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Barriers to "last mile" financial inclusion: cases from northern Kenya

Jaya Tiwari, Emily Schaub & Naziha Sultana

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Introduction

Northern Kenya suffers from poverty rates as high as 70%, well above the national average of 45% (World Bank, [2018](#)). In the region, 90% of residents rely on livestock raising as the source of both food and income, but the increased severity of droughts and decreased dependability of weather patterns in recent years have contributed to the instability of the pastoral lifestyle. A major drought in 2011, for instance, triggered a hunger crisis throughout the region that affected more than 13 million people in East Africa and left up to 100,000 people dead.

In pastoral communities like those of northern Kenya, women and children are especially vulnerable to changes in climate and weather patterns, and resultant cycles of drought and famine. Traditional gender roles dictate the lives and decisions of couples and families. Herding is traditionally a male activity, and as water scarcity takes men and their herds further from home in search of water and grazing land, men spend more time in satellite camps, away from their homes and their families. These same gender norms have created a system under which men have greater authority in household decision-making, ownership of assets, and control over financial resources. Most women must consult with their husbands on spending decisions, including for medical care and education. This can leave women without financial resources for months at a time while their husbands are away, forcing them to survive by subsisting

on food. For the few women who have access to financial resources, geographic, political, and social change and lack of independent power women in

Financial empowerment, accumulation of assets, patriarchal household resource control, and building resilience to shocks, future. In related to their own expenditures,



The BOMA Project (BOMA) supports women at the “last mile” of financial inclusion – those living in remote, rural areas, for whom delivery of financial services is complex and costly. BOMA’s Rural Entrepreneur Access Project (REAP) seeks to empower ultra-poor women through a graduation programme that develops their livelihoods and life skills, including the ability to earn income, accumulate savings, and access sustainable pathways out of extreme poverty. Qualitative and quantitative analysis of BOMA’s 2016 cohort suggests that women involved in REAP expanded their savings and expenditures, improved food security for themselves and their children, and increased their decision-making power around family and personal income and expenditure. However, BOMA’s experience implementing M-Chama, a digital finance platform through Kenya Commercial Bank (KCB), illustrates that low levels of literacy, numeracy, and familiarity with mobile technology are binding constraints that limit women’s ability to most effectively use digital financial products. Evaluation of mobile banking practices among the REAP cohort revealed low usage and high dependence on others for support. Until and unless basic skills are developed, and products take into account both abilities and preferences of their targeted users, women will struggle to use digital and other financial products and services, reap their benefits, and exercise full control over their spending and livelihoods.

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Financial inclusion may also be a driver of reduced gender inequalities. Formal banking services and other institutions enable women to invest in the growth and development of their businesses and to manage their earnings and savings. As their personal store of funds grows, women can become less dependent on their husbands' earnings and less subject to their control, able to make decisions for themselves about where and how to spend their money. This autonomy can extend to decision-making beyond finances to other domains such as marriage, leisure time, and contraceptive use (Aker et al. [2016](#); Bandiera et al. [2013](#); de Brauw et al. [2014](#); Field, Pande, et al. [2016](#); Holloway, Niazi, and Rouse [2017](#); Pitt, Khandker, and Cartwright [2006](#); Schuler and Hashemi [1994](#); Suri and Jack [2016](#)).

Yet despite increased recognition of the benefits of financial inclusion, these services and products still fail to reach some of the world's most vulnerable groups, who may stand to gain the most from them. According to the World Bank's 2017 Global Financial Inclusion data, 72% of men but only 65% of women have a bank account, and that gap widens in poorer countries. In Kenya, two-thirds of unbanked adults are women (Demirgüç-Kunt et al. [2018](#)). Women are frequently unable to access banks and other services as a result of restrictive gender norms, laws, and policies, as well as a lack of personal resources, limited mobility, low literacy and education levels, and information asymmetries (Gammage et al. [2017](#)). Poor women and those engaged in informal or subsistence employment face additional barriers in trying to access financial services,

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been adopted by at least one member of 96% of Kenyan households – and for its success in driving economic growth among users. M-Pesa has increased households' ability to save and protect themselves against shocks, and by providing users an easy way to make and receive payments, it has also expanded their social networks, giving them access to broader systems of support in times of crisis. Research suggests that M-Pesa and similar innovative tools have the potential to close the financial inclusion gap and spread the benefits of financial services to the last mile (Suri and Jack [2016](#)).

Yet digital financial services may also present several challenges in financial inclusion. Kendall, Wright, and Almazan ([2011](#)) argue that for low-income clients, high-touch engagement at point-of-sale is still essential, and digital financial services can fail if such provisions are not made. Client trust in a brand is an important factor in ensuring uptake and continued use of mobile bank accounts and can be sensitive at the inception of adoption. If clients make mistakes in mobile money transfers – for instance, misspelling an intended recipient's name – and are not able to recover the money promptly, they are likely to mistrust the mobile money system (Kendall, Wright, and Almazan [2011](#)). Other factors like transaction costs and difficulty in fulfilling know-your-customer (KYC) requirements can also create barriers to digital financial inclusion (Karlan et al. [2016](#)). Women are often disproportionately affected by these and other barriers to adoption. Lower levels of employment, income, and education negatively impact women's use of digital technology (Hilbert [2011](#)). Incomplete property rights including and pressure mobile money (st, KYC requirements most success s (Gammage et al. [20](#)



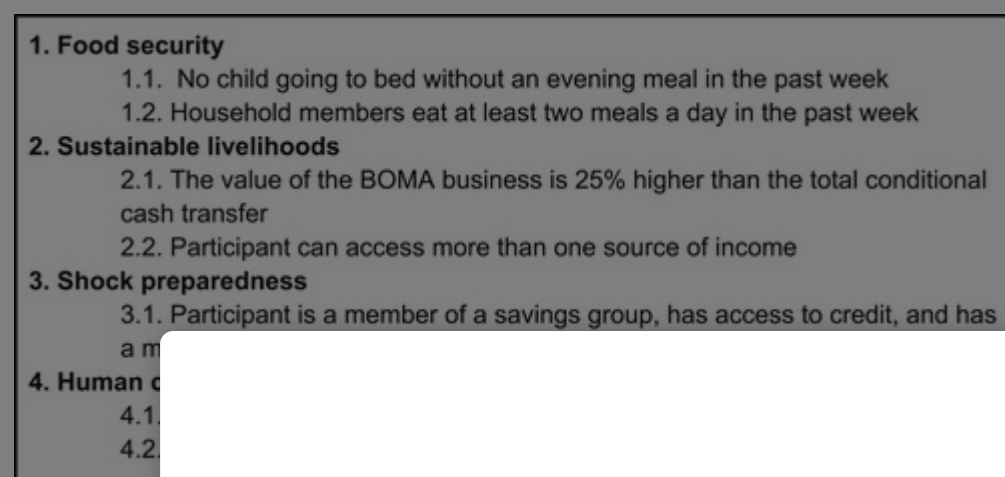
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sustainable incomes, and move out of poverty. REAP engages ultra-poor women, defined as those who are living at less than half the US\$1.25-a-day poverty line, and those who eat below 80% of their energy requirements despite spending at least 80% of their income on food (BRAC [2013](#)). BOMA has tailored a traditional graduation approach to the unique challenges faced by women in the sparsely populated, highly food insecure, and resource-poor drylands of Africa. Women enrolled in the programme receive seed capital and business and life-skills training, join savings groups, and are mentored throughout the programme's lifespan. At the time of writing, BOMA had reached more than 170,000 women and children through REAP across six counties in northern Kenya and the Karamoja region of Uganda. Graduation from extreme poverty is evaluated at the end of the two-year cycle, based on criteria within four key areas: food security, sustainable livelihoods, shock preparedness, and human capital investment. These criteria are outlined in [Figure 1](#).

Figure 1. BOMA's poverty graduation criteria.



1. Food security
1.1. No child going to bed without an evening meal in the past week
1.2. Household members eat at least two meals a day in the past week
2. Sustainable livelihoods
2.1. The value of the BOMA business is 25% higher than the total conditional cash transfer
2.2. Participant can access more than one source of income
3. Shock preparedness
3.1. Participant is a member of a savings group, has access to credit, and has a m
4. Human capital
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Savings groups

After six months in business groups, REAP participants are also enrolled in savings groups, by which participants are encouraged to save at least KES 400 (US\$4) per month. Savings pools are accessible to members as loans for business expansion or personal use. As these savings accumulate, their holders build resilience to climate and economic shocks and allow women and their families to plan for future large expenditures. The groups are also registered with County Social Services, which facilitates members' ability to open formal bank accounts and access other formal services.

Mentorship

In addition to business and savings groups, women are supported by BOMA village mentors, who are tasked to provide extensive mentoring and coaching in investments, savings, and business decisions. All mentors are full-time paid BOMA staff and are respected local residents from villages where BOMA participants live and work. Mentors are carefully selected, trained, and supported by regional BOMA field officers. They work with participants throughout the intervention period to provide business and life-

skills training, monitor progress, and provide support. BOMA mentors also help participants graduate from business groups, supply a range of services, and ensure the sustainability of their businesses. This is an important component of the BOMA household-level intervention.



The BOMA household-level intervention was implemented in May 2018 in Samburu and Meru counties, Kenya. The intervention was a challenge grant funded by the Bill & Melinda Gates Foundation. The grant included KES 20,000,000 (US\$2 million) for the implementation of small

After six months, a second, performance-based progress grant of KES 10,000 (US\$100) was awarded to business groups following a progress report conducted by the mentors: 249 out of the 250 original business groups received these conditional grants – one group was dissolved early in the programme.

Mobile money

In 2016, BOMA also introduced mobile banking into the programme to harness mobile technology for additional impact. In addition to engagement with REAP's other activities, the Gates cohort received feature phones and SIM cards registered with mobile money accounts. Designed by KCB, M-Chama is a platform that connects to mobile money accounts like M-Pesa to allow members of savings groups to contribute to and withdraw from both personal and group-based digital accounts. The group was expected, by the end of the programme, to be able to open bank accounts, purchase goods, receive money, and access loans from any location. An initial pilot was conducted in partnership with KCB among 27 women from two BOMA savings groups, then scaled up to reach 676 women.

Sustainability

The results of recent impact studies of poverty graduation programmes have provided strong and positive proof of the effectiveness of such programmes and generated

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Evaluation of the Gates cohort sought to understand whether participants reached BOMA's graduation criteria, the effect of REAP on household decision-making power, and participants' experience with the new mobile banking component. Performance on graduation criteria was evaluated using a pre-post comparison between baseline and endline results from BOMA's Standard of Living Index survey (SOLI). The SOLI measures outcomes aligning with graduation criteria as presented in [Figure 1](#), as well as mobile phone and mobile money use, household expenditure, asset ownership, household decision-making power, healthcare-seeking behaviour and family planning practices. Baseline surveys were administered to the 750 women selected for participation in REAP one month before enrolment, and endline surveys were administered to 92% of participants between April and May 2018. Both periods of data collection were conducted in participants' homes by three teams of trained, independent enumerators, university students or graduates from Marsabit or Samburu counties with high numeracy, literacy, and familiarity with the local language and context. Both baseline and endline data collection was preceded by a four-day enumerator training facilitated by BOMA's Project Data Analyst and Regional Monitoring and Evaluation Officer. Training included instructions on using TaroWorks and tablets, a discussion of the roles of enumerators, survey methodology and survey questionnaire, role playing and translation exercises, a field test of enumerator competency and a field test. Data were recorded using tablets equipped with TaroWorks.

Quantitative data were analysed using both descriptive and inferential statistics. Descriptive statistics were used to describe the proportions and frequencies of variables. Inferential statistics were used to test for differences between groups. Two-sample t-tests were used to test for differences in mean values of continuous variables. Chi-square tests were used to test for differences in categorical variables. All statistical tests were conducted using Stata 16.0. The results of the analysis are presented in the following sections.

BOMA was established in 2011 as a community-based organization (CBO) in Marsabit and Samburu counties. BOMA was established to support the development of the region and to discover



behaviour, and understand whether those shifts were related to participation REAP. An additional six-month internal review and subsequent external evaluation of the mobile project component was carried out by Bankable Frontier Associates (BFA) in 2016. Interviews were conducted with BOMA staff, beneficiaries, and representatives from KCB and mobile banking agents.

Impact¹

BOMA anticipated that by the end of the two-year project, women enrolled in REAP would hold both financial and social capital and assets and be able to make spending decisions around the nutrition, education, and health of their families. To understand and measure any change occurring as a result of the programme, evaluators looked for change in household income, savings, household decision-making power, livestock ownership, enrolment of children in school, food security, healthcare use, and expenditures. Comparison between baseline and endline data suggests substantial growth across all BOMA criteria for poverty graduation, as described in [Figure 2](#).

Figure 2. Percentage of respondents fulfilling graduation criteria.



By endline, all but one of the 250 BOMA businesses were still in operation, of which 94% (234 out of 249) were valued at 125% or more of the initial grant size. The greatest increases in business value were observed within the first three months of the programme, with more gradual increases observed over the next two years. The viability and success of these businesses allowed for the increase and diversification of household income. The percentage of households with more than one income increased from 65% to 96%, and average total household income rose by 78.8%. BOMA businesses contributed an average of KES 1,025 (US\$100) per month to household income.

Savings

A key component of REAP's model is the establishment of savings groups, to encourage and enable women to set aside financial assets for the future. Participants are encouraged to cultivate savings accounts as a safeguard against such shocks as drought and unplanned medical expenses. BOMA's endline analysis revealed that almost 100% of participants had some form of savings, compared to just a third at baseline. These savings were primarily held within BOMA savings groups (100%) and businesses (87.8%), as well as in personal household cash and livestock savings. Average total savings increased from KES 785 to KES 14,510 - a 1,748% increase over the course of the two-year programme.

Shocks

Access to savings groups provided a safeguard for a household's financial assets during the drought (2016). By endline, 96% of households had savings, up from 22% at baseline. Savings were primarily held in BOMA savings groups (100%), and for businesses (87.8%), and for personal household cash and livestock savings (12.2%). Access to savings groups was prepared to respond to shocks.

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increased by 154% during the programme and annual medical expenditure rose by 85%. Increases in education expenditure also translated into an increase in girls' school enrolment. At baseline, 56.7% of participants reported that all daughters ages six to 14 years were enrolled in school. Further investigation revealed that herding livestock and household chores were key barriers to girls' schooling, and in response, BOMA, in consultation with the International Center for Research on Women, developed a campaign to address this which was implemented in all 14 Gates cohort locations between November 2017 and February 2018. Activities included community meetings with participants and stakeholders, advocacy for the importance of girls' education, and identification of girls' education champions, as well as follow-up with REAP participants and their husbands who had failed to enrol their daughters in school. By endline, 68.5% reported having all daughters in primary school.

The same increase in household income also contributed to observed decreases in food insecurity among REAP participants and their families. Between baseline and endline, the percentage of participants reporting eating at least two meals per day rose from 79.9% to 99%. Similarly, while at the beginning of the programme 53.2% of respondents reported that their children had ever gone to sleep without an evening meal, by endline that number had dropped to 1.5%.²

Decision-making power

Women's decision-making power is linked to their greater control over household income and expected savings, and their ability to spend on their children's education. REAP participants reported an increase in their decision-making power over time. The focus of the programme was on increasing women's bargaining power and their ability to make decisions in their own households. Changes in decision-making power, household



decision-maker around those expenses. This was particularly important for women whose husbands spent time at satellite camps or were otherwise away from home for long periods of time. Before engagement with REAP, if a man were not at home when a need arose, his wife would need to send a message to him to ask for money or wait for him to return. As women developed the means to earn money on their own through REAP, this level of dependence decreased, and they were able to make necessary purchases more efficiently. Similarly, the level of intra-couple consultation appears to have improved. In cases where men had been the sole decision-maker, wives who had participated in REAP became more involved in the decisions. Even when men are still the ultimate decision-maker, as is generally the case for larger family expenditures, women may be more involved in the discussion and decision-making process. Thus, participation in REAP gave women the power to make decisions around small, everyday household expenses, and to be included in discussions around larger purchases, even if the ultimate power over those still lies with their husbands. BOMA anticipates that these attitudes will continue to shift to empower women as businesses continue to grow and men adapt to and accept their partners' changing role.

Social cohesion

It is likely that REAP's group setting model is, at least in part, behind the strong impact BOMA observed in both economic and social empowerment. Studies by Johnson (2004) and Dupont (2005) suggest that group settings can help women save and group members monitor each other's progress and can be critical in helping women who have traditional roles (Kumar, 2005). These groups of women have particular knowledge in their communities (Kumar, 2005). Social capital derived from group settings suggests that women have the opportunity to identify growth. Women credit when



they are otherwise credit constrained, giving them access to a wider range of financial services (Johnson [2004](#); Kuada [2009](#)).

By establishing both business and savings groups and encouraging participants to work together to achieve their goals, REAP also built and strengthened social relationships outside of the household. These relationships supported REAP's economic and decision-making impacts, encouraging greater financial savings and bolstering women's influence within their households. Women in savings groups are more likely to participate in social and civic activities, which can in turn expand their autonomy and decision-making power, by breaking down traditional barriers to collective action (Desai and Joshi [2013](#)). Membership in organisations or groups similar to those established through REAP has been associated with increased involvement in both household decisions and in voicing public concerns. Qualitative inquiries with REAP participants found that not only financial empowerment but also social empowerment drove women to feel more confident in themselves and their self-worth and to exercise increased influence over household decisions.

Challenges and low uptake of digital services

Mobile money offers extensive benefits for reaching populations that have been, for geographic and service reasons, excluded from financial services. However, the technology is not always accessible to the poorest households out of poverty, and the experience of using mobile money is often difficult. Each last year, the World Bank addressed these challenges by carefully designing financial inclusion programs that include mobile money.

A total of 1.2 billion mobile money accounts were opened in 2014, and received 1.5 billion transactions and a share of 1.5% of the total mobile money transactions. The technology is still in its infancy, and mobile money accounts are still a small fraction of the total mobile money accounts.



73.9% were the devices originally provided by BOMA. Use of M-Pesa had also skyrocketed, from 34% to 87% of participants over the two years. The correlation suggests that lack of access to mobile phones is a significant barrier to M-Pesa use in northern Kenya. However, while BOMA observed success in driving participants to use M-Pesa, business-related use was not common among members of the cohort. They were more likely to use it to transfer money to or from friends and family members (47.6%) or purchase air time (24.1%). Only 9.5% used it to save money. Although by midline the percentage of participants using M-Pesa or a similar service had risen from 34.4% to 56.3%, engagement was largely limited and only 5.7% used it to receive money from customers. Further analysis provided a few explanations for this.

Education and familiarity with technology

The great majority (88.9%) of the Gates cohort had no formal education. Only 8% of participants could read and 7% could write in any language. Illiteracy severely limited participants' ability to interact with the M-Chama platform. Participants were able to adapt to the use of a mobile phone, developing workable solutions to the issue of illiteracy, including using recognisable icons instead of names to store contacts. However, M-Chama's menu and group account platform proved too complex for adoption by the target population. M-Chama is even more complicated than M-Pesa because participants must first send money to their personal accounts before directing it to the

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Because of the complexity and misunderstandings surround REAP's digital tool, participants were not able to be truly independent, which is one of the key goals of financial inclusion programming. Though women did gain autonomy from their husbands in terms of decision-making power, they became dependent on mentors to maintain financial records, on mobile money agents to make deposits and, at times, on their children and relatives to confirm that transactions had been made correctly. At endline, most participants still relied heavily on their mentors for all digital financial transactions. In turn, this exacerbated issues of trust and security, as account holders shared their PINs with others. 66% of participants using M-Pesa reported that they had shared their PINs with another person - usually M-Pesa agents (42%) or their children (18%).

Savings and financial preferences

Another major challenge BOMA identified was the general preference of their target community to save in cash and other traditional forms of securing value. In pastoralist settings, savings are traditionally maintained primarily through livestock, which can be easily lost due to disease or drought. Even at the end of the graduation period, as women were making deposits in their savings accounts, they maintained additional savings in cash and livestock. Though participants reported higher levels of formal savings at endline than at baseline, they continued to save in both cash and livestock as well. - during the life of - did not replace - cash meant that part - and for their business - as a matter of habit.

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informally is used interchangeably. This finding is consistent with evidence from other financial inclusion programmes. CARE International's Link Up project team has noted that access to formal banking systems did not immediately take the place of informal savings, suggesting that forces other than access are at play in determining how people save (Sultana [2018](#)). Norms, tradition, and comfort may prevent potential beneficiaries from transitioning fully to new, formal services.

Conclusion

REAP saw improvement of women's businesses, and economic, and social power. Participants increased their disposable household income and consumption on goods like education and nutrition for their families. They were also able to accumulate savings as a way of planning for larger future expenses as well as becoming resilient to shocks. Women also reported higher levels of influence within their households, empowered by both financial autonomy and newly formed social networks to make decisions around daily expenditures and to be involved in discussions of larger purchases. Mentorship proved to be critical to all of BOMA's activities. Training on mobile phones and savings activities, as well as follow-up on girls' schooling and regular monitoring of group targets allowed for the substantial achievements in economic

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women with little experience and exposure to technology. Participants' low levels of literacy and numeracy as well as hesitation to trust unfamiliar tools were significant barriers to uptake and usage. Further research is being undertaken by IDEO.org with support from the Bill and Melinda Gates Foundation to gain a deeper understanding of the barriers that women, like those in northern Kenya, face in accessing and using digital financial services. This research is expected to shape solutions to help women overcome those barriers, contributing to a greater body of evidence that will improve access and uptake of digital tools, ultimately supporting economic and social development of women at the last mile.

Disclosure statement

No potential conflict of interest was reported by the authors.

Notes on contributors

Jaya Tiwari joined the BOMA Project in 2015 as Director of Strategic Partnerships. She brought to BOMA over 15 years of experience in research, writing, fundraising, advocacy in international development and global health field with focus on Africa. Prior

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Naziha Sultana is a Gender and Economics Specialist at the International Center for Research on Women. She has over seven years of experience in the international development sector, spanning topics on gender's interaction with labour force participation, labour migration, agricultural value chains and access to financial services and energy, among others. She is skilled at quantitative research, including econometric analysis and costing exercises, qualitative data analysis, programme evaluation, and project management. Prior to joining ICRW, Naziha worked as the Project Coordinator at the International Organization for Migration (IOM), where she managed projects on labour migration and migrants' rights and led research on topics related to labour migrants' experiences and climate change induced migration.

Additional information

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