



Background Paper on Fintech Solutions for Women and their Impact

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Table of Contents

1.	Introduction	4
2.	The SSA Context	4
3.	The state of women's financial inclusion	7
4.	Fintech's on the Savannah	10
5.	The impact of fintech solutions on women	12
6.	Conclusion: Making fintech solutions more impactful	16

1. INTRODUCTION

Amongst all the excitement and sometimes hubris of the impact of financial innovation on financial inclusion, the gender dimension is often missing from the discourse.

This paper will consider what we know about the gender dimension of financial inclusion, and the impact of financial innovation on women. This will require a consideration of the evidence of the gains of financial innovation and how the gains are distributed by gender. The paper will then present a framework for thinking about the gender dimensions of financial innovation, and suggest avenues for further research and engagement.

In the first section of this paper we consider the broader context in Sub-Saharan Africa (“SSA”) and assess whether improvements in macro-economic performance have resulted in a broad reduction in poverty or a greater level of inclusion among women. The second section considers the evolution of the financial sector and the contribution of enlightened regulation to breakthroughs in financial innovation. The third section discusses broad trends in financial innovation in SSA. In the fourth section we present a classification of innovation from a gender perspective. Here we look for evidence of the extent to which women have benefitted from three types of innovations: those that transform the market - the “lift-all-the-boats-in-the-sea”-type innovations, those that meet the most relevant livelihood needs and household burdens facing women, and those that affect financial institutions that target women (such as microfinance companies). The final section concludes the paper and presents some thoughts for the future.

2. THE SSA CONTEXT

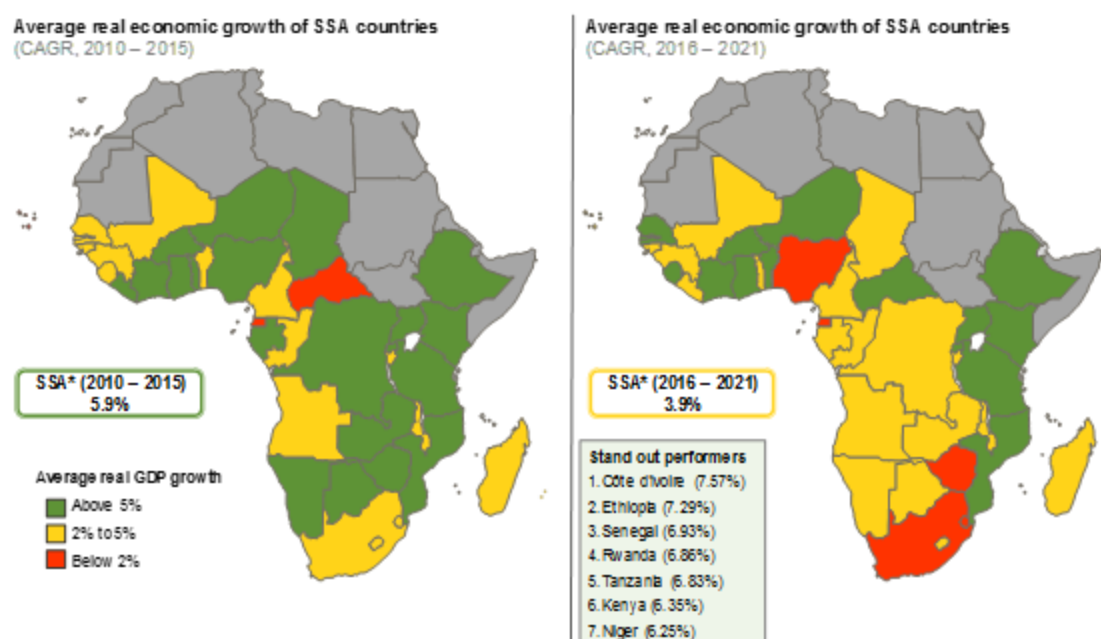
Many of the advances in financial inclusion over the last ten years have been supported by a very favourable macro-economic environment. Between 2000 and 2014 SSA recorded higher real GDP growth than most other parts of the world (about 5.6% compared to a global average of 3.9%¹). This growth was on the back of a commodity price boom², favorable demographic developments, burgeoning manufacturing and services industries, and higher government investment in infrastructure. Since 2015 however growth has slowed markedly to a low of 1.5% in 2016. Poor policies in the major economies combined with a slump in commodity prices and sustained droughts across the region, have caused food scarcity, water and power shortages, currency depreciation, and high inflation in many countries. Some countries have weathered these challenges better than others and Francophone West Africa and East Africa stand out for their sustained growth.

Looking ahead, commodity prices are expected to remain low for the next couple of years, and food scarcity will likely persist at least until the next harvests in late 2017. Growth across SSA is likely to be 2-3% points lower than in the 2010-2015 period for the next five years. This will have an important impact on the deployment and adoption of Fintech products and services

¹ IMF World Economic Outlook database, April 2017

² The IMF commodity price index increased from 53.7 to 176.85 by 2014

Figure 1: Economic performance in SSA

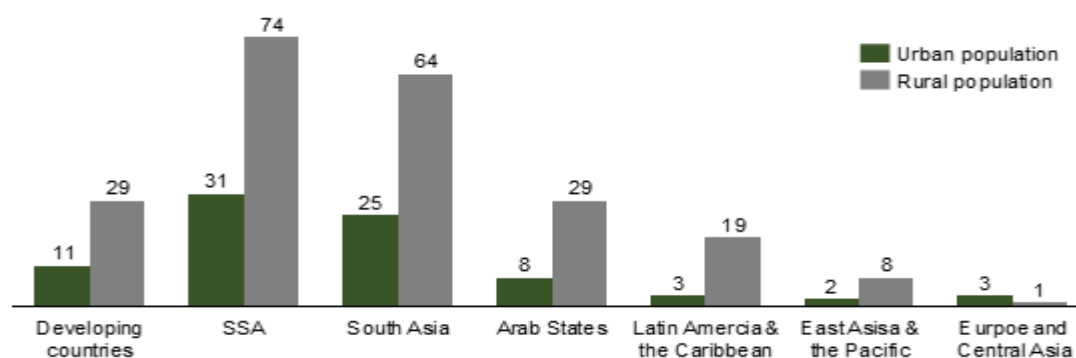


Source: Genesis Analytics team analysis, 2017, Data sourced from IMF World Economic Outlook Database, 2017

Poverty and productivity

Despite the years of economic growth, poverty levels in SSA remain high, particularly in rural areas where most of SSA populations reside³ and people are far more likely to be in multidimensional poverty⁴ compared to those in urban areas (Figure 2). However, in a few countries rapid economic growth is indeed leading to a reduction in poverty rates. In Ghana, Rwanda, Ethiopia, and Burkina Faso, for example, there is real evidence of a reduction in poverty.⁵

Figure 2: Population in multidimensional poverty (%)



³ According to the World Bank, 2015, about 62 of people in SSA live in rural areas

⁴ Multidimensional poverty is made up of several factors that constitute poor people's experience of deprivation – such as poor health, lack of education, inadequate living standard, lack of income (as one of several factors considered), disempowerment, poor quality of work and threat from violence.

⁵ AGRA, 2016, Africa Agriculture Status Report

Agriculture is the backbone of many SSA economies (contributing an average of 20% to GDP), and a primary source of sustenance and income for rural communities. According to the World Bank, about 69% of all sub-Saharan Africans work in agriculture. Most of this farming is done by smallholder farming households, who predominantly farm on land between 1-5 hectares using simple farming tools. The growth of the agriculture sector has been constrained in many countries due to a lack of access to markets, poor physical infrastructure (roads, electricity, and water), weak policy implementation by governments, migration by youth to urban areas, political unrest, and armed conflicts.

Women make an essential and increasing contribution to the agricultural and rural economies in SSA. According to the Food and Agriculture Organization, women now make up almost 50% of the agricultural labor force, an increase from about 45% in 1980 (this ratio increases to about 53% when looking at rural areas only).⁶ Despite the role played by women in food production, very few women have statutory land titles over the land they live on or cultivate. The discourse around land continues to be defined through a patriarchal narrative with African women still dependent on their relationships with fathers, husbands, sons and other male relatives to access land. This lack of land tenure affects their ability to make decisions on key activities such as what crops to grow, what technologies to use, and what to sell. Given their limited decision-making powers over control and access to resources, women struggle to build an asset base, access credit and to participate in associations that process and market agricultural products.⁷

SSA also has high levels of women entrepreneurship, with the proportion of male-owned businesses to female-owned businesses being roughly the same.⁸ In Uganda for example, 48% of all small and medium-sized enterprises (SMEs) are owned by women. In Kenya, the corresponding figure is 49%. In Ghana and Nigeria where the number of female entrepreneurs exceeds that of men.⁹ Yet, women entrepreneurs continue to receive only a small fraction of the total capital available for SME investment across Africa. OSISA estimates the financing gap for women-owned SMEs is around USD20 billion. This gap is much higher for women-owned businesses in total, given the large number of women business owners in the informal sector.

Demographics

The population of SSA grew from 186 million to just over a billion people from 1950-2015. That is equivalent to about 12 million people a year for the past 65 years. By 2060, the population of the region could be as large as 2.7 billion people. The population structure of SSA countries is shaped by high fertility rates and low life expectancy. Until recently, on average a woman in SSA had 6.5 children over her lifetime. Now women have 5.1 children on average. This average however masks considerable heterogeneity; in countries like Botswana, South Africa and Kenya women have fewer children, but in countries like Niger, the change in fertility levels has been minimal. As a result, today many SSA countries are primarily made up of children

⁶ It should be noted that this ratio masks wide variations of women's role in agriculture within regions, countries, and crops. However a general finding is that women contribute on average 50% or more to agricultural production.

⁷ AGRA, 2016, Africa Agriculture Status Report

⁸ Herrington M & Kelly D, 2012, African Entrepreneurship: GEM Sub-Saharan Africa Regional Report

⁹ OSISA, 2015, Women's Financial Inclusion in Africa: Barriers, Costs and Opportunities

aged 14 years and under.¹⁰

Females account for 50% of the total SSA population. Gender inequality remains high despite the years of economic growth and slight reduction in poverty. According to UNDP, SSA has the third highest level of gender inequality after South Asia and the Arab States.

Because of differences in education and the mismatch between women's skills and those demanded by the formal labor market, women are more likely to be in vulnerable employment. Here regulation is weak and social protection is limited.¹¹ This in turn pushes women into the informal economy. Increased female participation in the labor market has not meant increased opportunities in high paying jobs or enterprises. A gender wage gap outside agriculture is pervasive across all labor markets in SSA, where, on average, the unadjusted gender pay gap is estimated at 30%.¹²

In rural areas, gender inequality is exacerbated by the multiple roles that women have to play. Their activities typically include producing agricultural crops, tending animals, processing and preparing food, working for wages in agricultural or other rural enterprises, collecting fuel and water, engaging in trade and marketing, caring for family members and maintaining their homes. Many of these activities are not defined as "economically active employment" in national accounts but they are essential to the wellbeing of rural households.¹³

3. THE STATE OF WOMEN'S FINANCIAL INCLUSION

Though the overall depth and financial sophistication of the financial sector across SSA remains generally low, the sector has evolved considerably over the last decade in a number of countries. Financial sectors in SSA are usually dominated by a highly concentrated banking industry. Given under-developed capital and insurance markets, banks play a crucial intermediation role and represent the main source of external capital for companies. However, bank lending is dominated by the corporate sector and typically excludes lending to those employed outside of the formal sector or small and micro businesses - areas in which women are more likely to be employed.¹⁴

The regulatory frameworks in SSA are not always in line with international practice and they may prove volatile at times, inducing uncertainty within the banking sector and among international investors. This is demonstrated in Kenya where the Central Bank recently placed a politically motivated interest rate cap on loans, and in Nigeria where the Government has refused to allow payment to bank head-offices for services rendered.

Importantly however in a rising number of countries the Central Banks (especially in East Africa) have adopted an informal "sandbox" approach to regulation that encourages innovation, by issuing no-objection letters to certain forms of financial innovation. Most importantly this gave rise to the introduction of mobile money (a watershed for financial inclusion), agency banking, microinsurance and bancassurance.

These regulations have led to increased competition, with mobile network operators (MNOs),

¹⁰ World Bank data

¹¹ UNDP, 2016, Accelerating Gender Equality and Women's Empowerment in Africa

¹² UNDP, 2016, Africa Human Development Report

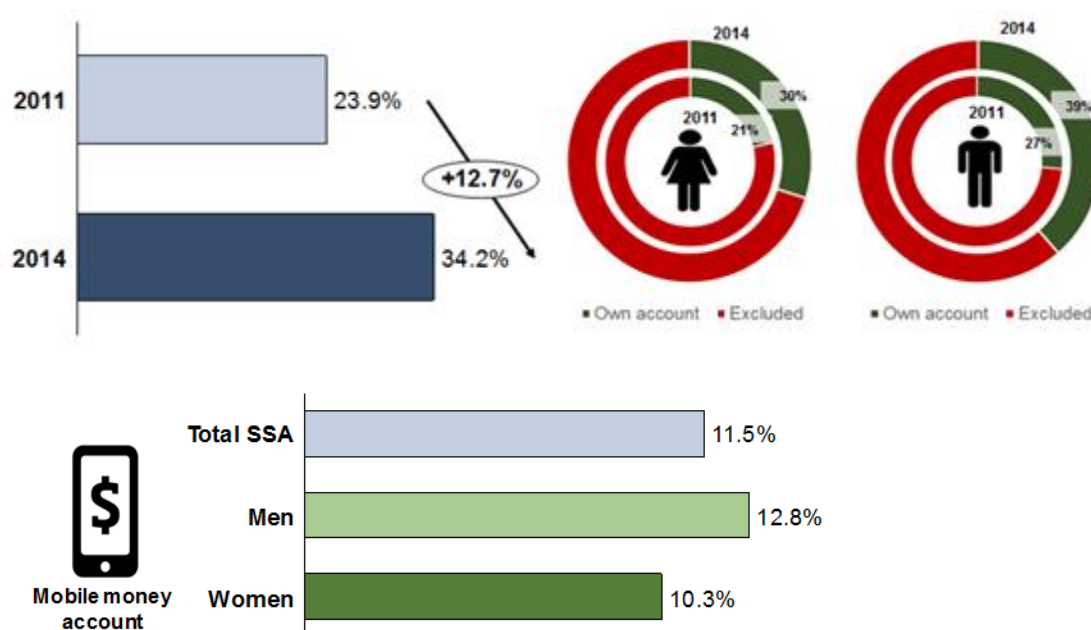
¹³ FAO, 2011, The role of women in agriculture

¹⁴ European Investment Bank, 2016, Banking in sub-Saharan Africa Recent Trends and Digital Financial Inclusion

payments providers, and other Fintech companies developing solutions to serve the previously under/unserved bottom of the pyramid populations (see section 2.1). Although banks were slow to react to this shift, they have begun innovating as well - partnering with MNOs and traditional payments providers (i.e. card associations) and belatedly building the national payments systems to improve their product offering and extend outreach to rural customers.

As a result of these developments the Findex and FinScope datasets indicate that financial inclusion has increased considerably across SSA, largely driven by the uptake of mobile money. However this increase has varied between men and women. According to Findex data, although financial inclusion for both genders increased between 2011 and 2014, the gap between them increased from 6% in 2011 to 9% in 2014, suggesting that men benefited more from financial service innovation than women. As a result 70% of women were financially excluded compared to 61% of men.

Figure 3: Trends in ownership of a formal account in SSA: 2011 – 2014



Source: World Bank Findex data

Without access to a formal product, informal financial services (e.g. savings groups, VSLAs, money lenders and family and friends) continue to play an important role in serving financial service needs, particularly in the rural areas and among women. According to FinScope surveys in the SADC region, for example, about 39% of adults have or use informal financial products/mechanisms.¹⁵

Barriers to women's financial inclusion

As implied in the financial inclusion numbers, women face more constraints to accessing financial services compared to their male counterparts. Part of the reason for lower account ownership among women is because they use someone else's account, which is common in

¹⁵ FinMark Trust, 2016, An excluded society: Financial inclusion in SADC through FinScope lenses

many SSA countries.¹⁶ This may be a matter of preference in some households, but there are evident barriers for women who wish to have their own accounts.

According to FinScope surveys, **lack of money or regular income** is the most important reason why women do not have an account. In fact, more women than men cite this as the primary reason for not having a bank account.¹⁷ This is a function of their restricted position in the household, where the proceeds from activities such as agriculture are often controlled by the male head of the household. Women farmers also tend to earn less from agriculture since they work on small-size plots and are less productive in terms of output per unit of land, and as many of the outputs are consumed in the home do not generate a cash income that passes through the woman's hands.

Legal and societal restrictions on women's ability to inherit property, and restrictions that limit their ability to engage in economic activity have a direct impact on the ability of women to access finance because it deprives them of acquiring assets that can be used as collateral to obtain loans from financial institutions.¹⁸

Another key barrier for women's financial inclusion is the **lack of involvement in household financial decision making** due to societal norms within patriarchal communities. Because proportionately fewer women are involved in household financial decisions, they have a lower level of demand for financial services.

Women across SSA also tend to have **lower levels of education and financial literacy**. According to UNESCO, no country in Sub-Saharan Africa has achieved gender parity in both primary and secondary education. On average there are still only 92 girls per 100 boys in primary school in the region. The gender disparity in education affects financial literacy, which is a major barrier for women's financial inclusion. Awareness-related barriers include lack of understanding about benefits of having a financial product, how financial products work, the financial language used, or where and how to apply for a product. It also involves attitude-related problems such as a feeling that formal financial services are not made for them.

Low cost digital financial services (DFS) such as mobile money address a number of barriers to financial inclusion including proximity, affordability, and KYC¹⁹. However the benefit of these services for women is short circuited by the **lack of mobile phone ownership**. Although cell phone penetration in Africa is high (about 70%), women lag behind men in cell phone usage and access to cell phones in general. This is demonstrated in Uganda, a country with one of the widest gaps in phone ownership by gender in Africa as 77% of men own a mobile phone, while only 54% of women do.²⁰

All these characteristics suggest that many of the gains in financial inclusion that are dependent on technology (mobile phones), engagements with formal financial institutions, and or a monetised income will have a disproportional impact across genders. At the same time however it can be demonstrated that women have certainly benefited from some of the key innovations that have had an economy wide impact. This paper thus distinguishes between

¹⁶ Finmark Trust, 2016, Gender and financial inclusion: Analysis of financial inclusion of women in the SADC region

¹⁷ Finmark Trust, 2016, Gender and financial inclusion: Analysis of financial inclusion of women in the SADC region

¹⁸ OSISA, 2015, Women's Financial Inclusion in Africa: Barriers, Costs and Opportunities

¹⁹ In many instances banks only allow women to open bank accounts or obtain credit if the banks first notify the husbands

²⁰ Pew Research Center, 2015, Cell phones in Africa: Communication lifeline

innovations that have an economy wide benefit (“lifts all boats”), and those that benefit institutions that predominantly serve women and those that are designed to meet the needs of women – given their roles in the household and in the economy.

4. FINTECH’S ON THE SAVANNAH

Since the global crisis of 2008, piggybacking on changes in technology, regulation, and consumer behaviours, SSA and the world in general has experienced a Fintech revolution.

Agency banking, mobile banking, big data credit scoring, and machine-to-machine learning, are all examples of innovations that have been possible due to developments in regulation and technology, and by greatly reducing costs and providing new forms of risk mitigation, have resulted in rapid increases in financial access.

Pure Fintech companies and entrants from other industries (e.g. MNOs) are now competing to provide financial services that were originally the preserve of banks, and these offerings now span the full range of financial services from payments and savings products, to loans, insurance, and financial management.

At a global level, funds raised for Fintech investment have now reached almost USD25 billion from about USD4.5 billion in 2013.²¹ Africa has experienced a similar rise with investment in Fintech expected to rise from USD414 million in 2014 to USD608 million in 2018.²² As a consequence, the number of start-ups in Fintech globally has grown from 770 to 1,100 over the same period. These investments translate into “a flurry of new business models, including pure online banks and insurance companies, non-bank lenders, credit scorers using big data, payment services offered by technology companies (Google Wallet, Apple Pay), or blockchain platforms”.²³ Africinvest categorises these investments into the way in which they can impact the market:

- dematerialization (digitisation of a previously physical activity),
- disintermediation (the entry of a new platform or participant that eliminates a traditional industry participant. The rise of peer-to-peer lending is an example of platform disintermediation.),
- disruptors (entrants from other industries that can offer traditional products in new ways, such as Safaricom’s M-Pesa),
- convergence (where players from different industries partner to offer new products. The proliferation of bancassurance distribution models is an example of partnerships between banks and insurers.)

Sometimes a leading innovation will involve several of these; for example mobile money products **dematerialised** what was largely a cash money transfer business, but are probably best categorized as a **disruptor** innovation since they were the result of the entry of a MNO into the payments business. The combination of a banking sector with limited reach and high mobile penetration has made innovation around the mobile phone the initial focus of Fintech in

²¹ Africinvest, 2016, Africa and the global Fintech revolution

²² IFC, 2017, How Fintech is Reaching the Poor in Africa and Asia: A Start-Up Perspective

²³ Africinvest, 2016, Africa and the global Fintech revolution

SSA.

The main contribution to improved financial services in Africa has been the influence of the **disruptors** in the form of MNOs - initially in payments but now in credit and savings. M-Pesa in Kenya led the way and has revolutionised access to payments and basic accounts in half a dozen countries. M-Shwari is probably best categorised as a **convergence** play as the product is in the form of a savings and loan product provided by a bank but using big data and a platform provided by an MNO. The impact of these two innovations is impressive by any standard - with financial access increasing dramatically in Kenya and other markets. M-Pesa has become a way of life for about 30 million Africans in 10 countries with more than 80% of Kenyans using the service.²⁴ As evidence of its success, in 2015 M-Shwari issued 25 million micro-loans - in a country with a population of 44 million people. This scale suggests that M-Shwari also has the potential to disrupt, and potentially displace, large chunks of the micro-finance industry.

Disruptors include machine-to-machine technology solutions such as the embedded SIM cards in M-Kopa solar panels, which have the potential to massively expand a credit asset class (micro-leasing), as do other innovations that rely on social networks and data for new lending models.

Of particular importance is the rapid evolution and response to such disruptive business models as illustrated by the launch of Equitel by Equity Bank - a bank becoming a MNO to replicate a new business model and the consolidation in e-commerce providers seen across Africa.

Agency banking is an equally important disruptive business model that has transformed the cost and reach of financial service providers but may be entering into a new phase of consolidation.

Disintermediation in the form of peer-to-peer lending and crowdfunding platforms such as PesaZetu (East Africa) has been slowly gaining momentum in Africa. These mobile and online platforms enable consumers to bypass the traditional role of banks and to lend directly to individuals and businesses. The industry however is still in its infancy with several hurdles to overcome, particularly risk (e.g. default and fraud) and connectivity.

SSA is ahead of the rest of the world when it comes to convergence between different sectors. Because of the unserved demand for financial services, Fintech is becoming relevant for players in other sectors. And the widespread use of mobile wallets is enabling companies that are already serving low and middle income segments to broaden their service offering to include other financial services, as evidenced by M-Kopa - which started out as a prepaid solar business but is now a consumer asset finance business.

An increasingly beneficial regulatory environment has also contributed to a positive outlook for bancassurance²⁵ - with many MNO's now offering embedded credit products providing life and health insurance. Finally improvements in satellite technology is reducing the cost of providing weather based crop insurance. As this technology matures and becomes more reliable and affordable we expect more agricultural insurance products to be introduced in the market.

²⁴ Brand South Africa, 2017, M-Pesa at 10: How Africa became the leader in mobile money

²⁵ Finaccord, 2014, Bancassurance in Sub-Saharan Africa

5. THE IMPACT OF FINTECH SOLUTIONS ON WOMEN

For the purposes of understanding the impact of Fintech solutions on women, we use a three-way classification. Firstly we classify innovations into those that transform the market - the “lift all boats” and what evidence there is of how women have benefitted of these innovations. Secondly we classify those that specifically target women, either through targeting services that are of most relevance to the livelihoods, and thirdly those that benefit institutions such as MFIs or other financial institutions that directly target women.

Lifting all boats

Given the huge impact on financial inclusion of M-Pesa style **mobile money products** in an increasing number of markets we would certainly include M-Pesa in the “lifts all boats” classification. Equally important would be the emergence of M-Shwari and competing products in an increasing number of markets. A recently published study²⁶ on the long-run impact of mobile money on economic outcomes in Kenya provides some valuable insights. The study found that increased access to mobile money has reduced poverty in Kenya, particularly among female-headed households. It estimates that the rapid expansion of mobile money has lifted an estimated 2% of Kenyan households (some 194,000) out of extreme poverty. It has also enabled 185,000 women to move out of subsistence farming and into business or sales occupations.

This evidence is supported by another study²⁷ which adds that women were much less likely to use their money when they saved it in M-Pesa compared to saving in their homes. The women also reported that in the past, their husbands often used their money for personal items and left them with no money to be able conduct income generating activities the following day. With their money saved in M-Pesa, their husbands no longer had easy access to their money. Women were then able to save for more costly activities and purchases, helping their families or expanding their business and more importantly, sending their children to school. Apart from being a safe place to save, these mobile money accounts enable MSMEs, which women own more than half of, to access much needed **micro-credit** such as Mo-Kash (Uganda) and M-Shwari.

Mobile **insurance** has also continued to expand. According to GSMA, by 2015 mobile insurance was available in 33 emerging markets, predominantly in SSA (58%), South Asia (19%) and East Asia & Pacific (18%). This has increased with new services launched since then. These products are showing signs of positive impact, especially in the lives of women. For example Orange launched a mobile insurance product (Tin Nogoya) in Mali which activates automatically when a savings balance reaches about USD66. It provides a payout in the event of death or permanent disability of about USD260. Early results show that 97% of its female users had never been insured and 98% of surveyed users wish to continue saving to reach the insurance activation threshold.²⁸ These results are very positive and show that mobile insurance is able to penetrate new segments for insurance which had previously been un/underserved.

Low-income women in rural areas often face barriers to accessing a safe place to save due to

²⁶ Tavneet Suri and William Jack, 2016, The long-run poverty and gender impacts of mobile money

²⁷ Oumy Khairy Ndiaye, 2014, Is the success of M-Pesa empowering Kenyan rural women?

²⁸ GSMA, 2015, Case Study Orange Mali: Reaching Women Customers With Mobile Savings and Insurance

mobility and time constraints. Thus the innovation of **agency banking**²⁹ using handheld mobile, POS devices, or roaming staff to link clients directly to the financial institution can reduce the risk, distance, and thus indirect cost of women's financial participation. Formal financial institutions have also achieved success with in-field account opening, doorstep collection services through traveling agents, and partnerships with existing savings groups. For example NMB Bank Tanzania significantly increased its client numbers with an affordable and instant access account called ChapChap ("FastFast" in Swahili). The ChapChap sales team opens accounts for clients through market storms in urban and rural areas. Client information is captured via POS and smartphone, and clients receive a starter kit with a pre-registered debit card linked to mobile banking. ChapChap clients then have access to multiple channels to transact including agents.

Targeted Fintech solutions

An alternative lense is to consider how Fintech is having an impact on the areas of economic activity dominated by women and areas of particular concern for women given their role in the household – namely education and health - and or in their ability to receive social grants given their income levels. It should be noted that thus far most of the Fintech in SSA has been the "lift all boats" kind and there has been very few Fintech innovations targeting women specifically. As stated by Women's World Banking: *"the current form of financial services is not necessarily designed to meet women's needs and a comprehensive digital financial service model that effectively serves low-income women at scale has yet to be developed"*.³⁰ That said there are a few examples of solutions tailored for women that have had a positive impact.

Health

Like other developing regions healthcare for women is significantly underdeveloped in SSA. Developing countries accounted for approximately 99% of global maternal deaths in 2015, with SSA countries accounting for about 66%.³¹ This is because of several challenges including poor medical infrastructure, a high prevalence of HIV/AIDS, lack of affordability among low income households, and lack of awareness and information around preventative measures and treatment.³²

Mobile phones, though still a barrier among women, have opened up opportunities for pioneering innovations in the healthcare of women. This includes innovations such as Access Bank's Better Mama, Better Pikin (BMBP) in Nigeria - a country ranked 169 out of 176 countries in terms of conditions for childbearing. BMPB is a mobile wallet that offers micro savings, health and life insurance services for expectant mothers. The expectant mother is only required to save a minimum of about USD3 per month. The "premium" gives her medical insurance coverage of up to about USD125 per annum and life insurance cover of up to about USD312 in case of death or permanent disability. BMBP offers expectant mothers a structured prenatal and postnatal training programme. The one-month pilot of this initiative has helped reduce infant and maternal mortality by 2% across participating government institutions. In Kenya the M-Tiba innovation provided a healthy savings "wallet" linked to M-Pesa (Box 1).

Box 1: M-Tiba Kenya product

M-Tiba is a mobile phone service launched by Safaricom and PharmAccess that allows anyone in Kenya to send, save and spend funds specifically for medical treatment. Money stored in M-Tiba can

²⁹ The word "banking" here is used loosely to also include microfinance deposit-accepting institutions which have approval from the Central Bank to roll out agents

³⁰ Mondato, 2017, Mobile money: OTT and Fintech at the gates

³¹ UNICEF, 2015, Trends in Maternal Mortality: 1990 to 2015

³² Gilbert Dechambenoi, 2016, Access to health care in sub-Saharan Africa

only be used to pay for treatment and medication at a network of partner clinics and hospitals. The biggest impact of M-Tiba has been on children under five and pregnant women. Before M-Tiba, pregnant women would only go to the clinic once they were approaching their due dates. Now they go in their first trimester, which has made it possible to “avoid obstetric complications, screen the mothers for HIV and TB, and look for congenital abnormalities”.³³ Clinics also receive payments on time – something that wasn’t always the case before.

Education

Educating young girls is one of the best investments that can be made by a nation to break the cycle of poverty, improve health, and increase economic growth.³⁴ Better educated women tend to be healthier, participate more in the formal labor market, earn higher incomes, have fewer children, marry at a later age, and enable better healthcare and education for their children.³⁵ All these factors combined can help lift households, communities, and nations out of poverty (Box 2).

Box 2: Camfed increasing education for rural girls

Camfed is a non-profit organisation providing funding to educate rural girls. They do so by, among other activities, providing funds to cover essential school going costs for vulnerable children at risk of dropping out of school. Camfed recently transformed its operations through the use of FinancialForce and Salesforce technology to enhance how it serves girls in rural Africa. Through this partnership Camfed now has an MIS system that enables it to have a holistic view of a client. The data includes a pupil’s family situation and attendance record, which helps Camfed identify girls at risk of dropping out, and take immediate action. Camfed has also been able to achieve scale, increasing from 30,000 to 220,000 records of pupils.³⁶ By paying close attention to young girls’ life situations, Camfed is able to tackle the social challenges and keep them from falling off the education journey.

Social transfers

Irregular, ad-hoc, and short term responses to hunger and vulnerability tend to be neither cost efficient nor particularly effective in terms of building long term resilience to shocks. Recognition of this led to the development of a number of Government cash transfer programmes and organisations such as the Hunger Safety Net Programme (HSNP) in Kenya and the Social Security Agency in South Africa. The programmes are based on the acknowledged need to provide regular and predictable assistance in the form of cash-transfers to the poorest - which tend to be women, children, and elders. The cost and the integrity of these social transfers has been enhanced by the development of biometric technology and the increasing availability of bank agents in remote areas.

By using digital channels, beneficiaries are given a biometric smartcard which they use to collect their cash from a range of paypoints (mainly FMCG shops and mom and pop stores). This reduces the risk and the cost of transporting the large amount of cash to remote areas. Evidence from an impact evaluation of HSNP shows that the benefit of these cash transfers has been two-fold. Firstly, because the card was registered in the women’s names, there was a positive, albeit limited³⁷, improvement in financial decision making. Secondly the cash transfer improved the potential for women to undertake income generating activities as the cash is used as working capital.

³³ The Guardian, 2017, The mobile 'e-wallets' bringing healthcare to Kenya's uninsured

³⁴ Kathy Matsui, 2013, The Economic Benefits of Educating Women

³⁵ World Bank, 2013, Girls' Education - Context

³⁶ Salesforce, 2017, Camfed scales girls' education with Salesforce

³⁷ According to the study, male family members in many families insisted on maintaining control of the funds

Institutions serving women

Financial access data shows that women are more inclined to participate in informal savings groups and to be the focus of MFIs more so than men. These are areas in which the impact of Fintech has thus far been more limited. Most MFIs have struggled to succeed with agency banking (which benefits large commercial banks and microfinance deposit-accepting institution (MDIs)), and have often faced increased competition from large banks in community areas as a result of agency banking. Despite some early successes, most MFIs now recognise that they lack the scale and technological capabilities to compete with the MNOs in the provision of mobile banking services, and instead focus on integrating with the dominant platforms.

Several innovators have therefore tried to address the operating and technical capacity constraints of **MFI's** by developing shared service models. Musoni offers an interesting example of such operational innovation applied to a product targeted at women (Box 3).

Box 3: Musoni using Fintech to strengthen MFI services for women

MFIs are an important provider of finance to women in rural areas. However these MFIs are usually characterised by poor operational capabilities and low financial sustainability. Given their small balance-sheets, most MFIs can hardly afford, maintain or develop their IT and MIS systems. To address these challenges, Musoni developed a low cost, cloud-based core banking system to help MFIs improve efficiency, reduce costs, and expand outreach.

Musoni pioneered the use of new technology in microfinance, and as such is integrated with multiple mobile money transfer services including M-Pesa. This includes an SMS module for the sending of automated payment reminders, a tablet app that loan officers can use for offline data capture, a mobile banking app for clients and credit scoring to improve lending decisions. Musoni therefore helps MFIs to leverage technology at a fraction of the cost associated with traditional banking systems.

The benefits of integrating with Musoni has been reported by multiple MFIs. MBF, a Tanzanian MFI providing finance to women entrepreneurs, is a good example. In less than two years after integrating with Musoni, MBF expanded by more than 100%, with portfolio quality improving at the same time. MBF saw a significant reduction in cash handling, alongside the introduction of more efficient processes. These improvements have freed staff to concentrate on recruiting and helping clients rather than on administrative tasks, enabling the business to scale up its operations.³⁸

Savings groups have also proved difficult to digitise, given both the engagement model and the location of many of the groups. Traditional products offered to groups do not always suit their needs. Linking to savings groups may require bespoke savings products that have reduced or no fees. Many groups also expect interest to offset the cost of travelling to the bank and to ensure their savings are growing. Additionally due to a lack of experience with banking and low levels of literacy, groups often need additional assistance from bank staff to complete the account opening process and busy staff may lack the required time and incentive to help.³⁹ In Kenya FSD Kenya attempted to improve the quality of record keeping at groups through the development of an e-recording app for a low cost smart-phone (see Box 4)

Box 4: FSD Kenya digitising savings groups transactions

Savings groups spend a lot of time recording, collecting, verifying, consolidating, reporting, and reviewing their data. It starts at the group level with ledgers, and while groups learn to record savings quickly, tracking loans and calculating share-outs are much more difficult. In fact, these transactions

³⁸ Musoni, 2015, Mama Bahati Foundation support women entrepreneurs in Tanzania using the Musoni System

³⁹ Plan and Care, 2015, Linking Savings Groups to Banks What Works, What Doesn't, What's Next

are often beyond the capacity of groups and require significant amount of hand-holding/training. In addition to this training, the process of collecting this data and consolidating it into a useful database is expensive, error-prone, and time-consuming.

To address these challenges FSD Kenya partnered with Software Group to develop an Android based app called e-Recording to improve the quality and speed of data capture while enhancing transparency and security of the data, and providing a convenient and reliable solution data recording. It is used to record all the transactions of a savings group. It also captures some sections of the group constitution, especially those that relate to financial transactions, as well as recording group and member details. The application also does all the calculations, including share-out, reducing the time spent and errors associated with manual calculation. The groups using the e-Recording app expressed, among other benefits, reduced time when holding meetings, easy computation of share-out at the end of the cycle, accuracy of records, respect for constitution (fines, leverage, etc.), back-ups, and protection of records against tampering.

This is a positive step towards digitising the money itself. However the operational features of savings groups and the challenges of creating a valuable proposition will continue be a constraint for financial services providers.

6. CONCLUSION: MAKING FINTECH SOLUTIONS MORE IMPACTFUL

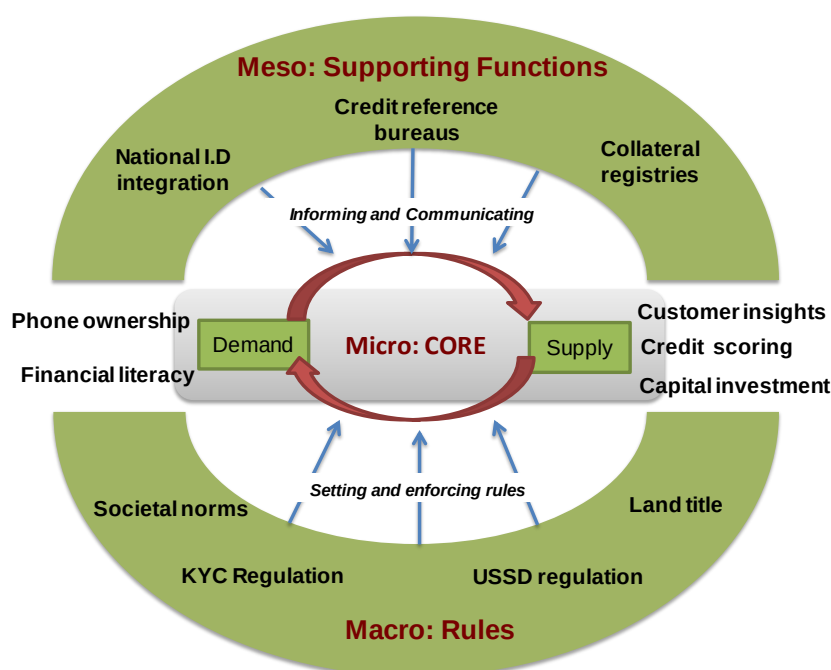
To a degree unimaginable several years ago, “**disruptors**” in the form of MNO’s have transformed the financial inclusion landscape in Africa – most households now have access to a basic, if mobile based, account into which funds can be deposited / collected, and mobile based micro-credit and insurance has addressed many basic cash flow needs.

Evidence in this paper shows that these innovation has had a positive impact in the lives of women, particularly in making them more financially resilient, supporting their economic activities, and has improved their level of confidence and independence. However most of these innovations have been largely introduced within an ecosystem context that **still contains significant gender bias**. As a result low income rural women continue to face barriers in accessing these products, particularly if they lack access to a mobile phone.

Consideration for the future is therefore how these “rails” can be replicated to address women’s livelihood challenges. Going forward it seems there should be an increased focus on **solving challenges in critical sectors** that impact women such as **agriculture, education, and health**. There is also great potential for innovation to impact those institutions on which women depend – for instance shared back-end platforms for co-operatives and savings group applications.

Access alone does not lead to livelihood improvement for women if they continue to face the same systemic challenges. A more holistic approach is required from Government, financial institutions, and donors to address not only supply side issues, but also regulatory, societal, and market infrastructure constraints. This is analogous to the “making markets work for the poor” (M4P) approach, which postulates that the most effective way to create inclusive and sustainable markets is to address constraints at different levels of the market. Figure 4 below uses the M4P “donut” to summarise the priority areas that need to be addressed in order increase financial inclusion and have a long term impact in the lives of women.

Figure 4: Priority areas for women financial inclusion in SSA



- **Demand side:** Financial literacy is a barrier for uptake among women. Therefore their demand for financial services can be supported by efforts to improve their awareness and understanding of financial services and the value that they can provide in their lives.

Equally important is the lack of phone ownership among women which acts as a first step barrier to accessing digital financial services. GSMA recommends a number of actions that could address the lack of phone ownership. These include: leveraging alternative financing mechanisms and channels; promoting the mobile phone as an effective development tool which creates education, health, and business opportunities; and helping to identify culturally relevant and acceptable ways of promoting mobile phone ownership amongst women and youth.⁴⁰

- **The USSD/STK watershed:** Lack of smartphone ownership presents further challenges for Fintech companies. It forces them to try and engage customers through USSD or to convince MNOs to add their solution to the Sim Toolkit (STK) menu on the SIM card and/or offer services in partnership with the MNO. There are a number of ways to address these challenges. Firstly Fintech partners need better legal advice and support when entering into contractual obligations with an MNO that clearly defines the rights and redress if the MNO decides to compete with their erstwhile partners. Secondly behavioural economics can be used to design products which address consumers' inability to remember USSD codes, increasing the likely success of such solutions. Equally importantly is the need to support investigations on the regulation of the pricing of USSD services to level the competitive playing field.
- **Regulation and policy:** Women face a number of legal constraints which affect their ability to interact with financial services. This includes stringent KYC requirements and restrictive land tenure legislation. These constraints call for more work in the advocacy

⁴⁰ GSMA, Women & Mobile: A Global Opportunity - A study on the mobile phone gender gap in low and middle-income countries

space to adopt more favourable standards specifically targeted at improving access among women.

- **Market infrastructure:** Information asymmetries affect the provision and access to financial services, particularly among women and women-owned SMEs. For example when banks want signatures from spouses. Similarly credit risk assessment is still faced with process weaknesses as Lenders lack behavioural data. Adopting risk based KYC and broadening the range of data available in the credit reference bureau (CRB) will help reduce this burden for women-owned SMEs. These should be supported by linking the national I.D database, the account opening systems of FSPs, and CRBs to create a streamlined process of identification and assessment for easy client onboarding.

Likewise in the absence of fixed collateral (i.e.: land), women stand to benefit from the introduction of movable collateral registries (e.g. in Ghana and Uganda) which enable them to pledge movable items as collateral for productive loans.

- **Informal rules:** Societal and cultural norms across SSA continue to be a significant barrier for women - especially as they relate to decision making in the household and choice of economic activities. These barriers are difficult to address, and require engagement from not only government but also financial institutions and donors. This can be done through training and other similar interactions at a community level. Government is particularly important as this requires significant financial investment over the short to medium term. In the short term, donors and financial institutions can embed these gender sensitization modules in their operating communities.
- **Consumer Insights:** One of the foundational assumptions for many development interventions is that private institutions misjudge the business opportunities in low income markets as a result of a lack of information or launch products that fail due to a lack of understanding of low income consumers' needs and behaviour. This can be addressed by investing in knowledge products that provide these informational data sets (for instance the Financial Diaries outputs published by BFA) to enable market opportunity analysis and the implementation of methodologies designed to improve how partners understand consumer behaviour and design products accordingly. Such datasets can be hugely influential but need to be more widely disseminated.
- **Finding a balance sheet:** Despite the amount of funding that has been raised globally, many Fintech companies that provide credit products (loans) continue to struggle to raise the capital to grow their balance sheet, and many promising solutions fail at this point. This challenge can be addressed with support from donors through grants, impact investing, and other mechanisms that fund the development of demonstration asset portfolios. Secondly donors can use their networks in the market and crowding in of private capital through guarantees, technical assistance, and knowledge outputs to fast track a Fintech's ability to find the right funder and develop a realistic perspective on the cost and scale of financing available from different providers.