



GOING DIGITAL: THE EFFECT OF DIGITIZING WATERCREDIT ON WOMEN IN KENYA

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EXECUTIVE SUMMARY

In partnership with Water.org, graduate students from the Johns Hopkins University School of Advanced International Studies' (SAIS) Women Lead practicum set out to do an initial assessment of the Equitel digital Maji (water) loan pilot project to understand the key advantages and barriers to women in Kenya in accessing WaterCredit digitally. Together with Water.org and Equity Bank, SAIS students traveled to Nairobi, Kenya to conduct a qualitative research study to answer the question: "What are the advantages and barriers to accessing water credit digitally for women in Kenya?"

The research team conducted 16 tele surveys, 4 Focus Group Discussions (FGDs), and an interview with Equity Bank water loan officers - a group of Equity Bank contractors who work regionally in communities around Kenya. These contractors are the main drivers of the Maji loans at the community level and act as a liaison between the bank branches and the local communities. Tele surveys were conducted with a random sample of Maji loanees. Tele surveys consisted of a total of 16 women, all of whom have access to a smartphone, and 69% had a monthly income over 15,000 Kenya Shillings (~\$112 USD). FGDs were conducted with alreadyestablished table-banking groups that provide a means of traditional loan access. FGDs consisted of a total of 37 women, of which 46% were over the age of 45, 35% were between the age of 36 to 45, and the remainder of participants being between 24 and 36. 54% of these women have access to a smartphone and 57% have a monthly income below 15,000 Kenyan Shillings (~\$112 USD). The interview with the Water Champions included Equity's Maji loan regional representatives from all over Kenya.

Our study yielded several key findings that shed light on the advantages and barriers associated with digitizing water credit solutions for women. Access to digital Maji loans provides numerous advantages for women including:

- Improving accessibility of women's access to finance by eliminating distance barriers and reducing loan application time;
- Allowing women borrowers to improve their credit scores over time;
- Improving women's access to finance by eliminating requirements for security and collateral; and
- Supporting water security for women-owned small-scale farming or other small enterprises.

Despite the highlighted benefits, women continue to face barriers in accessing Maji loans through the Eazzy App and Equitel Line including:

• Network connectivity issues and Equitel system inefficiencies make accessing Maji loans digitally less attractive;

EXECUTIVE SUMMARY

- Higher credit limits for conventional loans versus digital loans;
- Women borrowers are granted lower credit limits than men borrowers;
- Borrowers' dissatisfaction with the very high interest rates associated with the Maji loans;
- 3 women borrowers are reluctant to use digital channels due to concerns about fraudulent activities;
- The lack of choice or variety of WSS merchants and products offered through the Maji loan; and
- Continued confusion in the loan process, which is not sufficiently explicit.

In addition, our study found that group lending continues to be a preferred method of borrowing for Maji loans as these mechanisms enable women to get higher loan amounts, financial literacy training, and more convenient service. Furthermore, Maji loans are predominantly used for personal purposes rather than for business or income-generating activities. Based on the analysis of our data, the authors recommend the following action items:

Short-term

- Extend digital lending services to group borrowers. Extending the digital option to group borrowers will improve women's overall accessibility and increase inclusivity of women in rural areas.
- o Options for source merchants and products should be increased. Increasing lendee options for what products and which merchants they can purchase via the digital method will also enable more equitable and efficient access to water infrastructure.
- Improve the quality and quantity of loan information provided on Maji loans. Currently, information available on the Maji loan and general understanding of the loan process remains unclear to many customers. Improving and increasing the amount of information available on the Maji loan will improve customer experience.

Long-term

- Efforts should be made to ensure that women can benefit equally from digital loans. Currently, men and women do not receive the same credit limits by virtue of many women not having prior credit history, which hinders their ability to obtain higher limits. Parity in credit limits ensures that more women can make use of the water loans and gender disparities in water access do not widen. The digital WaterCredit solution developed by Equity Bank is a useful innovation for improving financial access and the technical support provided by Water.org can help to improve its design to ensure women can benefit more significantly from this initiative.
 - Create a Maji loan product specifically targeted to women. The creation of a women-centered product that provides female borrowers with better terms could help drive gender parity in the long run. Typically, male borrowers have other pseudo advantages such as ownership of property that they could offer as collateral to firm up their borrowing abilities, a women-centered Maji loan could achieve the goal of equal limits by leveling the playing field through offering women better terms or less requirements to receive similar limits.

ABOUT THE ORGANIZATION

Water.org

Today, 1 in 10 persons lack access to safe water in the household, and 1 in 4 persons do not have access to a toilet¹. There is a huge gap in financing for water and sanitation solutions across the globe, leading to the death of about 1 million people per year from water-related diseases. Water.org aims to bridge this gap by helping people access safe water and sanitation through affording financing mechanisms. They offer a portfolio of innovative, market-driven solutions that reduce the financial barriers to access to water and sanitation. Water.org can provide these services through partnerships and collaborations with financial institutions and water service providers. They provide technical assistance and collaborate with stakeholders to develop and implement effective solutions.

WaterCredit

WaterCredit introduces microfinance to water and sanitation, providing small loans to finance household water and toilet solutions. These Water, Sanitation and Security (WSS) loans are provided through in-country financial partners who add WSS solutions to their lending portfolios. With 20 years of experience providing WSS loans, Water.org has been able to reach 52 million people in 11 countries worldwide as of 2022². Working with over 150 partner financial institutions, they have catalyzed \$4billion to support WaterCredit initiatives³. A profile of borrowers of WSS loans demonstrates that women disproportionately benefit from WaterCredit, making up 90% of borrowers⁴.

Digital Maji (Water) Loans

In 2021, Water.org partnered with Equity Bank, Kenya to integrate WaterCredit solutions into Equity's digital banking portfolio, developing the digital Maji (Swahili translation for water) loan and Jamii Safi (Swahili translation for sanitation) loans. Prior to this intervention, clients were able to access these loans via conventional in-person banking methods at Equity Bank. Water.org has been providing technical assistance to support Equity Bank's WaterCredit solutions since 2011 as part of their bottom of the pyramid approach to finance. Initially, Maji loans were intended to provide financing solutions for water services - such as water tanks and piping systems - while Jamii Safi loans were targeted towards all things sanitation - including toilets and sewage repairs. Eventually, these two products merged considering the inability to separate indicators for water and sanitation.

The Maji loan is a short-term loan that enables customers to access water and sanitation related equipment without the need for guarantors or filled out forms. Customers are now able to access Maji loans via digital channels either using: a) Equity Bank's Equitel application- a mobile banking app available on smartphones or b) Equity Bank's Equitel line- a mobile phone platform that allows you to carry out your financial transactions, make calls, send SMSs, and access the internet. These loans usually have a repayment period of up to 12 months. The loans are only available for pre-approved water and sanitation products and paid directly to selected Equity merchants to provide equipment once the customer is approved.

INTRODUCTION

Financial inclusion, particularly for women, remains a major concern in the developing world. While the majority of informal small and medium enterprises (SMEs) are women-owned, women are still the majority without access to financial services⁵. Given the widening gender gap in financial inclusion in Kenya, this research project will enable Water.org to better understand how the digital expansion of their WaterCredit Initiative can increase women's access to financial services and credit. Our research assessed the uptake of Maji loans using Equity Bank's digital channels with a focus on women's usage of the channels as well as their interactions with Maji loans. In doing so, we looked at rural and peri-urban areas near Nairobi to determine the advantages and demerits of accessing WaterCredit digitally for women in Kenya.

The study found that the digitization of Maji loans presents both advantages and barriers to women in Kenya. Participants in our study highlighted reduced application times and improved geographic accessibility as important reasons for their preference of digital Maji loans. Women are no longer obligated to travel long distances to bank branches, and are no longer limited in their accessibility to credit because of large amounts of paperwork and proof of collateral needed. Moreover, women are able to improve their creditworthiness over time with these small loans. It was also found that women entrepreneurs are using digital Maji loans to improve the water security of their small businesses.

Yet, women also face significant challenges in accessing digital Maji loans. A common theme emerging from our study is the lack of clarity in the loan application process. Women borrowers are left confused about the process given the limited information available on the digital Maji loan application. Women borrowers are also dissatisfied with the low credit limits offered by the digital loans and prefer to visit the physical bank branches where approval for higher credit limits is typical. High interest rates emerged as a major concern across responses from both traditional and digital borrowers. Women borrowers were also concerned about the lack of choice in the equipment merchants. Respondents expressed concerns about price and quality of products received in the absence of choice. Network connectivity continues to limit rural women's access to digital loans, both on the bank and customer side.

THE ISSUE IN CONTEXT

Studies show that technology, notably mobile money, is enabling increased financial inclusion, especially for women⁷. A 2021 study by the World Bank showed that women are equally likely as men to have a digital money account and, of those that had accounts, were 9% less likely to be in poverty⁸. Digital platforms have been seen as a way to increase financial activity and accessibility in underbanked groups⁹.

However, insufficient accessibility to financial information, products and services in Kenya is still a challenge, especially for low-income individuals and rural residents. Furthermore, recent studies of popular microcredit e-loan products in Kenya, such as the M-Shwari loans from M-Pesa, have questioned their ability to improve the financial position of borrowers and contend that these loans are restricted in their accessibility due to the requirement of a smartphone¹⁰.

Another major consideration is the risk of digitization of financial services widening the rural-urban divide. Kenya's technological revolution has not affected its population equally, resulting in often gendered disparities of mobile access and usage¹¹. According to a 2020 United Nations report, "those yet to be connected remain cut off from the benefits of this new era and remain further behind," emphasizing that there is a likelihood that these digital technologies could fuel inequality and widen the gap in access to services¹². This divide can be seen in the digital literacy skills that are required for efficient use of digital financial platforms. Digital skills are necessary to use technology; the absence of these skills implies that individuals are unable to optimize the use of innovations like mobile money and digital loans¹³.

RESEARCH DESIGN AND METHODOLOGY

INTERVIEW METHODS

16 Tele surveys



The study used a qualitative research design to evaluate the research question: "What are the advantages of and barriers to accessing WaterCredit digitally for women in Kenya?". The purpose of our research question was to qualitatively evaluate women's access to digital WaterCredit loans via Equity Bank's digital channels: Equitel App and Equitel Line.



Focus Group Discussions

Key Stakeholder Interviews





2 Expert

Interviews

Total female Maji loan customers interviewed



We collected our data via four different interview methods: four focus group discussions (FGDs), 16 structured individual interviews, three key stakeholder interviews, and two expert interviews; we interviewed a total of 53 female digital and conventional Maji loan customers (37 FGD participants and 16 tele-surveys).

The key stakeholder interviews were conducted with Water.org, Equity Bank's Research and Development (R&D) team, and Equity Bank's Loan Officers, referred to as "Water Champions". Finally, in order to gain a stronger macro-level understanding of the issue of women's digital financial inclusion in Kenya, we met with two experts in the field: Joseph Murabula, CEO of Kenya Climate Innovation Center (KCIC) and Dr. Irene Ngunjiri, Acting Director of Strathmore University's Water Governance and Innovation Hub.

RESEARCH DESIGN AND METHODOLOGY

For the tele-surveys, we used a multistage sampling. First, Equity Bank identified a master list of 2,500 customers, including men and women, who borrowed WSS loans in the past 2 years. From that list, 60 female customers who accessed the loan digitally were randomly selected and called ahead of time to ensure their willingness to participate in the survey.

A random sample of 30 customers was taken from the list of 60 to contact for the interviews. We split into two groups and divided the list of participants and called as many as we could until we reached a total of 16 completed interviews. For the FGDs, we used a convenience sampling strategy. The women's group lending communities were selected by Equity Bank's R&D team and local Equity Bank branch managers based on the groups' availability and willingness to participate. Appendix 7 discusses our research methodology and sampling strategy more in-depth.

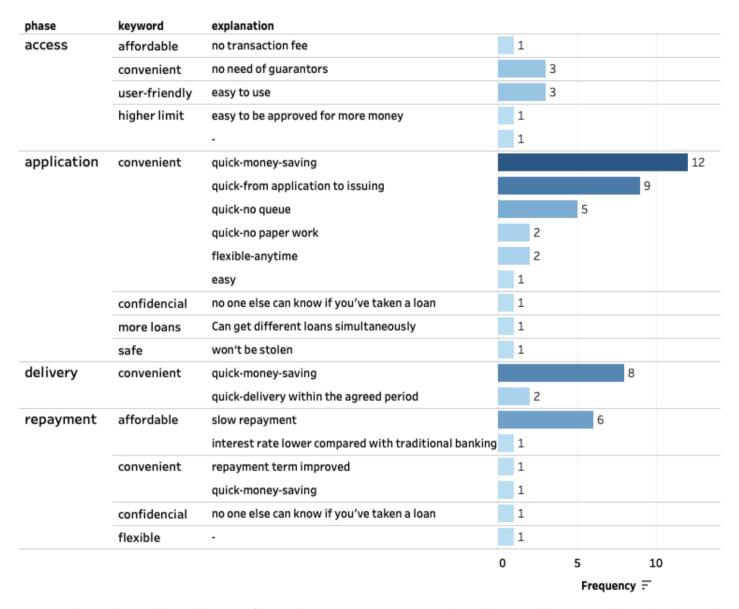
We utilized FGDs to gain a better understanding of women's experience accessing and using digital Maji loans. The FGDs were conducted with women's group lending communities affiliated with Equity Bank in rural and peri-urban areas around Nairobi. For the rural-based FGDs, we traveled to the villages of Kathiani and Kiumoni in Machakos County. The second round of FGDs were peri-urban-based and took place in the town of Kikuyu in Kiambu County.

For the structured individual interviews, due to data privacy restrictions and Equity Bank's preference, we shifted from our initial intent of conducting in-person interviews to telesurvey interviews. We conducted 16 structured tele-surveys with women who had taken out digital Maji loans, either digitally or traditionally, in the past.

Our data analysis involved a review and coding of the interview transcripts to identify keywords and common themes related to barriers and advantages. Based on our analysis of the 16 tele-surveys, four FGDs, and the Water Champions interview, we identified key insights into the barriers and advantages of digital lending. These three types of interviews provided both first and second-hand information on women borrowers' experiences accessing digital Maji loans, which reflects the advantages and barriers encountered during the application process. In addition, we noted that several participants also provided valuable information on the advantages of traditional group lending, which we further incorporated into our coding.

RESULTS AND KEY FINDINGS

Advantages of Digital Lending



Source: Primary data collected by team from Tele surveys, Focus Group Discussions, and the Water Champions interview
Chart 1: Advantages of Digital Lending

Chart 1 highlights the benefits of digital lending by reviewing all interview data. Based on the chart, some of the most frequently cited words describing the advantages of digital lending include: convenient, affordable, and accessible. Based on these findings, we analyzed the following 5 key advantages of digital lending for women:

- Digital loans improve accessibility by removing the distance factor. One key theme that emerges from the data is that the digital Maji loans improve accessibility of these WaterCredit loans. This accessibility is enhanced through the elimination of the distance between customers and bank services. The majority of women borrowers expressed their appreciation of not being restricted to traditional bank branches. This advantage is particularly important for rural women who have traditionally been subjected to long commutes to physical bank branch locations. These women now have access to these banking services using mobile phones and have expressed their satisfaction with this development.
- The digitization of the Maji loan process cuts down on the length of the loan application process. Women-borrower interviews echoed that they find the digital loan process "quick and easy" allowing them to save on time and money. By using the Equitel line or the mobile app, borrowers can simply request the loan and be approved within minutes, which they find useful and efficient. For women, this cuts down the time necessary to "go into bank branches and queue", as approximately 10% of women respondents mentioned. This time can be spent productively elsewhere in the household or at their jobs. Applying digitally also reduces the amount of paperwork required to apply for traditional loans, which poses a challenge to some customers. They are also able to conduct these transactions at their convenience through all hours of the day. Furthermore, products are delivered to their homes, providing further ease to customers by eliminating transportation needs.



I can say the process is easy and seamless when it comes to the application process.

- Tele survey respondent on her experience using the digital Maji loan

The digital loan process allows women borrowers to improve their credit scores over time. The nature of the digital Maji loans allows women to take small loans with longer repayment periods. If they are able to make their payments frequently and on-time, they are able to gradually build their creditworthiness and receive larger loans with longer repayment periods. This opportunity allows women who were previously unbankable to enter the credit market. Many of the interviewed women borrowers expressed their desire and willingness to take out other loans in the future.

• Digital loans are improving women's access to finance by eliminating requirements for security and collateral. The digitization of the loan process allows women to take control of their household water and sanitation supply, without the requirement of collateral, which they do not typically have access to. Women borrowers have cited the lack of requirements for a guarantor or collateral as an advantage of the digital Maji loans. Traditionally, women seeking credit may have had to use their husbands as a coapplicant. However, the study indicates that women borrowers are primarily responsible for obtaining and repaying these digital loans.

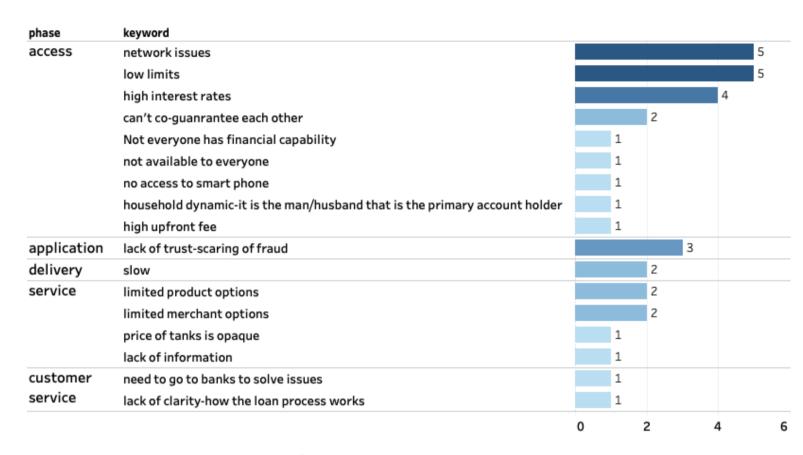
It does not need any form of guarantee. I wanted to open a water business kiosk which in turn would enable more to earn good profits from the water business. 99

- Tele survey respondent on her experience using the digital Maji loan

• Many women borrowers are taking out digital Maji loans to improve water security for small-scale farming or other small enterprises. The study also shows that the digital Maji loans have allowed women to access quick, easy, and convenient finance to fund small-scale enterprises. Some women have been able to increase the number of water tanks for their rental units in their villages or to improve water supply for small-scale irrigation. This demonstrates that digitizing Maji loans does not only improve women's water and sanitation needs in the households, but also allows women to expand their small businesses.

RESULTS AND KEY FINDINGS

Barriers to Accessing Digital Loans



Source: Original data collected by team from Tele surveys, Focus Group Discussions and Water Champions interview
Chart 2: Barriers to Accessing Digital Loans

Chart 2 showcases the barriers of digital lending by presenting data collected from the 16 tele-surveys, four (4) FGDs, and the interview with the Water Champions. Based on the chart above, we summarize the following seven (7) possible barriers of digital lending for women:

- Network connectivity issues and Equitel system inefficiencies are key barriers that make the Maji digital loans less attractive. For customers in rural and peri-urban areas, network connectivity is a major challenge. Poor network service in rural areas and intermittent connection in peri-urban areas make accessing these loans digitally very challenging. Five participants from rural areas claimed that in order to facilitate digital payments or to access the Equitel line, they must walk a significant distance to get network service. This eliminates the convenience of digital services. Consequently, women are often compelled to visit the bank branches to conduct their transactions. The data is corroborated by bank officials, who suggest that the bank's network often suffers outages, thus creating difficulties for customers trying to make their loan payments or to access a loan product at a specific time.
- Some female borrowers prefer using the traditional bank branch methods to access loans because of the possibility of higher credit limits. Since the method of credit scoring via the digital platforms is automatic and loan disbursements are high risk, there are often lower credit limits offered to borrowers. A key theme highlighted by 10% of respondents is the prevalence of low limits as a deterrent from using digital banking options. Women, seeking higher credit limits, resort to visiting the bank branches and/or participating in group lending mechanisms to secure high limit loans. Through the community-based women's groups, women are able to co-guarantee one another, thus securing higher loan amounts and lower individual monthly payments.
- Women borrowers tend to obtain lower credit limits than men borrowers. The study further found that women borrowers are offered smaller loans compared to their male counterparts. This was explained as a consequence of women borrowers typically having little to no credit history and their collateral assessment being lower than men. Since the digital credit scoring process is automatic, the system's algorithm scores them much lower than their male counterparts. While this process is changing as the group loan method offers a way to generate initial credit history, there remains a gap. It is also important to emphasize that this gender gap was identified by the bank officers; many women are unaware of the difference.
- Several women borrowers are reluctant to use digital channels due to concerns about fraudulent activities. A lack of trust in the security of digital transactions has led 3 respondents to prefer visiting bank branches to access financial services, as they have more faith in the face-to-face interactions with staff. Conversely, they are hesitant to use the Equitel app and line due to fears of online spam attacks and the potential risks associated with these platforms.

- Borrowers are dissatisfied with the high interest rates associated with the Maji loans, both digitally and traditionally. A 13 percent per annum interest rate applies across both the individual and group-lending options of accessing the Maji loan. Considering the high-risk nature of these loans, it is understandable that financial institutions would price these loans accordingly to offset loss. However, given the borrower profile of the Maji loanees, a majority (57 percent) of them had a monthly household income below \$111 USD, the interest rates place a high financial burden on women from lower-income households. This runs counter to the goal of improving the financial situations of women borrowers. Concerns over high interest rates emerge as a theme across all levels of our data analysis, identified as a key barrier to accessing these digital loans. Respondents have expressed their willingness to engage more with the Maji and other digital loans if interest rates were to be reduced significantly.
- Women borrowers are dissatisfied with the limited choice of Maji loan merchants and items offered through the Maji loan. Limitations on choice of merchants emerged in the research as a barrier to accessing digital Maji loans. Their concern is primarily with the quality of the equipment they receive as well as the prices of the equipment. Although Equity bank's Maji loan merchant list comprises 172 hardware and convenience stores nationwide, women remain dissatisfied with the choices available to them for receiving their equipment. This number can, of course, look much smaller when the number of merchants located within one town is considered. According to our key stakeholder interview with Equity Bank, this issue pertains more to rural clients than urban. Two tele survey respondents, as well as respondents from one FGD mentioned that they would prefer to have the option to receive the loan amount directly, or to be connected with dealers of their choice to purchase the tank. Additionally, it appears that the loan is specifically for purchasing tanks and cannot be used for other items such as pumps or fertilizer. Respondents from FGDs mentioned that often their products were delivered from merchants in Nairobi, resulting in a longer delivery period. Women in these FGDs expressed their desire to choose their own merchant as many of the women had longstanding relationships with merchants in their villages.

The general sentiment is that, since the loan process involves direct payments to preselected merchants from Equity Bank to provide equipment, they may be deprived of cheaper priced products elsewhere and better quality merchandise. Though our research has not compared the prices of products nationwide among Equity's merchants and elsewhere, Equity's efforts to monopolize this market presents a possible barrier to enhanced financial positions for borrowers. While this loan process benefits Equity Bank by keeping the market within their accounts, borrowers are being disadvantaged by not being able to select their preferred merchants and equipment.

• The study reveals that the loan process is not sufficiently explicit. Around 6 percent of the women in this study highlight that there is a general lack of information on loan processes and services available. Customers are unclear about the process of taking out the loans and the facilitation of payments through the Maji loan equipment merchants. Given the brevity of the loan application process via the digital platforms, borrowers are not well-informed of the specifics of the payments. Further investigation into the information offered on the Maji loan on Equity Bank's website and flyers distributed to customers also demonstrates insufficient information considering the borrower profile. The lack of information also generates mistrust in digital borrowing as customers fear fraud and scams that may be associated with such activity. One woman borrower expressed that she prefers to access loans via traditional methods to avoid the complexities of the digital methods.



I took the loan with the assumption that I'm going to get the money credited in my account. I didn't have more knowledge that you will be sent to the merchant as the monies are credited to (the) merchant's account.

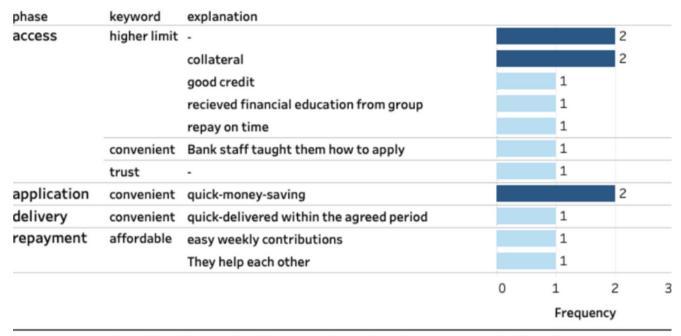
- Tele survey respondent on her experience with the digital Maji loan process

In addition, when an issue arises, individuals may be required to physically visit a branch to resolve the matter. This lack of clarity and transparency creates frustration among women borrowers and acts as a barrier to accessing loans digitally.

This problem is compounded by the lack of access to smart-phones among the women borrowers. Women who have basic feature phones are limited to use of the Equitel Line STK option which is accessible on these devices. Unlike the mobile banking app, this line is designed to be brief with limited selection options. Taking out a loan via such platforms leaves little room for clear comprehension of its implications to these women.

Other Findings

Advantages of Traditional Group Lending



Source: original data collected by team from Tele surveys, Focus Group Discussions and the Water Champions interview Chart 3: Advantages of Traditional Group Lending

Group lending mechanisms continue to be a favored method of borrowing. In addition to the key barriers and advantages discussed above, the FDGs and Water Champions interview also provided valuable information on the advantages of traditional group lending. Digital lending and group lending are not mutually exclusive and many group members have taken individual loans digitally. However, the terms of the group loans tend to be more attractive with smaller repayments overall. Group lending, by allowing multiple parties to support the loanee in their repayments, encourages the bank to give better loan terms due to the reduced risk. With digital borrowing, those guarantors are not able to support the individual loanee and this results in less desirable terms. It is important to note that digital lending appears to be adding more value to rural groups as one of our FGDs found that many of the women had borrowed digitally, but continued using the group mechanism for financial training and for savings. Both methods overlap in their target customers and will continue in parallel contention as long as the group lending mechanism is not digitized. Chart 3 highlights the advantages of traditional group lending. There are a few notable findings presented in the data:

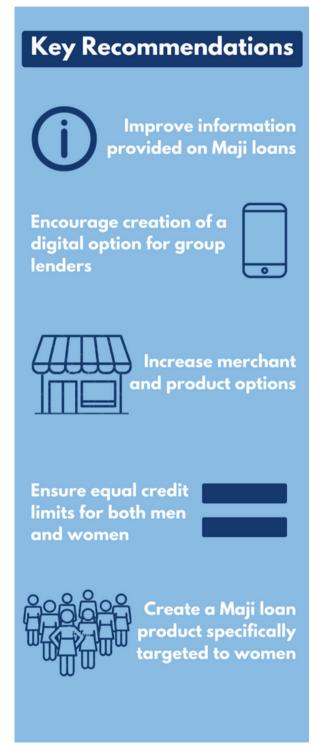
- The women in these mechanisms can get higher loan limits compared to the digital lending options. Since group members can guarantee each other, providing collateral enables them to access higher loan limits. Additionally, members are trained in financial literacy either within the group or by the bank. Participants also mentioned that group lending offers financial support when group members cannot repay the loan. In one focus group, members were asked to contribute weekly in advance, making it easier for them to repay monthly.
- Furthermore, several participants mentioned that when they engage in group lending, they do not need to go physically to the bank. Instead, bank staff come to them and handle the paperwork.
- Maji loans are still primarily taken for personal use. Equity Bank has expressed their desire to extend the use of the water loans to small and medium businesses via added service or as water kiosk sellers. Considering the recent decentralization of the Kenyan government into more autonomous counties, privatization of public water supply is a supported goal to overhaul and extend water infrastructure. However, very few loanees use the loan for anything other than personal use. Only one interviewee from the tele-surveys expressed a desire to take out a second water loan for the purpose of selling water.

RECOMMENDATIONS FOR STAKEHOLDERS

Short Term Action Items

1.Improve the quality and quantity of loan information provided on Maji loans. From the data, it is clear that women who are taking out these loans are not well-informed on the process and implications of the debt that they are incurring. We recommend providing more detail on the loan process in marketing strategies (radio and television advertisements), more detailed flyers at bank branches, and more information on the Maji loan on Equity Bank's website. In addition, even though the digital loan application is designed to be brief, we still recommend ensuring that sufficient information is provided both on the Equitel Line and EazyApp platforms to avoid further confusion. Another means of improving access to this information would be to provide targeted info sessions on the Maji loans to group borrowers which would allow them to gain further clarification on the digital lending option.

2. Encourage creation of a digital option for group lenders. Based on the feedback from the FGDs, a key point highlighted by the groups was that the group mechanism is lending only available through traditional banking methods. The majority of the participants in the women's group lending mechanisms had previously taken out Equity Bank loans digitally, but stopped when they joined their group. Digitizing this process could enable greater uptake in group loans as more women can join these group lending networks in wider areas of Kenya, including remote villages that are not currently serviced by Equity Bank loan officers.



RECOMMENDATIONS FOR STAKEHOLDERS

3. Increase merchant and product options. Another consistent piece of feedback from both the women's group lending mechanisms and the individual interviews was the limited merchant and product options that customers could purchase with their Maji loans. One FGD participant highlighted that she wished that she was able to choose a merchant that was closer to her village, as she had to wait a long time to receive her water tank from Nairobi. Furthermore, participants noted that they would prefer to choose their merchant as some do not provide the products they need or want. Based on this feedback, we recommend expanding the merchant and product options available through the Maji loan. Increasing merchant options will not only improve user experience, but positively impact local business communities that will benefit from increased business.

Long Term Action Items

- 4. Ensure equal credit limits for both men and women. One of the most common responses we received during the individual interviews was the issue of loan limits. Consistently, women cited loan limits as a main barrier to accessing Maji loans. In our interview with the Water Champions, they highlighted that men and women receive different limits, with men receiving higher limits than women. A main reason for this disparity is due to the fact that men typically utilize banking services more frequently than women, giving them better banking history and making them a less risky option for the bank. In order for women to sustain their businesses and households, women need the same limits as men.
- 4a. Create a Maji loan product specifically targeted to women. We suggest the creation of a women-centered product that provides female borrowers with better terms that will drive gender parity in the long run. Since male borrowers have other pseudo advantages such as ownership of property that they could offer as collateral to firm up their borrowing abilities, a women-centered Maji loan could achieve the goal of equal limits by leveling the playing field through offering women better terms or less requirements to receive similar limits.

CONCLUSION

Our study concludes that digital Maji loans offer both advantages and barriers to women in Kenya. Based on our interviews with 53 female Maji loan customers, the digitization of the Maji loan cuts down the length of the loan application process, improves accessibility by eliminating the issue of distance to a bank branch, and improves women's access to finance by removing the barrier of collateral. Additionally, we find that the digital loan process enables women borrowers to build and improve their credit score over time as they are able to repay smaller loans over a longer period of time. Finally, the data shows that digital Maji loans are being used by women to improve water security for small-scale farming and other small enterprises which indicates that these loans are not only impactful at the household level, but at the business-level as well.

While the digital Maji loan provides a myriad of advantages to women, our study also found a few barriers that should be taken into consideration for future changes to the product. Respondents indicated that the borrowing and repayment process was confusing and lacked clarity, which led some borrowers to opt for traditional banking methods. Additionally, some women prefer traditional banking methods based on their belief that they could receive higher limits, which was a consistent theme from the interviews. Our study further found that women typically receive lower credit limits than their male counterparts, partially due to women having less credit history. High interest rates and lack of merchant and product choice are other key barriers to both digital and traditional women borrowers. Finally, network connectivity issues make digital loans less desirable to women borrowers. In addition to these key advantages and barriers, our study found that Maji loans are still primarily used for personal use; furthermore, group lending mechanisms tend to be the favored borrowing method.

As the digital Maji loan program continues to develop, we recommend a combination of both short and long-term action items that could help address the barriers outlined above. In the short-term, we recommend that the key stakeholders develop a digital option for group lending mechanisms, as group borrowers are only able to access Maji loans through traditional banking methods. Furthermore, we recommend that Equity Bank and future bank partners increase the number of merchant and product options, which could improve overall accessibility and contentment with the Maji loan product. Finally, a key long-term recommendation is to find ways of ensuring that men and women have equal credit limits, as it will enable women greater access to funds that will help sustain their households and businesses.

ENDNOTES

- 1. Water.org. Safe Water Saves Lives.
- 2. Water. Org, Where we Work.
- 3. Water.Org, WaterCredit Toolkits.
- 4. Water.Org, WaterCredit Toolkits.
- 5. (Morsy, 2020)
- 6. (Wambua & Ndolo, 2021)
- 7. (Kim 2022; Wandibba et al. 2014; Jack & Suri 2011; Morawczynski & Pickens 2009)
- 8. (Demirgüç-Kunt et al., 2021)
- 9. (Kim 2022; Wandibba et al. 2014; Jack & Suri 2011; Morawczynski & Pickens 2009)
- 10. (Kandie et al 2022; Nan & Markus 2019)
- 11. (Wyche & Olson, 2018)
- 12. (United Nations, 2021)
- 13. (Tuwei 2018)
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Appendix 1 - Demographic Survey for Focus Group Discussions

The purpose of this session is to establish demographic information of focus group participants and enable comparisons to collected descriptive statistics.

<u>Demographic Survey</u> (This will be provided to women before entry into focus group session)

Thank you for agreeing to participate in this interview. We are graduate students from the U.S. who are trying to better understand Water, Security and Sanitation (WSS) loans in Kenya and their impact on women. We would like to begin by asking you a few background questions about yourself.

Your participation in this focus group session is completely voluntary and you do not need to answer all of the questions, if you do not want to.

1. What area of Nairobi do you live in?

- 1. What is your age?
 - 1. Under 25
 - 2.26-35
 - 3.36-45
 - 4. Over 45
- 2. How many family members live in your household?
 - 1.1-2
 - 2.3-4
 - 3.5-8
 - 4.9 or more
- 3. What is the monthly income for your household in Kenyan Shillings? (*List options to participants*)
 - 1. Below KSH 15,000
 - 2. KSH 15,001-50,000
 - 3. Above KSH 50,001
 - 4. DON'T KNOW
 - 5. REFUSED TO ANSWER
- 4. What is your highest level of education completed?
 - 1. Below upper-secondary
 - 2. Upper secondary
 - 3. Tertiary education

- 4. Do you have access to a smartphone?
 - 1. Yes
 - 2.No
- 5. Are you responsible for finances in your household?
 - 1. Yes
 - 2.No
- 6. Have you used Equity Bank's WSS loan products such as the Maji and Jamii Safi loans?
 - 1. Yes via the Equitel app
 - 2. Yes via a traditional bank branch
 - 3. No
- 7. What was the purpose of taking out the WSS loan?
 - 1. Water (water quality improvement and handwashing facilities)
 - 2. Sanitation (sewage system improvement)
 - 3. Water and Sanitation

Appendix 2 - Focus Group Discussion Interview Questions

This next set of questions will be discussed during the focus group interview, to help us better understand the main advantages and barriers for women for using a mobile app for WSS loans over traditional banking methods in Kenya. This is a voluntary, semi-structured interview.

Study Information Overview

Thank you for agreeing to participate in this interview. We are graduate students from the U.S. who are trying to better understand WSS loans in Kenya and their impact on women. We would ask a few questions regarding your experience.

Facilitator instructions

- 1. Read the 'Study information overview" out loud to the group requesting the attention of participants
- 2. Asks each participant to state their consent to participate in the FGD on the audiorecording device.
- 3. Inform participants that the FGD will last between 60-90 minutes.
- 4. Inform participant on the role of the Facilitator and the Note taker
- 5. Inform participant that refreshments will be served during the group discussion,
- 6. Confirm that socio-demographic information of each participant is collected upon arrival.
- 7. Ask if they have any questions. Answer any questions that arise.
- 8. Conduct FGD.
- 9. Thank participants for attending the FGD.

Focus group questions

- 1. For the two groups who have access and use the mobile app for WSS loans:
 - 1. Why did your household decide to use the mobile app for your water and sanitation loan?
 - 1. What features attracted you to use it?
 - 2. Do you keep track of your loans via the app or in-person at the bank?
 - 3. How many people in your household own cell phones?
 - 1. How many people in your household own smartphones?
 - 2. Who is the primary account holder for your current water loans? Please explain why.
 - 1. Who in your household primarily makes payments on these loans?
 - 2. What would you say is your proportion of contribution to the payments?
 - 3. What has your experience been in accessing water and sanitation loans via the Equitel app?
 - 1. What features do you find the most useful?
 - 2. Have you encountered any difficulties during the application or usage?
 - 3. How has this app affected your access to water and sanitation loans?
 - 4. Can you describe the impact that the app has had on your loan repayment?
 - 4. What benefits have you experienced since using the Water and Sanitation loan to make water and sanitation improvements?
 - 5. What negative consequences, if any, have you experienced since taking the Water and Sanitation loans?
 - 6. Have you taken out any additional loans via the Equitel app?
 - 7. Has there been any change to your credit score since using the digital Water and Sanitation loan?

Appendix 3 - Tele-survey Questionnaire

This next set of questions will be conducted as tele-survey interviews, to help us better understand women's experiences of advantages and barriers for women for using a mobile app for WSS loans over traditional banking methods in Kenya. This is a voluntary, structured interview.

Hello, this is (insert name) calling on behalf of Equity Bank. Do you prefer English or Swahili?

START: You have been selected to participate in this survey about your water and sanitation loan as you are a valued customer of Equity bank. Your participation is voluntary and you can choose not to answer any of the questions you are not comfortable with. You may also choose to end the survey at any time. The information you give us will be held confidentially and will only be used for research purposes. Do you agree to participate in this study?

If yes, proceed to Question 1:

1.Yes 2.No 3.Other Loans 2.Did you access your Maji loan via a mobile smartphone? (Do NOT read out loud, just circle option) 1.Yes 2.No 3.Other 3.Why did you decide to use the Equitel app to take out your Maji loan? 4.What is your experience in getting the digital Maji loan? 5.What are the benefits of accessing the Maji loan digitally? 6.What are the challenges of using the Maji loan digitally? 7.What is your marital status? (List the options to participants) 1.Married 2.Separated 3.Single 8.How many family members live in your household currently? (Don't list the options, just circle what they say.) 1.1-2 2.3-4 3.5-8 4.9 or more 9.What is the monthly income for your household in Kenyan Shillings? (List options to participants) 1.Below KSH 15,000 2.KSH 15,001-50,000 3.Above KSH 50,001 4.DON'T KNOW 5.REFUSED TO ANSWER	1. Is this your first Maji loan with Equity Bank? (List options to participants)
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5. REFUSED TO ANSWER	
	5. REFUSED TO ANSWER

Thank you for your time. This is the end of the survey.

Appendix 4 - Water Champions Interview Questions

- 1. How did you initially establish the connections with these women's groups?
- 2. Can you explain how the group lending mechanism works?
- 3. What is your experience in terms of barriers and advantages to these women's groups for traditional banking?
 - 1. What about the advantages and barriers of using the Equitel App?
- 4. How do you promote the use of the digital Maji loan?
- 5. Have you noticed any differences in the different areas (i.e rural, peri urban, urban)?
- 6. Have you noticed or experienced any differences when it comes to gender and using the Maji loan?
- 7. Are you responsible for selecting the dealers that provide the equipment?
 - 1. What is this cooperation like?
 - 2. What are the advantages and disadvantages of this distribution system for both the customers and the bank?
- 8. What suggestions would you have for improving the process to reach more women?

Appendix 5 - Expert Interview Questions

- 1. What is the state of current water financing in Kenya?
- 2. Why do you feel that venture capital is the most effective way to provide water facility development?
- 3. What gaps in water finance exist for Women in Kenya? What are the challenges of applying water financing in reaching Women in Kenya?
- 4. Are there current water financing initiatives specifically for women in Kenya? Where and with whom?

Appendix 6 - Equity Bank Interview Questions

WSS loans

- a. How do you promote the usage of WSS loans?
- b. Repayment rate, interest rate, etc.
- c. How do they trace the usage of loans?
- d. Do they receive any feedback on WSS loans?

<u>Gender</u>

- 1. What gender-related research has been conducted?
- 2. Can you describe where this research was conducted?
- 3. How has this research been prioritized?
- 4. What key questions have been asked?

<u>General</u>

- 1. How does your partnership with Water.org work?
- 2. What is the next step?

In-depth Questions

- 1. Can you describe any motivators for women to access traditional WSS loans?
- 2. Can you describe any barriers for women to access traditional WSS loans?
- 3. Have they considered developing digital banking services? Why? Describe the motivators, concerns, current stage.

Appendix 7 - Demographic Survey Results

We conducted FGD with a total of 37 women. Over half of the participants had access to smartphones, indicating a certain level of digital literacy. Over 80% of the participants were over 35 years old, indicating that the study captured the opinions of women with more life experience. Most of the participants (84%) believe that they were responsible for managing finances in their households, highlighting their significant roles as household decision-makers. A majority of the participants (57%) had a monthly household income below 15,000 Kenyan Shillings, demonstrating that the study captured the perspectives of women from lower-income households. Half of the participants (51%) had achieved an upper secondary level of education or higher, indicating a decent level of education and potentially greater financial literacy. The loans obtained by the participants were primarily for water and sanitation purposes. Overall, the demographic statistics of the participants provide a glimpse into the perspectives of women with varying backgrounds.

