormant ones. The active MNOs are Zain, MTN and Digitel, which commenced operations in 2021 and launched mobile money in 2022. Vivacell and Gemtel are the two MNOs that are not operational now but still have infrastructure in place (Table 4).

Table 4: Base transmitter stations

Status Operator	On Air (Active)	Off Air (Inactive)	Planned	Total	Technology			Total
					2G	2G/3G	2G/3G/4G	
MTN	357	58	19	434	158	177	99	434
Zain	240	105	15	360	283	77	-	360
Vivacell	-	161	-	161	-	-	-	-
Gemtel	-	44	-	44	-	-	-	-
Digitel					27			
Total	587	368	34	998	468	254	34	998

Source: National Communications Authority (2022)

In April 2021, m-Gurush launched International Remittance Services, again revolutionizing the transfer of money between South Sudan and East Africa. The potential gains from transparent and cheaper methods of remittance are significant given that the size of official-recorded remittance flows to developing countries carry high transaction costs (IMF, 2021). The m-Gurush is debuting its global footprint, with Head Office in Juba, and offices in Dubai, Nairobi, and Bengaluru, and extending services to its growing client base (Table 5). Overall, the table presents generalized limited access to financial services in South Sudan and limited geographical coverage, notwithstanding considerable efforts by m-Gurush.

Table 5: m-Gurush footprint in South Sudan, 2022

Category	Value
Regional branches covering all 10 states of South Sudan	15
Registered customers	600,000
Corporates and NGOs	150+
Care centres and regional offices	30+
Agents to deliver for services	2,500 +
Partnering banks	10
Merchants	10,000+
Staff	264
Brand Ambassadors – Field staff	500+

Source: Trinity Technologies Ltd, January 2022

As of January 2022, based on South Sudan's current population, m-Gurush has a good footprint that translates to 172 MM agents per million people for service delivery across the country; 41,124 registered clients

per million people; over 34 brand ambassadors per million; 18 staff per million; 1 partnering bank per 10 million people; over 685 merchants per million; and about 2 care centres per million; and 1 regional office per million. Of the total subscribers, 44% have full KYC while 56% subscribers have partial KYC (requires minimal details from customer; see Table 6), with gender disparities clear. Data from MTN also demonstrates beyond doubt that women are financially excluded. While this comparison sounds good, we hasten to add that agents are concentrated in Juba and fewer exist outside of Juba.

Table 6: Summary of m-Gurush and MTN mobile money subscribers, 2022

Category	m-Gurush		MTN Mobile Service	
	Subscribers	In %	Subscribers	In %
Customer Base	265,014	100	289,962	100
Male	223,629	84.4	264,974	91
Female	41,385	15.6	24,988	9
Agents	5,398	100	2,688	100
Male	4,789	88.7	2,538	94
Female	609	11.3	150	6
Merchants	9,105	100	-	-
Male	7,912	86.9	-	-
Female	1,193	13.1	-	-

Source: Trinity Technologies, January 2022; NCA, January 2022

We can equally see the shallowness of the mobile phone uptake in South Sudan (Table 1). We also present the case of m-Gurush and requirements for account opening in Boxes 1 and 2.

Table 7: Historical data on mobile subscriptions in South Sudan, 2010-2021

[In '000]

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
MTN		350	579	721	830	190	763	740	1,016	1,232	1,493	1,966
Zain			657	682	696	725	604	738	980	991	997	1,041
VIVACEL	589	993	9,950	1,305	1,596	1,209	1,031	940	0	0	0	0
GEMTEL	150	180	260	0	0	0	0	0	0	0	0	0
DIGITEL	0	0	0	0	0	0	0	0	0	0	0	32
TOTAL	739	1,523	11,446	2,708	3,122	2,124	2,399	2,418	1,996	2,223	2,490	3,039

Source: National Communications (2022)

Note: Gemtel did not submit data for other years as requested shutdown in 2017; Vivacell Shut down in 2018; Digitel is just operationalizing and submitted data in 2021 to NCA

Box 1: Use case of m-Gurush in South Sudan

Digital illiteracy and low mobile phone penetration are currently hindering the adoption of both m-Gurush, MTN, and NilePay. That said, m-Gurush enables some households to access financial services. The Trinity Technologies Ltd (TTL), which is behind the creation of m-Gurush, was established in 2013 with the Pan-African vision, including the espousal of customer centric as one of its core values. It aims to traverse all sectors in South Sudan from payments to insurance to agriculture to health to education and to financial services (TTL, 2022).

Just like M-Pesa in Kenya where digital value gets transferred through text messages, with help of a network of agents, users can deposit and withdraw money from the mobile accounts at the point of sales (Dubus and Hove, 2019). Users, for example, have access to many features on their phones. With a touch of a phone in Juba, for example, a son or daughter can send funds to a family, say in Bentiu or Aweil (Garang 2014; 2015; TTL, 2022).

The TTL (2022) indicates that m-Gurush service is available to customers, agents, and merchants. It is convenient and provides a fast, easy, safe, and convenient way to send and receive money. Paying for goods and services and buying airtime, making bulk payments, and offering international remittance services are among its features. It gives a customer an access to mobile money wallet in South Sudan pounds (SSP) and hard currency, while facilitating interoperability across platforms, to integrate with core banking, bill payments, insurance companies, and top-ups, among others.

The movement of cash into electronic accounts provides a record and gives the unbanked records of their financial transactions in real time. Yet, just like local money transfer services, mobile money faces similar risks of long distance from financial services or payout locations. Our conversations with mobile money providers indicate that network problems, insecurity, lack of knowledge of mobile money, use of hard currency, and complex application operating systems are among the challenges, and transactions costs. As observed elsewhere, the travel and wait times in long queues at payout locations, and coordination costs between individual benefactors and beneficiaries can be a huge constraint (Aron, 2018).

The m-Gurush devised solutions to address key problems (TTL, 2022). For those without mobile phones, it provides them with smart cards, affording many functional features. To overcome the poor network coverage, it has resolved to use satellite solutions; for the lack of power, it has focused on investing and using solar power and generators. To expand the horizons of financial services, m-Gurush has allowed customers to enjoy multiple wallets, including in SSP, US dollars, and free account options. To minimize cash loss, it has obtained insurance coverage.

Source: Garang's Interviews with MM Agents and End-users, 2022 and TTL (2022)

Box 2: Using m-Gurush to illustrate requirements to operate mobile money account

Operating mobile money in South Sudan is amazingly simple for the privileged and difficult for poor households. Let us consider, for example, how m-Gurush works after securing a registration. Customers can contact m-Gurush through its agents, via phone lines or email. For registration, a customer is required to visit the nearest agent, with a valid national ID and their Zain line. Once registered and provided with a pin number, a customer can hold a maximum of SSP 400,000 in their m-Gurush wallet. The maximum and the minimum they can send are between SSP200,000, and only SSP100, respectively. For cash withdrawal, customers can go to their nearest agent and receive service, including the direction on how to withdraw cash. For minimum account balance, customers should expect to keep a small amount of SSP1,000-2,000.

Furthermore, m-Gurush customers can link their m-Gurush bank with the bank account, following simple dial-up steps. It is quick to send and receive money within 3-5 minutes. Relatedly, m-Gurush operates now in states and plans to expand to 75 out of 79 counties of South Sudan soon. That said, this case does not apply to all banks, since a few links have been made, noting lack of systems in some local banks.

Source: Garang's Interviews with MM Agents, 2022

From the above discussion, we summarize, in the following sub-sections, key impediments to the evolution of MM and DFS in South Sudan.

Challenges Facing Mobile Money in South Sudan

From the above discussions, the key challenges to MM in South Sudan include: (i) low phone uptake; (ii) poor infrastructure, including unreliable electricity and low GSM coverage; (iv) insufficient regulatory framework and lack of clear guidelines; (v) demographic challenges such as digital illiteracy; and (vi) agency matters, including the need for agent business case and liquidity management given that cash is delivered in Juba.

The above challenges constrain the uptake of mobile money and financial inclusion in general. Notwithstanding these problem-solving initiatives of m-Gurush in Box 1, challenges remain, and which call for “solutions” to resolve what does not work. Given that many people are poor and illiterate, mobile phone uptake is very low which depresses the use of MM because of reliance on mobile phones. Unreliable power supply also remains a huge impediment to the evolution of MM. Even

when transfer has been sent to an individual recipient, they cannot receive money sometimes because the phones have run out of cash, or a payout location has run out of power and its systems or computers are down. When there is low coverage, the business case for MM is weak. The same goes for the difficulty of providing liquidity, and the difficult-to-reach areas, either because roads are impassable, insecurity exists, or the population is sparsely scattered. Putting in place the overall business environment in which MM could be successful calls for demand-side considerations.

Broadly, liquidity management is vital. There are 66 branches and 5 central bank branches for managing cash across the country, which results in expensive cash in transit (CIT). It also resulted in local money transfer companies with more than 500 branches across the country and not equally distributed, hence low coverage in others. Support from the government through the central bank to expand the cash management infrastructure, for example, establishing more central bank branches is key. Financial service providers must deal with cash-related issues, including unavailability of cash when required, security risks, power outages, and high transport costs due to poor roads. Broadly, CIT is expensive and risky, noting that its providers encounter robberies on the road as they deliver cash. The need for liquidity management—both float and cash for mobile money—is real. This diagnosis of challenges points to the need to find practical solutions by resolving impediments to MM from the supply perspective, while incorporating research on the demand for cash.

From the analysis, we find that South Sudan currently lacks supportive regulatory framework and appropriate ecosystem. Therefore, the case can be made to provide supportive regulatory and policy framework; rallying the development of MM around the MM sector just like Kenya (see Section 5.2 below) did with Safaricom, and finally, developing a supportive ecosystem, which allows other mobile operators to offer diverse productions and create successive generations on MM.

Lessons from Kenya on Mobile Money and Deployment of Technology

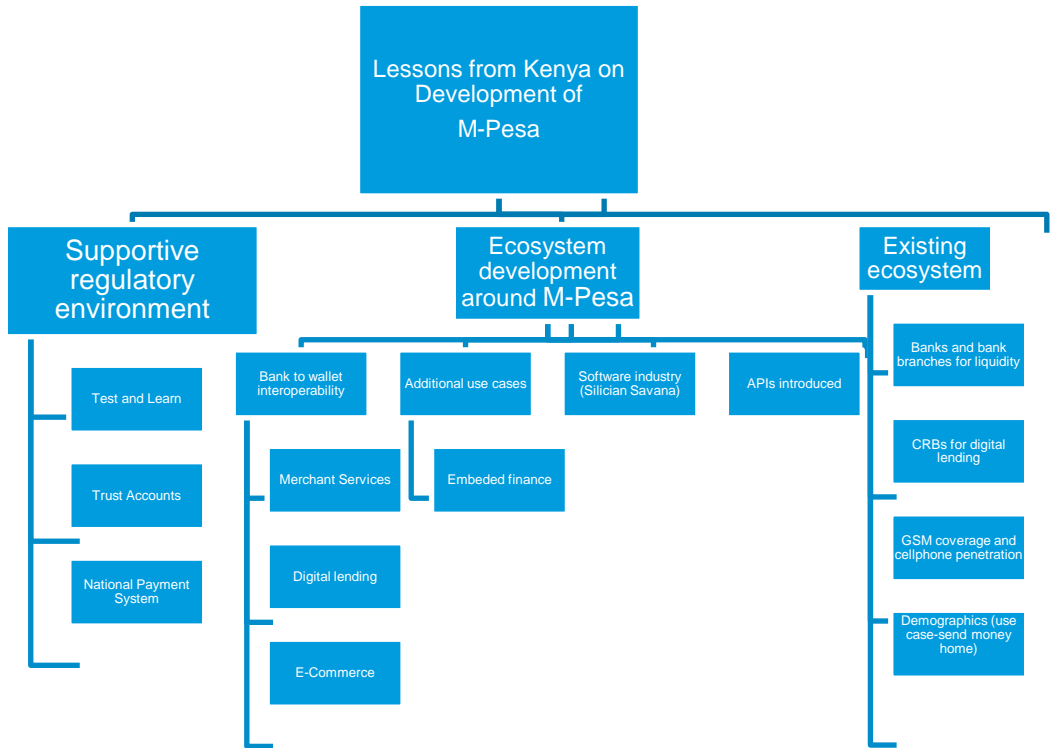
We capture in a diagram (Figure 4) three key lessons from MM development and DFS in Kenya, including a supportive regulatory environment, an ecosystem which has evolved around M-Pesa and a pre-

existing ecosystem, which could be used to support the development of mobile money.

Kenya led the MM revolution in Sub-Saharan Africa (SSA), with the launch of M-Pesa by Safaricom and Vodafone in 2007 (Cracknell, 2012; Ruparel, 2021). As Ndung'u (2021) details in his recent paper, M-Pesa benefited greatly from the supportive policy environment, Safaricom ecosystem, and existing regulatory and banking structure in Kenya (Figure 4). The MM benefits to Kenya are many, with successful replications in East Africa and beyond (Kimenyi and Ndung'u, 2009; Demombynes and Thegeya, 2021; Ndung'u, 2021). It proved effective in expanding financial services and smoothing household consumption and reducing poverty (Donovan, 2012; Van Hove and Dubus, 2019) and motivated other MM providers and more generations of M-Pesa (Ndung'u, 2021).

Not only did Kenya foster mobile communications services, but it also continues to advance mobile financial services to societal segments previously excluded from formal services, thereby providing economic security. According to Demombynes and Thegeya (2012), less than 1 in 1,000 adults had access to mobile phones in 1990. Fast forward by the end of 2011, about 93% of Kenyan households owned a mobile phone, and by 2020, the mobile penetration among adults rose to 98%. Kenya also invested in agency network and by 2017 there were 136,000 M-Pesa agents countrywide (compared with about 2.4 commercial bank branches per 1,000 km² in 2013, or 1,410 total branches). Therefore, setting up an agency network, besides training and payment of agents, has become a vital initial investment by mobile operators to develop the market.

Figure 4: Lessons from Kenya on evolution of M-Pesa and digital financial services



Source: Author's compilation, 2023

According to Kimenyi and Ndung'u (2009) and Ndung'u (2021), some factors account for the revolution in mobile money in Kenya. These include a conducive legal and tax environment; open dialogue between public-private actors; prudent macroeconomic policies; and presence of a contestable market discouraging dominance by initial entrants. Other researchers cite a high demand for remittances, induced by the rural-urban migration.

A lesson drawn from Kenya also signals to the multistakeholder approach to financial inclusion.³ Every stakeholder has a role to play. To drive adoption of digitized G2P/P2G payments, governments tend to prioritize digitizing payments; the National Insurance Commission

³ Other countries such as Uganda, and Nigeria, and Bangladesh, India, and Brazil in other continent also offer similar experiences in multistakeholder approach to financial inclusion.

defines and implements a micro-insurance framework; the Communications Authority defines a plan for the government to invest in fiber optic cables for mobile network operators, ensuring a dedicated bandwidth for data services to give priority to payments and privacy considerations. Further, licensed mobile payments operators implement the mobile payments framework to provide innovative mobile payments products to increase outreach; the Kenya National Bureau of Statistics includes financial inclusion indicators in annual household surveys and publishes them; and development partners provide technical assistance to implement the Financial Inclusion Strategy.

Kenya has taught us that an appropriate deployment of mobile technology also fosters financial inclusion, as the case of M-Pesa shows (Ndung'u, 2021). The spread of 3G and 4G technologies in the last two decades presents an opportunity to harness economic empowerment and value through advanced access to smartphones, which is an embodiment of digital economy. It creates a consumer surplus, with operational costs decreasing when running online businesses. It remains a powerful tool for business growth and competitiveness.

Providing financial literacy in Kenya is another area that South Sudan could appreciate. Equity Bank, for example, established a financial literacy programme to avail relevant financial skills to individuals (Mutegi, Njeru and Ongesa, 2015). Digitizing payment systems also served Kenya very well. Given that a sizeable percentage of the population in South Sudan receives social payments from development partners and are provided some form of identity by partner providers of social payments, investing and leveraging digitization makes sense.

Therefore, supporting networks of agents, agent banking, alongside satellite branches, and introducing shared agents, could be a way to facilitate the spread of formal services. Therefore, arrangements among BoSS, commercial bank agents, MM agents, and local money transfer agents can enhance liquidity management. This has the potential to enhance safekeeping, efficiency, money creation, and financial stability.

Opportunities for Mobile Money in South Sudan

Opportunities for MM in South Sudan include: (i) product evolution; (ii) customer research; (iii) market research; (iv) collaboration between and with local money transfer companies; (v) social payments (onboarding and training); and (vi) mobilization campaigns subject to KYC-remote

onboarding. Specifically, product evolution could focus on local and international remittances, which m-Gurush has already started. Further, customer research, which focuses on product development, with a focus on meeting financial needs and delivering customer education could be affected. Unlike in Kenya, there are no active legislation or initiatives by individual banks to provide financial literacy or specialize in customer centric research and products. On product development, the market in South Sudan is not responding to the 2017 regulations in the same way that M-Pesa responded in 2007 in Kenya. Some of the favourable conditions that Kimenyi and Ndung'u (2009) cited are not available in South Sudan, emphasizing the need to develop and nurture them.

Finally, further research will be key to support internal remittances. The current local money transfer companies, which act largely on their own, would benefit greatly from such endeavours. Further, bulk payments such as business to business payments (B2B), say by MM providers to large firms or government entities and with private actors, are also other areas that deserve careful attention. There exists room for improvements for P2P or government to persons payment arrangements. These could be used to pay taxes, and for the government to provide direct services to the vulnerable population, especially when the pensions and social safety net are up and running. These services and expected uptake of MM can bring the government to people and vice versa.

6. Policy Areas for Consideration

Policy in Progress

There are presently few policies in place to support MM and the financial inclusion agenda. However, South Sudan is strengthening the legal framework by drafting a New Banking Bill, a National Payment Systems Bill, and a National Financial Inclusion Strategy. That said, relevant laws need to be passed and outdated ones, including MM guidelines, revised. It must be positively noted that a payment function has been established with the BoSS, which is in advanced stage or the process to establish a Real Time Gross Settlement System (RTGS) and an Automated Clearing House (ACH) to clear cheques. At a later stage, there is also a presumption that an Instant Payment System may be introduced.

Policy Opportunities

Policy opportunities in South Sudan include capacity building for the financial sector; and electrification to enhance power supply, which has implications for MM and FI. Further, there is need to streamline work for the KYC, and set up a National ID. This also includes reforming the judicial bureaucracy and procedures of contract enforcement.

Policy Challenges

There are policy challenges that need to be addressed to support MM development. First, there is a need to sequence policy actions. Second, funding is also an issue, especially the question of who covers the costs of implementing the proposed items: Does the government shoulder the major costs or will the private sector and development partners play a leading role here? Third, there is also a sense that the knowledge of policy makers needs to be enhanced to improve their oversight role. This allows them to embrace and support financial inclusion agenda and appropriate resources to promote the policy agenda. Finally, ensuring peace and stability remains imperative. Therefore, a full implementation of the Revitalized Peace Agreement will be key to supporting deployment of MM and enhancing financial inclusion in South Sudan.

Supply-Side Considerations for Mobile Money and Formal Financial Services

Banking sector policies, such as simplifying documentations, enhancing bank products, offering financial literacy, and increasing ATM footprint are among the steadiest ways to formal access.

Supply-side policies could focus on formal banking sector, MM operators, and unlicensed local money transfer companies. For now, providers accept documents held by the army, pensioners, schools, and other institutions. That said, constraints exist. First, majority of potential customers in rural areas do not have national IDs.⁴ Second, South Sudan lacks the capacity to implement and effectively monitor AML/CFT measures in the digital age. Thus, monitoring MM operations since they have the potential to also attract criminals and unlawful providers

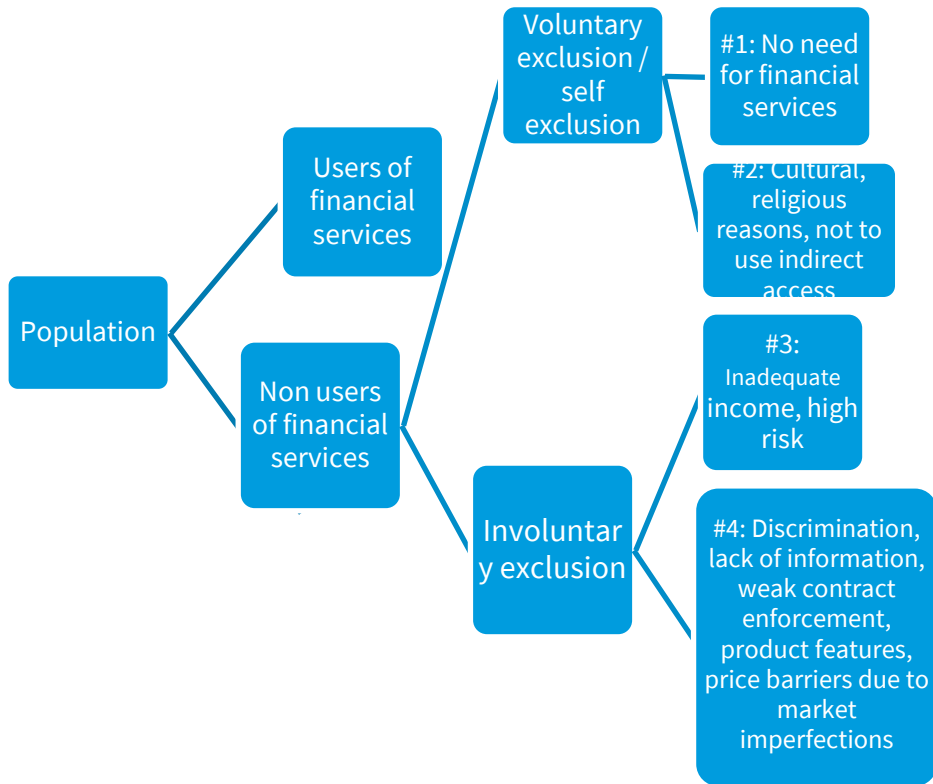
⁴ Know-Your Customer (KYC) does not require national IDs; it requires proof of identity, which can be defined by BoSS. The World Food Programmes (WFP) issues a biometric identity, for example. There are army identities, and voters' cards that can be used if the policy environment permits. Creating a digital trail for transactions reduces money laundering risks, a point corroborated by the BIS.

looking for regulatory arbitrage to exploit is warranted. Third, Kenya offers lessons on MM through encouraging productive partnerships, and supportive regulatory environment. Fourth, investing resources in supportive infrastructure and research remains key. The central bank should keep pace with MM developments to improve its research work, while collaborating with other institutions.

More importantly, lessons from other MM providers are instructive. The policy intent to create user-friendly interfaces, ensure privacy considerations, and make e-money trustworthy while protecting consumers is warranted. Mobile money must be safe and underpinned by sound legal frameworks to support financial integrity (IMF, 2021). Actions to enforce agent due diligence, monitor financial development; adopt National Framework for Data Protection, create community-level awareness; provide financial literacy, enhance legislation, and ensure effective telecommunication, including by harmonizing requirements and approval procedures, are key. A structured plan to develop mobile money, including by working with relevant government agencies, is also vital. In addition, BoSS can sign MOUs with various MM and local money providers. This will allow MM providers and local money transfer companies to receive cash replenishments, if necessary, while fostering deposit-taking by commercial banks.

Policy makers must make efforts to distinguish between use and non-use of financial services. There are barriers that affect use and non-use, some of which can be addressed through policy (Figure 5). We hasten to add that financial exclusion can be involuntary or voluntary, and policy can be made effective under #4, including through removing market imperfections. For the case of South Sudan, points #3 and #4 apply, especially the case about low income and prevailing weak enforcement mechanisms and limited products and other imperfections.

Figure 5: On the use and non-use of financial services



Source: Barajas (2020)

Regional Policy Coordination

The examples provided in the above section point to mobility of financial services across the EAC border. Given that South Sudanese send money informally and formally across the border, regional collaboration with Kenya and Uganda is justified. Regional cooperation could focus on the areas of data collection, risk monitoring, customer protection, and equitable trade in services.

7. Conclusion and Policy Implications

The main contribution of this paper has been to trace the evolution of and impediments to mobile money and financial inclusion in South Sudan, while answering two key questions: (i) How did the conflict impede financial inclusion; and (ii) what promises does mobile money

hold for South Sudan? Many people in South Sudan remain financially excluded, partly due to the rudimentary nature of the financial systems and the previous conflicts. While the adoption of mobile money is slow, it holds promises. The paper recommends the following actions to various stakeholders:

- Financial service providers could address illiteracy, ensure interoperability, simplify documentations, deploy user-friendly interfaces, and expand access through differentiating bank products, and advancing branchless tools, including positioning ATMs.
- Mobile money providers and banks must develop uniform KYC requirements for opening and operating all wallets, developing agent networks, and working with others to close the gender gap. Agreeing on acceptable KYC rules could support digitizing social protection payments and designing programmes to expand women's opportunities. Along with government, they should invest in reliable electricity, and generous broadband internet, push for conducive regulatory environment, and address other imperfections.
- BoSS should focus on regulations to support national payments; consumer protection; and providing moral suasion to banks to tailor financial services to disadvantaged groups.
- The National Communication Authority should continue its current path and focus, regulating telecoms, and applying due diligence in licensing mobile operators while the BoSS focuses on licensing MM providers and supporting liquidity management. They must also support the plan to roll out more or additional mobile money operators.
- Robust collaboration between the Ministry of Finance and Planning and BoSS to operationalize the draft National Financial Inclusion Strategy (NFIS) is key. This includes setting up the National Payment Council, and secretariat to monitor progress, and supporting liquidity management, including the CIT.
- Development partners focusing on financial inclusion could coordinate their activities with relevant regulators, underscoring the centrality of multisectoral approach. The role played by different funders, including private sector, government, NGOs, and foreign partners, among others, in funding activities and

programmes that might aid access to money and human resources remains central. Such coordination remains imperative to maximize financial support and technical assistance at a time when South Sudan is developing its NFIS.

To conclude, enacting a Financial Inclusion Strategy, with clear objectives, actions, and benchmarks, is justified. Collaborating with partners and investing in key infrastructure and state capacity could support mobile money and expand access in South Sudan.

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Mission

To strengthen local capacity for conducting independent, rigorous inquiry into the problems facing the management of economies in sub-Saharan Africa.

The mission rests on two basic premises: that development is more likely to occur where there is sustained sound management of the economy, and that such management is more likely to happen where there is an active, well-informed group of locally based professional economists to conduct policy-relevant research.

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African Economic Research Consortium
Consortium pour la Recherche Economique en Afrique
Middle East Bank Towers,
3rd Floor, Jakaya Kikwete Road
Nairobi 00200, Kenya
Tel: +254 (0) 20 273 4150
communications@ercafrica.org