Expanding Digital Financial Services in the East African Community with a Gender Lens

By

Flora Myamba

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Women and Social Protection Tanzania (WSP)

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Abbreviations and Acronyms

CBK	Central Bank of Kenya
COVID	Coronavirus
DFS	Digital Financial Services
ID	Identification
FSD	Financial Sector Deepening
FSDT	Financial Sector Deepening Technology
G2P	Government to Person
GE	Gender Equality
GII	Gender Inequality Index
GSMA	Global System for Mobile Communications Association
KYC	Know Your Customer
MMO	Mobile Money Operator
MNO	Mobile Network Operator
NIDA	National Identification Authority
US	United States
WEE	Women Economic Empowerment

Abstract

The uptake of mobile money is on the rise around the globe, in Sub-Saharan Africa, and notably in East African countries. The digitization of government to person (G2P) payments is rising, governments are using electronic payments to pay public sector salaries, pensions and other social benefits. Social protection beneficiaries tend to be poor, are often women, and carry a legacy of financial exclusion. It is thus difficult to achieve a significant expansion of digital financial inclusion in these countries without gender consideration. Despite the outstanding achievements in the digital world, women in East Africa face more significant challenges in gaining access to digital financial services than men. This paper discusses more general and specific barriers, including women's lack of technical know-how to make transactions, low levels of mobile phone ownership, unavailability of agents, high transaction fees, and poor network coverage. The paper further discusses potential strategies for expanding digital financial inclusion for women, including those in the agriculture sector.

Keywords: Digital financial services, Eastern Africa, Gender lens, gender equality, women’s economic empowerment

1.0 Introduction and Context

Given the rapid spread of mobile phones and more robust identification (ID) systems, many countries are now moving towards using digital technology to strengthen State capacity to deliver a wide range of transfers, subsidies, and services. As mobile technology has found its way into the hands of those excluded from the formal financial system, about 1.7 billion people worldwide have leveraged mobile money to gain access to financial services (Demirgüç-Kunt et al., 2018). As of 2011, when the Global Findex was launched, only 51% of the world's adult population owned a financial account as seen in the Global Financial Inclusion (Global Findex) Database 2011. Subsequently, the 2017 Global Findex indicated that 1.2 billion adults globally had an account, taking the portion of financially included adults to 69% (Demirgüç-Kunt et al., 2020). The number of registered accounts in 2020 was reported to have grown by 13% globally to 1.21 billion (Global System for Mobile Communications Association - GSMA, 2021a). Active accounts (within 30 days) grew by 17% to 300 million; transaction volume grew by 15% to 41 billion; transaction value in US$ grew by 22% to US$ 767 billion; there were 9.1 million registered agents, an increase of 14%; and 4.8 million active mobile money accounts, an increase of 18% (GSMA, 2021a). The same report attributes this critical change resulting from changes in consumer behaviour, regulators implementing a more flexible Know Your Customer (KYC) process, and more relaxed on-boarding requirements for opening accounts.

Similar trends have been recorded for Sub-Saharan Africa despite the considerable difference in numbers across regions. In 2020, the GSMA (2021a) noted the following increases for Sub-Saharan Africa: registered mobile accounts (+12%), active-30 accounts (+18%), transaction volume (+15%), and transaction value (+23%). More moderate increases were noted in Central Africa and East Africa. East Africa, for example, grew its registered accounts to 293 million (+9%), active mobile accounts to 94 million (+16%), transaction volume to 18.6 billion (+10%), and transaction value to US$ 273 billion (+11%) accordingly, as illustrated in Table 1.

Table: 1 Digital expansion in 2020

Region	Registered Accounts	Active Accounts	Transaction Volume	Transaction Value
Global	1.21 billion (13%)	300 million (17%)	41 billion (15%)	US$ 767 billion (22%)
Sub-Saharan Africa	548 million (12%)	159 million (18%)	27.4 billion (15%)	US$ 490 billion (23%)
East Africa	293 million (9%)	94 million (16%)	18.6 billion (10%)	US$ 273 billion (11%)

Source: Author (numbers adopted from GSMA (2021a))

Since 2014, the share of adults with a mobile money account in East Africa has grown roughly twice as fast (9%) as the share of adults with an account at a formal financial institution (4%), according to Okello et al. (2018). Kenya, for example, has demonstrated an impressive rapid expansion of the mobile market, marking an increase of 30% between 2009 and 2019, with anticipation for further growth to 58% by 2025 (GSMA 2020). Mobile account ownership has increased steadily compared to the other East African countries. In 2011, Kenya had 42% financial inclusion, which grew to 75% in 2014 and 82% by 2017 (Demirguc-Kunt, A. et al., 2018). As for all countries in East Africa, most of these mobile accounts are owned by men. More discussion on the gendered nature of expansion in digital financial services is presented later in this paper.

The measures taken to promote digitization, particularly by the Central Bank of Kenya (CBK), and to mitigate the effects of COVID-19 have contributed to expansion of mobile money. The CBK encouraged usage by reducing transaction fee. Through CBK mediation, mobile money providers, the government, and other service providers agreed to reduce fees for low-value transactions lower than Ksh 1,000 (approximately US$ 10) (Central Bank of Kenya, 2021; Zeidy, 2020). Fees for transferring funds between mobile money wallets and bank accounts were also waived to allow seamless money transfer. These temporary measures were taken to encourage mobile money, and to mitigate the impacts of COVID-19. However, it is doubtful they would have been taken except for COVID-19 given that nearly 90% of mobile money income is derived from transaction fees.

This expansion in digital technology is an opportunity for socio-economic growth in East Africa and beyond. There is already evidence of market-led developments in interoperability in East Africa. For example, eight mobile money operators (MMOs) in Tanzania interoperate; these are Airtel, Smart, Smile, Halotel, Tigo, TTCL, Vodacom, and Zantel. In 2015, the MMOs voluntarily agreed to interoperate, making Tanzania the first digital financial services market in a world where this had happened (CGAP, 2017).

Also, in 2015, Vodafone and MTN announced that they were working to interoperate MTN Mobile Money and M-Pesa in East Africa. Ultimately, they aimed for Vodacom and Safaricom users in Kenya, Tanzania, the Democratic Republic of Congo, and Mozambique to make international transfers with MTN users in Uganda, Rwanda, Zambia, and vice versa (Techcentral, 2015).

The expansion in digital technology necessitates robust interoperability. Interoperability allows customers to transact conveniently and across networks, ideally at no extra cost. Two levels of interoperability are relevant: interoperability between mobile network operators (MNOs) payment systems and banks (i.e., transfers between mobile money accounts and bank accounts) and interoperability across the payment systems of different MMOs (i.e., transfers from a mobile money account with one MMO to a mobile money account with another MMO) (Argent et al., 2013). Inadequate infrastructure (electricity, mobile towers, etc) is one of the interoperability challenges. GSMA (2018) reports that 3.8 billion people remain offline out of which 1.2 billion are not covered by a broadband-capable network – majority of this uncovered population lives in the rural areas in developing countries.

While we document all these outstanding achievements in digital technology, women in East Africa face more significant challenges in gaining access to digital financial services than men. This paper discusses general barriers to women's financial inclusion, such as limited access to assets, resources, and services such as education and formal credit. Women's literacy levels are low; lower for rural women and poorer women (vs non-poor women) than urban women. Women's autonomy in making decisions over income and expenditures is constrained. Their ownership and control of long-term assets, including land, is limited and contributes to their continued disempowerment. Specific barriers are also discussed, including women's lack of technical know-how for making transactions, low levels of mobile phone ownership, unavailability of agents, high transaction fees, and poor network coverage, among several others. Cultural practices and patriarchy largely contribute to the barriers. The paper further highlights potential strategies for expanding digital financial inclusion for women, including those in the agriculture sector. The author argues that a significant expansion of digital financial inclusion in East Africa can only be achieved if we look at the situation from a gender lens.

1.1 Defining Digital Financial Inclusion

Financial inclusion aims to ensure all access to and usage of financial services. Borrowing from World Bank (2021), financial inclusion means that individuals and businesses can access valuable and affordable financial products and services that meet their needs. With fast-expanding technologies, millions of formerly excluded and underserved poor customers around the globe are moving from exclusively cash-based transactions to formal financial services—payments, transfers, savings, credit, insurance, and even securities—using a mobile phone or other digital technology to access these services (World Bank, 2021). Digital financial inclusion (DFI) involves

deploying the cost-saving digital means to reach currently financially excluded and underserved populations with the above named formal (and informal) financial services suited to their needs that are responsibly delivered at a cost affordable to customers and profitable for providers.

1.1.1 Digitizing government to people (G2P) payments

Government payments made to its people, mainly through social assistance programmes, are tools for digital financial inclusion. According to the World Bank (2020a), the digitization of government to person (G2P) payments is also rising. Governments increasingly use electronic payments (e-payments), particularly for public sector salaries, pensions, transfer payments, cash transfers, and social benefits. Tanzania piloted e-payments in 2016 at the national level through the Productive Social Safety Net (PSSN) programme and has recently scaled up, aiming to reach all beneficiaries (about 1.3 million households). G2P payments provide an important multifaceted initiative, particularly given that about 83% of the programme cash is paid to women who manage it on behalf of the household. Social protection beneficiaries tend to be poor and are often women carrying a legacy of financial exclusion. Digitizing G2P payments to beneficiaries of social protection programmes, particularly social assistance, has the potential to improve financial inclusion, gender equality (GE), and women's economic empowerment (WEE). Digitizing G2P social protection payments, which aim to create efficiency gains for the government, is also crucial in overcoming changes in technology and responding to shocks such as the COVID-19 crisis, where face-to-face interactions through cash payments must be minimized. Women are primary actors in the informal sector, and often victims as discussed later under section two.

This paper highlights G2P as one of the critical examples of government initiatives that address GE and WEE through provision of social assistance benefits to women, thus promoting their economic empowerment and well-being. The G2P initiative is, of course, only one part of a broader trend towards the use of digital technology, whether for private payments (M-Pesa in Kenya) or to improve tax administration (ongoing efforts in India to link tax IDs to the unique identification number and to place a ceiling on large cash transactions) or (as in Bangladesh) to monitor the outreach of health workers to their patients. Furthermore, while the initiative may not be the government's primary objective, it is proper not to ignore its potential positive developmental outcomes.

Addressing gender-based inequalities and barriers to digital financial inclusion similarly becomes essential for more inclusive sharing of this opportunity (digital technology expansion) if we are to grow socially and economically as individuals, communities, and nations in the East Africa sub-region, Africa, and beyond.

This framing paper is developed entirely from a review of literature and documents relevant to the topic. Available literature was primarily on Tanzania, Kenya, and Uganda and relatively limited to Rwanda and other countries as such. Most of the examples and data presented lean towards these countries. It is also important to

note that there is an asymmetry of information from these countries, hence the inconsistent/limited uniformity of certain information presented in the paper. The following section discusses several barriers to gender-inclusive financial services in East Africa.

2.0 Barriers to Gender Inclusive Financial Services

Despite important progress, the global gender gap remained at 9% for developing countries (Demirguc-Kunt, A. et al., 2018). About 75% of the population in Sub-Saharan Africa lives in rural areas (World Bank, 2017), making financial inclusion much more challenging. Holloway et al. (2017) note that 30% of females aged 15+ have bank accounts against 39% of males. Women in East Africa face challenges in gaining access to digital financial services than men, thus limiting their economic opportunities.

Generally, women have more limited access to assets, resources, and services such as education, credit, and technology than men. Their literacy levels are far from universal; the situation is worse for rural and poorer women (vs non-poor, or urban women). Women's autonomy in making decisions over income and expenditure is constrained. Cultural practices and patriarchy largely contribute to this situation. Their ownership and control of long-term assets, including land, are limited and this contributes to their continued disempowerment.

The specific barriers to women's limited digital financial inclusion in these countries include, but are not limited to, lack of technical know-how in making transactions, low levels of mobile phone ownership, unavailability of agents, high transaction fees, and poor network coverage. Women face more significant challenges than men in gaining access to financial services in several ways. The gender gap in usage of digital financial services (DFS) is higher and worsens faster than the gender gaps in mobile phone ownership, account opening, and individual capabilities (e.g. literacy). For example, in Tanzania, men and women use mobile money agents, insurance services, savings groups, and banks as service providers. However, mobile money is more common among men than women; 63% versus 50%, respectively (FSD Tanzania, 2017).

2.1 Highlight of Women-Specific Constraints in East Africa

What are some of the specific barriers to GE and WEE? This section deep dives into a select number of general and DFS-specific barriers to GE and WEE in East Africa.

2.1.1 General barriers to gender equality and women's economic empowerment

General Situation: Summary
Gender Inequality Index is high
Illiteracy levels are high
Rural-agricultural poverty is high
Informality/labour market exclusion is high
Ownership/control of assets/land is low
Time poverty (unpaid care burden) is high
Access to health/insurance/ devices is low
Disaggregated data on gender equality is low
Stigma and discriminatory cultural norms are high

The Gender Inequality Index (GII) is one of the critical expressions of existing gender-based inadequacies that need addressing. It is a composite measure reflecting inequality in achievement between women and men in three dimensions: reproductive health, empowerment, and the labour market. Overall, the Gender Inequality Indices for East African countries represented by Tanzania, Kenya, Uganda, and Rwanda are high, as presented in Table 2. Of the four East African countries, Kenya (126/189) is better off as it falls under the Medium Human Development category (preceded by "Very High" and "High" categories). In contrast, the rest fall under the low human development category. Tanzania is the worst of the four (140/189), and the Gender Inequality Index is reported to have worsened in 2020 to 163/189 (UNDP, 2020).

Table: 2 UNDP Gender Inequality Index for 2019

	Gender Inequality Index Value/Rank 189 countries		Adolescent birth rate) (births per 1,000 women aged 15-19)	At least has secondary education (% ages 25 and older)		Labour force participation	
Year	2019		2015-2020	2015-2019		2019	
				Female	Male	Female	Male
Tanzania	0.556	140	118.4	12	16.9	79.6	87.3
Kenya	0.518	126	75.1	29.8	37.3	72.1	77.3
Uganda	0.535	131	118.8	27.5	35.1	67	73.9
Rwanda	0.402	92	39.1	10.9	15.8	83.9	83.4

Source: Author (Numbers adopted from UNDP 2020: Gender Inequality Index: Human Development Report

Female labour force participation rates are generally lower compared to male participation. The gap is generally wider among those with higher levels of education. In Tanzania, for example, women participate less with rising education levels (widening the gender gap); by 2014, 67.1% of females with university education were active in the labour market compared to 83.2% of university-educated males (Idris, 2018; ILFS, 2014).

Limited access to and ownership of assets

According to Kusimba (2018), gender norms are barriers to women's use of finance. Digital finance offers women increased control over money, shifting restrictive gender norms. However, there is still much work to achieve gender equality in financial services. Many women do not have formal financial services due to barriers to accessing digital skills, financial capability, mobile phones, and identification documents.

In Tanzania, women have limited ownership and control of long-term assets, including land, contributing to their continued disempowerment. Women's land and house ownership is still low; with only 24% of women owning land either alone or jointly with someone, and a mere 9% of women having sole ownership of a house or land as of National Bureau Statistics 2018 (NBS, 2018) as argued by Madaha (2020). Men own 18 times more livestock, and women have particularly low ownership of more lucrative livestock assets. Men still make most decisions; only 35% of women aged 15-49 had decision-making power over their health care, visiting family and friends, and significant household purchases (NBS, 2017). Women independently make only 12% of decisions over when and what to sell. The prevailing cultural and social norms play a significant role in determining bargaining power within households and control over resources and assets.

Although much has been done to remove legal barriers, women are still subject to discrimination based on customary law or cultural practices (Ngunjiri, 2018). Similarly, in Kenya, religion and cultural norms hinder women from effectively accessing formal financial services (Abdu et al., 2018). Currently, some cultures force women to re-marry in the family of their deceased husband following the death of the husband. This is purposely enforced to limit women's right to own/inherent properties such as land (Ngunjiri, 2018); likewise, these practices limit women's ownership of collateral for loans as one means of financial inclusion. However, the use of DFS has minimized the need for collateral for small loans, since the credit history is available to the digital service providers. Thus, promoting gender inclusive DFS will contribute to addressing this challenge.

Unpaid care work

A study by Oxfam in Nairobi finds that women in Sub-Saharan Africa (SSA) countries such as Kenya spend around five hours a day on care activities, whereas men spend just one hour a day (Oxfam, 2019). Women in Tanzania are crowded into unpaid domestic work—and spend much more time (87%) than men (47%) on this work as more men focus on market work providing services for income (33%) than women (21%) (ILFS, 2014). Most poor women (53%) are employed as unpaid family helpers, followed by those working on their farms (37%), suggesting that poor women have more limited economic opportunities (NBS, 2016).

2.1.2 Digitized access, usage, and quality of formal financial services

Most financial institutions lend money to women who have collateral, have shown their business experience, and have a credit record as key to credit supply decisions (Bouffay and Shallal, 2013). Koch et al. (2014) observed that women's lack of documentation and inability to own the assets they can use as collateral had been the central obstruction to financial inclusion (Fletschner and Kenney, 2011; Deere et al., 2013). According to Klapper and Dutt (2015), some women try to create a credit history through digital transactions where they pay their bills and other utilities to become eligible to access loans from financial institutions. One example of such a model is M-Shwari in Kenya, which offers savings and loans (Cook and McKay, 2015). Tanzania has a similar product, M-Pawa. According to Aduda and Kalunda (2012), informal access to and usage of financial services complements each other, including them in the financial inclusion framework.

The GSMA (2018(b)) report, which is Tanzania Rural Coverage Pilots Performance Report, shows that credit, payment, and digital savings services can offer women in low- and middle-income countries a critical link to the formal economy and access to greater economic security and personal empowerment. This shows when they can pay dividends for their families in better health and education. In Kenya, for example, poverty dropped, savings rose, and most women left agricultural jobs for more responsible, higher-paying positions in business or retail for women-headed households as a result of mobile money account ownership.

Kenya has demonstrated a rapid expansion of the mobile money market, showing an increase in account ownership over time compared to the other East African countries. As for all countries in East Africa, most of these accounts are owned by men. For example, whereas the ownership of mobile phones for males in Kenya was 46% (2011), 79% (2014), and 86% (2017), the numbers were lower for women with 39% (2011), 71% (2014) and 78% (2017) (Demirguc-Kunt, A. et al., 2018). FinAccess (FSD Kenya, 2021) reports a lower growth rate in the uptake of formal financial inclusion among the female and male population between 2019 and 2021 compared to between 2016 and 2019. Even when slow growth rates have been experienced, the gap between males and females improved to 4.2% in 2021 from 5.2% in 2019, implying rising equality among men and women.

For Uganda, the 2018 Finscope study (FSD Uganda, 2018) showed that 78% of the adult population is financially included, with 78% male and 77% female. The same source reports that financial inclusion in Uganda is significantly skewed towards adults from urban areas – 86% (3.8 million) of urban adults are financially included verses 75% (10.6 million) of those residing in rural areas. In Uganda, the gender gap in mobile phones is similar to other East African countries. The DFS enabling women's access to digital financial services is a great success for the private sector to get involved in gender equality.

About 52% of adults (9.7 million) have mobile phones and 10% (1.9 million) have access to the Internet; of these numbers, male adults are significantly more likely to have mobile phones (58%) than female adults (46%). Male adults are more likely to have access to the Internet (13%) than female adults (8%) (FSD Uganda, 2018). The uptake and usage of formal service providers in Uganda are skewed towards men, where 63% of males and 54% of females are formally served (FSD Uganda, 2018).

The Alliance for Financial Inclusion (2012) highlights that digital financial services are essential to determining financial inclusion in Uganda; this will be achieved through appropriate regulatory frameworks that promote innovation and the committee to support and harmonize other regulatory bodies. As an example, Pitcaithly et al. (2016) report that Airtel-Uganda has collaborated with the Grameen Foundation to design a digital solution for women's savings groups. This aims to improve accessibility and protection of funds where three different people in the group must enter their personal identification numbers (PINs) before withdrawals can be made. This model could be adopted to provide extra protection to women and save them from being abused by other members.

Karlan et al. (2016) argue that mobile money providers do not have the business models to include these groups in Uganda or have incentives to address crucial social barriers. Rollouts of products such as Automated Teller Machine (ATM) cards may not expressly increase access for women. They can even have obstinate effects given the other factors such as convenience to own and access the existing bank account. Bruce and Beinomugisha (2018) insist that women encounter problems related to accessing and using financial services due to lack of collateral and low literacy rates, which discourages rural women from accessing and using financial services since they cannot read and write. Matthews and Mnyasenga (2016) exploratory study on oral financial literacy and numeracy in Tanzania and Cambodia found evidence of relative deficits in several skills essential to financial inclusion, including decoding multi-digit number strings, savings, and planning for the future in cash. The study also finds evidence that oral strengths offer cognitive scaffolding for learning new skills, and suggest that it should be leveraged on in future, in smartphones and financial inclusion more widely.

A common factor across all countries contributing to the limited ownership of accounts is lack of funds. In addition, some countries charge a premium for

maintaining an account, making accounts unaffordable, or offer limited access to financial services, which affects the account ownership patterns. In other cases, lack of documentation to meet know your customer (KYC) affects account opening. A more important barrier linked to lack of trust in financial services is where a woman relies on an agent or relative for help in making transactions, thereby exposing their secret passwords, the phone, and the cash itself.

In Tanzania, both men and women use a range of financial services, although mobile money is more common among men than women – 63% versus 50%, respectively. The share of adult females who own a cell phone is 73%, 9% less than male ownership (GSMA, 2018(b)). Fewer than 70% of poor women live in households with a cell phone, compared to 90% of non-poor women.

2.1.3 Access to and use of bank accounts and necessary identification

According to Finscope (FSD Tanzania, 2017), men are more likely than women to save in Tanzania: 51% of men saved in the most recent year versus 42% of women. Furthermore, Tanzania's gender gap in mobile ownership was 11% and women 77% compared with 86% of men owning mobile phones. Over the years, financial inclusion in Tanzania has been enhanced. This has made much progress in the application of mobile financial services and has moved women from the traditional way of keeping money to the digital financial platform. Through the digital platform, it has been easiest for them as now they do not need to go to the bank and make long queues. A transaction can be done where one is. An account holder can ask for account balance, make a utility payment, transfer money, and purchase airtime without physical presence in the bank. Although there is a digitalized financial platform, gender gaps exist on how to use and access the financial services as women are less likely to use financial services (Were, Odongo and Israel, 2021). Only 16% of women are saving formally, only 15% of women have access to insurance, and only 7% borrow from financial services providers. Only 5% of poor women have a bank account compared to 31% of non-poor women. Almost 70% of poor women live in households with a cell phone, compared to 90% of non-poor women (NBS, 2016).

Kenya achieved significant growth in ownership and registration of digital accounts in 2019 compared to 2016, reflecting high adoption of digital accounts. The 2019 FinAccess study shows that the gap in mobile money usage between the two genders narrowed to 7% in 2019 from 8% in 2016 (FSD Kenya, 2019). Although the financial access gap between males and females is closing, imbalances persist as the data shows that access to financial services by males is higher than their female counterparts. The number of individuals who can access formal financial services has risen from 26.7% in 2006 to 82.9% in 2019 (FSD Kenya, 2019). Despite this growth in financial access, usage of banks is still low, with only 29.6% being actively engaged in traditional banking whereas 25.3% are engaged in mobile banking (FSD Kenya, 2019). Literature also points out that two-thirds of unbanked adults in the country are women (Demirgüç-Kunt et al., 2018).

FinScope Uganda (FSD Uganda, 2018) shows that for Uganda, 54% (10 million) of adults reported to have saved in 2017-2018. About 50% of savers saved informally through savings group/ Village Savings and Loans Association (VSLAs) or giving it to someone in the community to keep safe, and 34% of savers saved with formal financial institutions, on their mobile phones, with commercial banks, saving and credit cooperative societies (SACCOs), or micro finance institutions. The same source reports that more males saved with formal service providers (22%) than women (15%), with females significantly more likely to rely on informal mechanisms than males 26% (3 million) versus 17% (1.5 million).

Onboarding new accounts require individuals to provide documentation to meet Know Your Customer requirements. These requirements are much easier to meet where individuals have a secure form of national identity. A particular challenge in Tanzania has been low penetration of national identity documentation. In 2016, FSDT supported the National Identification Authority (NIDA) to disseminate national identification numbers to the entire adult population. NIDA raised the number of issued identity card numbers from 2.7 million in 2016 to 18.9 million (11.9 million females and 7 million male) as of July 2021. The Tanzania National Audit Report (2021) reports an increase in registration from 8% in 2013 to 75% in 2019/20. Despite this success, the issue of national identity cards is lagging, with only 19% of citizens having been issued identity cards, which creates challenges for account opening.

General literacy/education status

Female illiteracy in Tanzania is higher in rural areas (35%) and among the poor (42%) (NBS, 2016). On average, poor women have about one year less of education, 6.3 verses 7.3 years, a difference similar to that seen between poor and non-poor men (NBS, 2016). The situation is worse for rural women who lag urban women in educational attainment. However, the gender gap in literacy shrank by 5% between 2002 and 2015 (World Bank, 2018).

Access to financial services in Kenya involves numerical and writing skills. Therefore, participating individuals need to have basic education to access both the traditional banking system and digital financial services. FinAccess shows that 98.6% of those with access to formal financial services by households have a member who attained a tertiary level of education compared to 60.7% without education (FSD Kenya, 2019). Only 55% of the total population of Uganda has attained primary education, with 23% secondary education and 1% tertiary education (FSDU, 2018).

Digital literacy

The uptake of mobile phones is generally low in rural areas. In Tanzania, for example, the uptake is lower in rural (53%) than in urban areas (81%) (FinScope Tanzania, 2017). In 2016-2017, only 30% of mobile money recipients for the national level Productive Social Safety Net (PSSN) programme could withdraw the money

themselves. Close to half relied on mobile money agents while 27% relied on others, including household members, friends, and neighbours) (IPSOS, 2018). Limited capability or know-how was the main barrier to mobile phone uptake and high transaction fees and distance to pay points. Currently, mobile phone uptake is at 49%, on average 50% for female beneficiaries, leaving 51% of beneficiaries as e-payment recipients (FSDT-unpublished documents).

In Kenya, 39.6% of those surveyed in the 2019 FinAccess Survey relied on their knowledge, and 34.7% relied on family and friends for financial advice (FSD Kenya, 2019). Financial advice by gender data indicates that 40.5% of males and 38.7% of females relied on their knowledge, whereas 37% of females and 32.3% of males receive financial advice from friends or family. The survey suggests that 42.2% of the rural population depends on their knowledge in decision-making on financial matters compared to 35.8% in urban areas. More males (63.7%) than females (52.2%) read and interpreted transaction costs correctly in a short messaging service (SMS).

2.1.4 Gender differentiated effects of COVID-19

Women have been disproportionately affected by the COVID-19 pandemic economically and health-wise due to the type and nature of employment they engage in:

- Women are over-represented in vulnerable forms of employment, particularly in informal employment, making them even more vulnerable due to business slow down and income uncertainties.
- The pandemic has adversely affected the informal sector (laid off business uncertainties).
- Women dominate in client-facing jobs, including domestic work, retail, and hospitality, which could be most challenged by social distancing restrictions while exposing them to health risks and infections.

According to Koehler (2021), women are less likely than men to access social protection benefits, such as unemployment insurance or health coverage (UNDESA, 2020). Women's and girls' care burdens have increased due to the pandemic, as they care for sick family members and children affected by school closures (UNDESA, 2020). The COVID-19 crisis could push additional people below the national poverty line (FSDT, 2021–unpublished).

Overall, mobile money operators (MMOs) in Sub-Saharan Africa (SSA) have engaged with businesses and governments on initiatives to alleviate the impact of the COVID-19 pandemic on citizens. MNOs have provided mobile money transaction fee waivers (as noted in Kenya), discounts on data tariffs for educational and health sites, and provided cash and equipment donations to support the most vulnerable in society during the pandemic and further contributed to economic recovery efforts (GSMA, 2021(a)). The same source reports that the mobile industry supported almost 3.8 million jobs (directly and indirectly) while making a substantial contribution to the funding of the public sector, with US$ 17 billion raised through taxation.

Digital skills should be enhanced to improve business and savings. Therefore, it is crucial to support basic digital technology skills on livelihoods, market information, linkages, and digital savings. They are essential when distancing is required, considering women's digital capability challenges.

Overall, women with access to DFS may better control their incomes and undertake their productive expenditure (Islam et al., 2014; Alam, 2012; Ashraf et al., 2010). According to Panda (2014), DFS may also help them have freedom facilitating stepping out of abusive relationships. Inadequate access to DFS will continue to exacerbate the gender gap despite the large number of people surrounding them using the financial services. Greater gender inclusion in DFS may unlock the potential for enterprises to develop in communities where individuals have access to financial services and are more able to plan and control their income (Ruiz, 2013). Households are managing to save what they earn and invest their savings for other developmental issues (Schaner, 2016b).

2.1.5 Summary of key constraints for women's DFIs

Before discussing potential strategies for expanding digital financial inclusion for women in East Africa, it is important to summarize critical individual and structural barriers to digital financial inclusion. Constraints exclude people who do not have the means to access digital financial services. Digitally excluded populations lose the opportunity to benefit from customized financial services and are less able to improve livelihoods, manage risks better, and enhance their living conditions. The key constraints that contribute to the widening of the digital financial exclusion gap are summarized in Table 3. All in all, financial products and services should be appropriate and match the client's needs. The client should also know what is available, affordable, and accessible.

Table 3: Summary of key constraints in digital financial inclusion

Challenge/fact	Solution/Intervention
Low levels of education for women	Design simplified digital technology models to suit illiteracy and numeracy levels
Limited technical know-how of making transactions, hence over-reliance on MNO agents to make transactions (from government or other sources)	Develop digital applications and build capacity for financial literacy and entrepreneurship skills
Value proposition for digital financial services among beneficiaries: Fintech providers have made little effort to tailor use-cases for the low-income market. Much focus has been on the easier to reach and more profitable market populations first	Design and roll out multiple digital products and use cases particularly relevant to female through active participation in product design
Low levels of phone ownership: Among poor households (including urban ones), there are few smartphones, and even the feature phones are largely owned by men	Encourage phone purchase through negotiated deals with MNOs
High transaction fees; For example, Tanzania has the highest fees with recent increase verses. In 2020, Kenya negotiated-reduced rates	Financial capability training - eAwareness Design a product that has zero cash out charges. Central Bank of Kenya, service providers and MMOs led by Safaricom, agreed to waive some transaction fees for low value transactions
Weak regulatory environment and consumer protection: To date, the regulatory environment and consumer protection provisions remain too weak to provide security to the poor (and indeed many of the not-so-poor)	Gender responsive policies and laws. Note Kenya's recommendations in the "Gender Review of Financial Sector Laws in Kenya" in Wambua and Ndolo (2021)

3.0 Potential Strategies for Expanding Digital Financial Inclusion for Women

The strategies for expanding digital financial inclusion must be gender-responsive to minimize the risk of excluding women, particularly in the largely poor and agricultural East African countries. Similarly, the current African Economic Research Consortium (AERC) intervention research should consider exploring women's DFS constraints and addressing them if women are to achieve more positive development outcomes, both short-term and long-term, and ultimately contribute to the growth of their countries, the region, and beyond. Gender considerations should cut across all the research segments of this (and other) AERC projects. The following sections highlight key strategies for expanding digital financial inclusion for women in East Africa in line with the discussed constraints. The list is not exhaustive.

3.1 Fintech Innovations and Use Cases

Mas and Almazan (2014) argued that for mobile money to deliver on its promise, it needs to prove that it can support a wide variety of products and use cases. More use cases drive broader appeal to more customer segments, generate more transactional volume and, in turn, justifies the required heavy investments and sustains denser cash merchant networks. More products and services with differentiated pricing present opportunities for providers to create more customer value. Exploring and investing in a broader range of essential socio-economic activities in a country will enable mobile money providers to gain a much higher level of durable impacts. The authors presented an ideal high-level product valuable typology for addressing the digital exclusion of the most marginalized due to limited fintech innovations.

Table 4: Monetary Transactions

Real time transfers		Inter-temporal financial obligations	
P2P One-to-one	B2P Bulk payments One-to-many	Credit	Insurance
C2B		Savings	
In store	Remote	Individual	Group-based
Merchant Cash Payment in/out	Online Bill payment purchases Many-to-one		

Key: B=business; G=Government; P=Peer (it can be an individual or a business); C=Consumer (representing individual persons)

The authors separated financial transactions (more typically associated with banking) from non-financial transactions (typically thought of as payments), arguing that financial transactions fit into an institutionalized, self-contained, inter-temporal pattern of purely financial obligations, and can be split by the direction of the obligation (savings and insurance vs credit), whether the obligation is fixed or contingent (savings vs insurance), or whether the obligation is held on an individual or group basis. Non-financial transactions are generally a real-time discharge of a business or personal obligation. They can be classified by the nature and relationship of the parties (P2P, B2C, or C2B), the number of parties involved (1:1, 1 to many, or many to 1), where the transaction takes place (in or out of store), and the nature of the underlying business transactions (products, digital content or cash). Of course, product definitions may not reflect such sharp boundaries, and the customer uses those products even less. However, it is helpful to define broad product categories along these lines. p.2.

High level-product typology
Source: Adapted from Mas and Almazan (2014)

The design and rollout of these digital products and use cases should address women's constraints and ensure relevance through active participation of both men and women in product design. Use cases should be contextualized and based on understanding the specific needs of the digitally excluded population.

A simple consideration of the basic human needs of food, shelter, and clothing, for example, can be a good starting point to determine how the different groups of the population (potential customers) are spending to meet these requirements. Therefore, one key question should be: how can financial service providers partner with entities in these sectors to create value-added products and services and make them relevant to specific groups? Essential also will be to differentiate the needs of the rural poor and vulnerable as women from other higher-income segments; what extras beyond the basic requirements do those groups spend on? What other value-added services can be created? What can other use cases be relevant and explored? Who are the potential partners?

3.1.1 Digital financial inclusion in agricultural value chains

Developing necessary digital finance for agriculture are key use cases for improving the sector, particularly given that agriculture is the largest employment sector for all East African countries. More women than men (around 49 million smallholder producers) are employed in the sector (around 79% more women are employed than men in Kenya, 84% in Uganda, and 63% in Tanzania (World Bank, 2020(a)). Nevertheless, this sector faces the critical constraints discussed in the paper. Lately, there have been efforts to expand digital financial services in agriculture (m-agri). Achieving m-agri and related use cases facilitates subsequent growth of other components of financial services. One such component is access to credit, fundamental to agriculture value chains. Innovations are building programmes such as m-agri, m-health, m-water, m-power, etc. However, so much is yet to be scaled up due to lack of data-sharing and analytics that could confirm the relevance and impact of the initiatives and make the services relevant to their customers' everyday lives (Nanjero et al., 2017).

Umati Capital (UCAP) in Kenya is one good example of an m-agri initiative. This non-bank financial intermediary focuses on providing supply chain finance across various value chains, weighing in on technology to provide financing to small and micro enterprises (SMEs) that supply to their corporate trading partners. In the dairy sector in Kenya, UCAP developed mobile applications and used them to make faster lending decisions, capture data, and inform their disbursal of smallholder farmer loans via mobile wallets for each stage of the value chain. The pilot phase results with dairy farmers were promising for a scale-up (Nanjero et al., 2017). However, evidence for impact is unavailable.

Several agricultural initiatives have the potential and opportunity for expanding digital financial inclusion for majority of poor women and youth. Aiming at unlocking access to finance and better financial management tools for female farmers and youth farmers in Tanzania, FSDT has, over the past few years, coordinated and supported both agricultural and financial sectors in delivering financial services for farmers' agriculture value chains in Tanzania. Examples of potential agricultural use cases for smallholder farmers in Tanzania that are being tested mainly in collaboration and support of FSDT (according to FSDT 2021 internal reports) and have the potential for expanding digital financial inclusion include:

- Agricultural inputs (with digital financial product/tool); at subsidized or lower cost with payment plan, e.g., M-Koba in Tanzania; digital agri-wallets and commitment to savings systems, e.g., M-Koba in Tanzania; likewise, smallholder farmer payment solutions facilitating agri-business payments to farmers, government to the farmer, farmer to inputs suppliers.
- Purchase and sales, green finance, blue economy, renewable energy loans, regular gas loans, etc are also potential models. Fit4AG provides a financial and agriculture sector partnership focused on value chain analysis, investment case business development, and capital mobilization for short, mid, and long-

term financing in high impact value chains. Increased research and insights on agricultural value chain financing were completed, such as a study on the Soya value chain, and an investment business case was developed. The investment business case is used to mobilize capital to unlock the Soya value chain.

- Smallholder farm products insurance (e.g., digitally enabled index weather, precipitation, pest insurance). Agriculture Insurance in Tanzania, for example, is a partnership that facilitated the design of a crop insurance product/solution. This was developed through FSDT, supporting the National Insurance Company (NIC) in the mapping, development and launch of the product in 2019.
- Affordable/subsidized health insurance plans, e.g., Ushirika Afya (Cooperative Health) in Tanzania, which provides farmers with insurance, is a model potential for further exploration and could be compounded with other forms of digitalized productive livelihoods.
- The model provides agro inputs through agro dealers
- Digital wallet (M-Shwari-Kenya, M-Pawa, Tanzania, etc)
- Potential to replicate to other agricultural crops (cotton, coffee, etc)
- Brings MNOs to have them take/use opportunity
- Mfumo Jumuishi, a rural agriculture financial model in Tanzania, addresses the challenges of financial inclusion of rural farmers by linking smallholder farmers and financial service providers through agricultural marketing cooperative societies. Mfumo Jumuishi reached 801,228 farmers to access financial services through four value chains (cotton, coffee, edible oils, and cashew nuts).
- Approximately 10,000 farmers have taken up health insurance. Ushirika Afya, and the National Health Insurance Fund (NHIF) are partnering with many banks to deliver the solution to more farmers.
- The Tanzania Mercantile Exchange (TMX) enables farmers in the cotton value chain to market their produce. Farmers are able to see an increase of 1,000 Tanzania shillings per kilogramme of cotton.

These solutions were deployed in the market in the last three years, but their impact is yet to be measured.

Generally, for all agri-models to unlock barriers in DFI, funds should be injected, and the models compounded with other well-being interventions such as health and education, while linking to increased productive livelihoods. Most of these models are yet to be thoroughly studied/piloted and brought to scale. It is also essential to link the smallholder farmers to local and international markets and build a coalition and platform to improve regional trade and agri-marketing for women and other producers. It is also critical to improve access to accurate and timely information and data, build/strengthen valuable business/stakeholder networks for smallholder producers and SMEs, and digitize critical trade-related processes, including those related to compliance, quality assessments and certification.

Potential partners for research and coalition building include FSDs, agri-CSOs, agri-banks, TradeMark East Africa, MasterCard/Visa, IFC, UNCDF, MMOs, Fundación Capital, business associations such as horticulture associations, and chambers of commerce.

3.1.2 Expand digitization of VSLAs and savings groups

Expanding digitization of Village Savings and Loans Associations (VSLAs), Village Community Banks (VICOBA), and other savings groups and associations is crucial. This can be achieved by developing digital financial capabilities among potential beneficiaries by providing knowledge and skills and ensuring they practice them. It is helpful to integrate training and awareness about risks associated with digital transactions in digitization. In the past decade, Fundación Capital, for example, conducted a few pilots on digital savings in the region while linking with livelihoods enhancement. In Tanzania, Fundación Capital notably conducted a pilot through the Productive Social Safety Net (PSSN) programme, of which 83% of the programme cash benefit is paid to women. Evidence of impact is unavailable for this paper.

A study by Ng'weno et al. (2018) in Rwanda documents that microfinance and loan groups effectively increase women's savings and income generation. Their effects lie in the short transformation of livelihoods and removing households from poverty. Businesses owned by women are practiced in a more complex location, which even when generating more income sell cheaper products. On the contrary, men sell their products in higher-value sales locations, which are situated near banks and other businesses.

We should not leave men behind in VSLAs and other savings groups. It is argued that gender cannot leave behind financial inclusion regarding money borrowing and saving. Men tend to have much more access to financial services than women because of their income and asset ownership. Being a woman limits the possibility of getting financial services due to the inferiority complex of low income and lack of business experience, lack of financial education, and low income. Practitioners should explore means to complement the digital skills and borrowing capabilities and behaviours of men to narrow the gap being experienced by women.

3.2 Improving Digital Capability

Technology can be used to improve digital capability; for example, it is possible to develop digital financial applications and use technology-enabled solutions to help digitally excluded populations better understand their financial options. As Matthews (2016) argued, oral learning models are strong, particularly for attaining new skills. Given women’s accounts of illiteracy presented throughout this paper, we can suggest that oral models be applied more widely for learning smartphones and financial inclusion skills.

Digital technology know-how is the primary source of the problem. Technology can encourage affordable products (and assets) more effectively and efficiently, promote self-esteem and confidence among users, and transition from reactive to proactive

decisions. According to Roessler et al. (2021), the initiation and use of mobile phone money services have significantly improved access to formal financial services. Women who are married are less likely to access banking services and mobile money services than men. Women instead save their money at home or in savings groups.

3.3 Increasing Mobile Phone Ownership

Low mobile phone ownership among women and poor digital and financial literacy can complicate women's adoption of digital payment methods over manual cash transfers. Explicit design choices through Human-Centred Design (HCD) approaches can address various challenges and adaptations to social protection payments for vulnerable groups. Collaborations are being explored/expanded in the region and are making a difference. Examples include M-Kopa in Kenya, which partnered with Safaricom and Samsung to launch a smartphone pay-as-you-go solution. The offering appears to have been successful and spurred the company's entrance into Nigeria. Safaricom partnered with Google to launch an affordable 4G-enabled smartphone that customers can pay for in installments.

Easy purchase options can improve choices for women; however, they should not distort household decision-making and compromise with intra-household relationships, e.g. whether to buy a mobile phone or other household needs, including meals, health, and education.

3.4 Weak Regulatory Environment and Consumer Protection

Regulatory environments and consumer protection provisions are too weak to provide security to the poor (and, indeed, many of the not-so-poor). There are no clear accountability procedures and grievance mechanisms. For example, many have lost money when making transactions. In many markets, abusive lending issues are common, with no clear accountability or redress procedures. Limited knowledge and awareness among most women, compounded with digital illiteracy, already guarantees vulnerability and demand for legal protection.

A recent review of gender in the financial sector laws of Kenya by Wambua and Ndolo (2021) argues that the rapid uptake of mobile technologies and innovations, in line with government initiatives and policies, have contributed to increased financial inclusivity and narrowing of the gap. However, legal and non-legal constraints towards women's financial inclusion remain. For example, Kenya has made impressive strides in reducing financial exclusion for women through gender mainstreaming in its finance and finance-related laws, but gender equality is not fully achieved. The authors call for more gender-responsive formulation and implementation of policies and laws if women's empowerment and economic growth are to be achieved.

3.5 Expanding the D3 (Digitize, Direct, Design) Framework

Digitization of G2P payments presents an opportunity to accelerate the closure of the gender gap in digital financial inclusion and amplify women's economic empowerment outcomes through active usage of digital financial services. According to the Bill and Melinda Gates Foundation's D3 Criteria (Chamberlin et al., 2019), women's economic empowerment can lead to better outcomes for children and the community, more significant investment in women's human capital, and more outstanding women's social capital.

The D3 Criteria or D3 Framework highlights crucial elements needed to boost women's financial inclusion and realize the vision of women's economic empowerment by designing, digitizing, and directing programme (cash) benefits to women. A D3 assessment can be used to flag areas expected to enhance the results for GE and women's economic empowerment and those that may be barriers to change unless effectively addressed.

Table 6: Digitize Criteria

Digitization refers to a payment system whereby payments are received electronically. Digitization offers the possibility of scale-up of cash transfer payments at low cost, especially to people who are located remotely, and technical tweaks, behavioural nudges and interface upgrades. It provides new possibilities in terms of two-way communication and recourse. A digitized Productive Social Safety Net (PSSN) that promotes women's economic empowerment (WEE) should be:

- Reliable: Payment reliability (amount, frequency, and timing), systems reliability, and communications (customer can count on regular communications that notify them of any changes/updates to payment terms).
- Accessible: Accessing the payment should not be burdensome in terms of time, convenience, and/or cost for programme participants.
- Flexible: The payment options should provide choice and control of when and how participants receive the payment. These should allow space for trial and error, so that recipients can learn the system and their options.
- Secure: Data privacy, security and fraud protection are all components of security, which mitigate consumer risks and ensure safe provision of digital payments to women.
- Accountable: The women are aware of their rights; they are respected by the programme, they can access well-functioning recourse, and ultimately have agency. All participants have the right to be treated in dignity and respect.

Table 7: Direct Criteria

The principle here is simple: 'one woman, one account.' Direct payments into an account held by the beneficiary, who has control over the account, which are registered in their names and to which they have direct access. The Direct principle is designed to enhance women's prospects for control and to mitigate the risks of having funds appropriated by other family members.

We aim to learn what types of accounts allow for full realization of the digitization and design principles. Questions we expect to test include:

- Can we achieve our objectives with limited functionality accounts or are full purpose accounts required? What are the tradeoffs when considering limited mandate and fully functional accounts?

Does it make an impact difference if women receive government transfers and /or social protection payments and receive them into their account?

Table 8: Design Criteria

The programme should be designed in ways that enhance prospects for economic empowerment of programme participants. What is appropriate and feasible will depend on the specific context, but dimensions and aspects that should be explored would be expected to include the elements below. Three broad categories of design questions are relevant: ensuring appropriate coverage, maximizing benefits through complementary services and linkages, and avoiding adverse effects.

Generally, e-payments can be made more gender responsive by:

- Offering simplified, low-cost accounts to reduce women's barriers to accessing payments and increase bank account ownership among women.
- Allowing more flexibility in the requirements for official documents (e.g., birth and marriage certificates) required to open bank accounts. Social protection schemes can link beneficiaries to complementary registration programmes and/or subsidize the costs of obtaining documents.
- Adapting e-payment administrative procedures to the financial and technical literacy levels of rural women and providing women with training support to ensure their effective use of new technologies. In some cases, programmes can provide women with free mobile phones to reduce technological and cost-related constraints.
- Ensuring that new female customers are treated fairly by banking institutions and have sufficient financial skills to be able to understand and trust digital financial services enough to adopt them.

The criteria are guides that need to be adapted to the local context as appropriate. Each of the three areas of D3 has a set of criteria therein and is accompanied by elements ("core enablers") and cross-cutting issues that impact the ability of a programme to achieve its goals.

Digital transfers of social protection payments are potent tools for enhanced women's economic empowerment. Increasing women's ownership and usage of accounts through G2P programmes could be transformational. It can provide women

with independent access to predictable income streams. Digital payment can give women greater control over how the money will be used, mainly if linked to a stored-value product such as an e-wallet. Baur and Zimmerman (2016) argue that at least five common consumer risks in digital payments can impede their chances at financial inclusion: inability to transact due to network downtime or service unreliability; insufficient agent or ATM liquidity; complex user interfaces and payment processes; poor or no recourse mechanism; and fraud that targets the recipient. These risks need to be mitigated through legal/policy and programme interventions to build people's trust, confidence, and value in digital payments and essential financial services (Baur and Zimmerman, 2016).

4.0 Recommended Questions

To summarize, a country-specific situation analysis of women's access to digital financial services and its contribution to their economic empowerment should consider the following questions:

1. What strategies can facilitate affordability and accessibility, including reducing transaction fees and device prices? Can governments negotiate fees with MMOs to reduce costs to the end-user, who always carries the increasing cost burdens? Are there affordable payment plans through MMOs so that once ownership of mobile phones is achieved, these women can practically utilize the devices for their benefit.
2. How can we enhance women's productive livelihoods through digital financial technology? Can we test/pilot digital products, e.g. use case designs and value propositions? What are the specific needs of rural agricultural women in adopting and using DFS? What are the needs for non-agricultural livelihoods? How can we promote the use of simple, practical, and visual digital technology training to accommodate the more significant numbers of illiterate women (verses men), most of whom reside in rural agricultural areas? Can we bundle m-agri with other initiatives, including m-health, m-power, m-water, etc?
3. What are the innovative strategies to improve women's access to ownership and control over productive assets and resources (addressing normative barriers) and support women's productive livelihoods? Are there proven opportunities through digital savings, including VSLAs, VICOBA, etc? What else is in the package? Is it skills development? Is it access to capital for business? Is it digital access to and linkages to markets for their livelihoods?
4. What innovative strategies can promote mobile phone uptake interventions for poor women in East Africa? Can we test strategies geared towards addressing the specific barriers faced, limiting the potential benefits of enhanced interoperability and leading to their continued digital financial exclusion?
5. Who else do we need to focus on and address their barriers as a preventive measure for similar barriers in the future? Youth (boys and girls)? Children? Policy makers? Consider addressing women and girls growing unemployment rates. How can we tap into youth's natural behaviour of responding fast to technology adoption?

6. How can East African countries promote gender intentional lens in designing and expanding policies and intervention programmes? e.g., MMOs (facilitated by government technology-related policies) should focus on issues of accessibility and technological reach in terms of extension of agency services, proximity (at least within a radius of 5 kilometers), ownership of mobile phones, primary financial education, etc; particularly among the most considerable population, and particularly the left-behind-women, again the majority in rural areas.
7. Can we address women and girls' time poverty/unpaid care and work overburdens through technological innovations to free up time for productivity? Can we innovate use cases to achieve time reduced/redistributed unpaid care work, e.g., digital credit incentives, m-power, etc? What are the opportunities for strengthening women-owned businesses' participation/win in procurement, market links, and access to microfinance institutions (MFIs)?
8. How can we address both country-specific and East African shared barriers, including women's mobile phone use and ownership, and ensure government and other money payments, particularly social cash transfers, are delivered digitally and directly into an account owned and operated by a woman (majority recipients)? A well-designed programme can increase women's control over personal financial decisions and enhance their prospects for economic empowerment by increasing the share of household income, which she controls and by increasing their bargaining power within the household.

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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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