

Assessment of the Gender Gap in Access to Digital Financial Services in Burkina Faso

MIT D-Lab | CITE
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This document is part of a series of reports produced by MIT CITE. Launched at the Massachusetts Institute of Technology (MIT) in 2012 with a consortium of MIT partners, CITE was the first-ever program dedicated to developing methods for product evaluation in global development. Located at MIT D-Lab since 2017, CITE is led by an interdisciplinary team and has expanded its research focus to include studies that explore the barriers to, and enablers of, effective innovation processes and technology adoption; the outcomes of capacity building programs and technology interventions; and the contexts in which technologies and innovation processes operate. This includes a portfolio of research studies on digital financial services programs, capacity for local innovation, internet of things for agriculture, inclusive systems innovation, fairness in machine learning, and evaporative cooling technologies. CITE also develops the capacity of researchers to conduct evaluations by providing resources and tools on its methods.

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SUMMARY OF KEY FINDINGS AND RECOMMENDATIONS

The project *Assessment of the Gender Gap in Access to Digital Financial Services in Burkina Faso* was established in 2019 through a partnership between MIT D-Lab CITE and USAID’s Center for Digital Development/Digital Financial Services Team (CDD/DFS). The objective of this research is to understand the current and potential role of digital financial services (DFS) in the lives of female entrepreneurs in Burkina Faso to increase their empowerment and resilience.

Table 1 provides a summary of the key findings and recommendations for local decision makers. The last column in each table indicates supply-side stakeholders who are well-suited to follow up on these findings and apply these recommendations. The findings are relevant to those working to promote women’s empowerment through digital financial inclusion in Burkina Faso and similar contexts. The findings of our study point not only to the importance of giving female entrepreneurs access to certain digital services, but also to the importance of 1) making sure they know exactly how DFS can be integrated into their daily lives for their benefit, and 2) engaging important people in their lives—their households, communities, and DFS agents—in order to build systemic support and goodwill among those who might otherwise be resistant—consciously or not—to women using DFS.

Table 1 – Summary of Findings, Recommendations, and Key DFS Stakeholders in Burkina Faso

Finding	(Provisional) Implication/Recommendation	Stakeholders
DFS use and barriers are gendered and reflect societal norms, highlighting the need for a long-term perspective	Use patterns among men and women show the challenges in promoting DFS among women. Women are more likely to need and want agent assistance, rely on a friend or family member to help them use DFS, and express unease using DFS. Lack of means, education, and awareness are the main barriers to women’s DFS use, particularly in rural areas, making it challenging to reach female last-mile customers. These barriers operate at the societal level and will require long-term effort to overcome. Significant advocacy, policy, and programmatic efforts from governments, donors, and NGOs are needed to support broader, gradual social and cultural shifts regarding the roles and power accorded to women.	Providers ¹ + Conveners ² + Enablers ³
Female entrepreneurs need more	Women do not find DFS conducive to their entrepreneurial activities, which consist mainly of small but frequent financial transactions. In contrast, male entrepreneurs value using DFS	Providers + Conveners + Enablers

¹ Providers are organizations that design and deliver digital financial services. They include actors such as banks, telecom companies, and *Fintech* startups.

² Conveners are organizations that aggregate DFS users.

³ Enablers are the organizations creating and maintaining the institutions that DFS need to function as an integrated system. They help in the design of regulations, policies, and programs as well as in the identification of organizational gaps and diffusion of best practices.

<p>information about the DFS value proposition, and more tools to make informed decisions.</p>	<p>for small business transactions. Trainings, media campaigns, and similar activities can help increase knowledge among female entrepreneurs of the requirements and benefits of DFS among female entrepreneurs, while the private sector could consider new financial products compatible with small but frequent transactions. Responsible DFS promotion also entails sharing information about potential risks so that women can make well-informed decisions that balance benefits with costs.</p>	<p>Providers + Enablers</p>
<p>Engaging women’s families and social networks may help tackle norms that discourage gender-equitable financial inclusion</p>	<p>Previous research has pointed to the need to bring men into DFS programs for women. This study supports this and would suggest incorporating households and broader social networks into gender inclusive (D)FS. Because (D)FS use is gendered, with women using these services less than men, finding and engaging with trusted intermediaries can help reduce the potential for divisiveness when increasing women’s financial activities, digital or otherwise. Finding ways to frame women’s financial empowerment positively rather than as a threat to established gender norms deserves explicit and careful consideration.</p>	<p>Providers + Enablers</p>
<p>Improved financial and digital literacy, independent access to DFS, and greater trust in husbands and agents can help promote confidence in DFS use among female entrepreneurs</p>	<p>Wives sometimes hide financial activity from their husbands, leading to potentially contentious situations. Further, in some cases, a woman’s lack of education and lack of confidence in her ability to use DFS translates into a fear of being taken advantage of by DFS agents. Leveraging leaders that women trust to encourage DFS use, increasing technical understanding of how DFS works, providing opportunities for continued financial autonomy, and promoting the creation and awareness of consumer protections—such as robust compliant procedures and incentives for agents to act honestly—can build women’s confidence both in their ability to use DFS as well as their faith in a fair digital-financial ecosystem.</p>	<p>Conveners + Enablers</p>
<p>The link between resilience and entrepreneurial activity is poorly understood among female entrepreneurs</p>	<p>Most women see how DFS contributes to resilience in their personal lives, like using informal money transfers when unexpected events arise that require a large amount of cash (e.g. a health emergency or an adverse weather event). However, women did not make the same connection between resilience and entrepreneurship. DFS for entrepreneurial activities requires active promotion among women and needs to be marketed in a way that resonates with women, such as being able to help their children and households. Any effort to promote DFS among women entrepreneurs should include trainings and information to enable adequate digital and financial understanding.</p>	<p>Providers + Enablers</p>

1. INTRODUCTION

The project *Assessment of the Gender Gap in Access to Digital Financial Services in Burkina Faso* was established in 2019 through a partnership between MIT D-Lab CITE and USAID's Center for Digital Development/Digital Financial Services Team (CDD/DFS). The objective of this research is to understand the current and potential role of digital financial services (DFS) in the lives of female entrepreneurs in Burkina Faso to increase their empowerment and resilience.

This project aims to support USAID, especially its Resilience in the Sahel Enhanced (RISE) programming. Launched in 2012, RISE (succeeded by RISE II), is a broad constellation of projects designed to improve the resilience of households and communities in vulnerable areas of Burkina Faso and Niger in the face of sustained humanitarian crises, security deterioration, and poverty. More broadly, the project seeks to advance women's economic empowerment in alignment with recent initiatives such as the Women's Global Development and Prosperity (W-GDP) initiative.

This project complements and extends previous work MIT D-Lab CITE completed on DFS. A previous project, *Assessment of Potential Opportunities for Use of Digital Payments for Smallholder Farmers in Resource Constrained Settings*, undertaken from 2018 to 2019, aimed to better understand the role that DFS can play in the financial inclusion of smallholder farmers in Guatemala and Senegal.

Existing research on DFS and its relationship to gender has yielded important insights.^{4,5,6,7} This project builds on existing knowledge and aims to understand how access to, and use of, digital financial services can empower women in their professional lives. The goal of this report is to generate a summary of the key findings of the study, highlighting the findings most relevant to practitioners and decision makers in Burkina Faso. In the future, more detailed research results will be published through academic papers. The findings and recommendations in this report reflect the evidence and analysis available to date and are still tentative.

Five concepts relevant to the project are important to define from the outset:

- **Digital Financial Services:** Digital Financial Services (DFS) is a broad category that encompasses Mobile Financial Services (MFS) and all branchless banking services that are enabled via electronic channels. Services can be accessed using a variety of electronic instruments, including mobile phones, card-reading point of sale (PoS) devices, electronic cards (credit, debit, smart card, key fobs), and computers. Similarly, "digital payments" refers

⁴ GSMA. (2015). Bridging the gender gap: Mobile access and usage in low- and middle-income countries.

⁵ Spencer, S., Nakhai, M., and Weinstock, J. (2018). The role of trust in increasing women's access to finance through digital technologies. USAID.

⁶ GFPI (2015). Digital financial solutions to advance women's economic participation.

⁷ Gammage, S., Kes, A., Winograd, L., Sultana, N., Hiller, S., & Bourgault, S. (2017). Gender and digital financial inclusion: What do we know and what do we need to know? ICRW.

to mobile payments and electronic payments, while “digital money” refers to mobile money and electronic money.”⁸

- **Financial Inclusion or Access to Finance:** “Access to and the ability to effectively use appropriate financial services that are provided responsibly and sustainably in a well-regulated environment. Although access to informal financial services (services offered by unregulated entities) is a form of access to finance, financial inclusion efforts typically focus on extending access to formal financial services (services offered by regulated entities) to poor and underserved communities.”⁹
- **Entrepreneur:** A term broadly defined as any individual(s) who has started a business, taking on some level of financial risk in the hopes of making a profit.
- **Resilience:** “The ability of people, households, communities, countries, and systems to mitigate, adapt to, and recover from shocks and stresses in a manner that reduces chronic vulnerability and facilitates inclusive growth. In short, resilience is defined as the ability to manage adversity and change without compromising future wellbeing.”¹⁰
- **Female Empowerment:** “Female empowerment” can be understood as an approach with the aim to give women and girls greater access to opportunities that increase their power and voice in decision-making and their control over resources—but not to the exclusion of men.”¹¹

Taking into consideration these fundamental concepts, two research questions drove this study:

1. What role does DFS play in making female entrepreneurs more resilient in Burkina Faso?
2. What conditions would permit greater DFS access and use among female entrepreneurs?

2. RESEARCH DESIGN, METHODS, AND IMPLEMENTATION

2.1. Research Framework

A research framework developed during MIT D-Lab CITE’s previous work on DFS in Guatemala and Senegal guided the operationalization of the research questions (see Figure 1). The first question centers on the availability of DFS and the demand for these services among entrepreneurs, particularly female entrepreneurs. The second question focuses on female entrepreneurs’ behavior and decision-making in terms of barriers and incentives to DFS adoption.

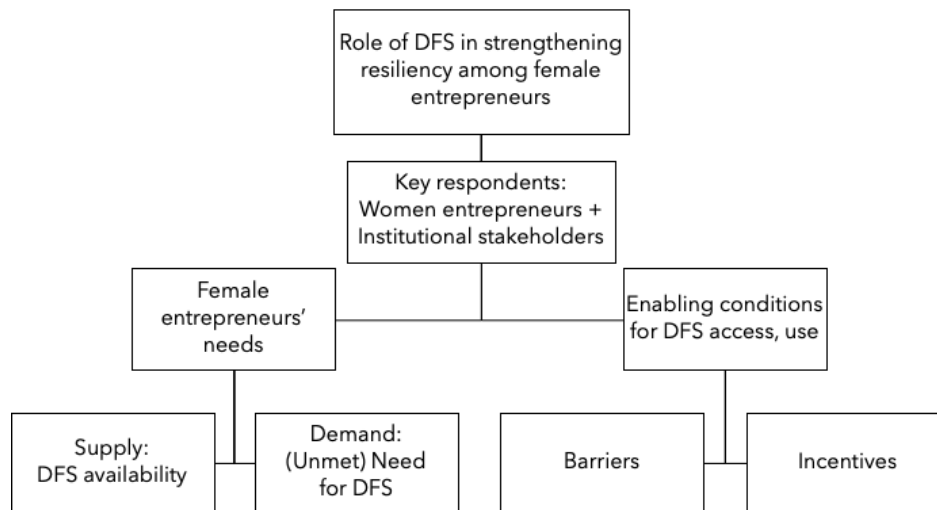
⁸ Martin, C. et al (2016) USAID Guide to the Use of Digital Financial Services in Agriculture.

⁹ Martin, C. (2017) - ibid

¹⁰ USAID. (2018). Resilience in the Sahel Enhanced (RISE) II, Technical Approach Working Paper.

¹¹ USAID. (2018). Resilience in the Sahel Enhanced (RISE) Gender Analysis.

Figure 1 – Research Framework



2.2. Research Strategy

The strategy adopted to respond to the two questions consisted of four phases and took place between June 2019 and December 2019. The research approach was qualitative, with data collected from different sources to triangulate information and increase confidence in the results.

- **Phase 1** – Identification of research questions and determination of the scope and features of the study design
- **Phase 2** – Data collection through interviews and focus group discussions with entrepreneurs and institutional stakeholders working in the DFS sector
- **Phase 3** – Analysis of the data collected through the interviews and discussions, identification of key results and lessons for local decision-makers
- **Phase 4** – A series of research dissemination events to relevant stakeholders well-positioned to act on the main findings

As of the writing of this report, Phases 1, 2, and 3 have been completed, with Phase 4 to begin imminently.

2.2.1. Research populations

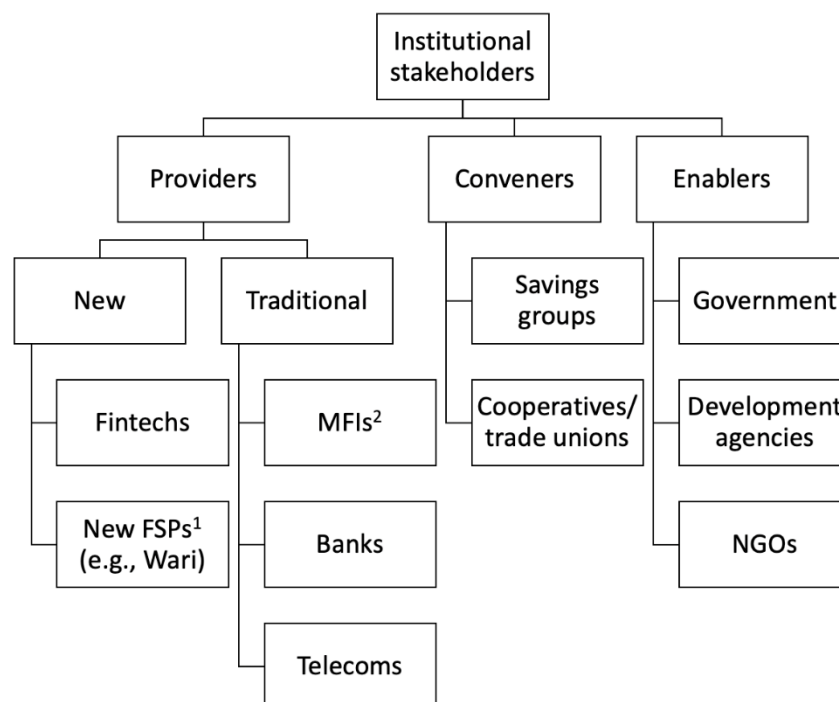
The operational framework for institutional stakeholders, which we call the “supply-side,” was designed around three types of organizations (see Figure 2):

- **DFS Providers:** Providers are organizations that design and deliver DFS. They include not only traditional actors such as banks and telecom companies, but also newer players like financial technology (fintech) startups. It is important to understand providers’ perspectives (including staff and third-party agents) and approaches. This includes the design principles

and assumptions providers use when creating services as well as the challenges and opportunities that emerge during DFS implementation.

- Conveners: Conveners are organizations that aggregate DFS users, which allows them to provide services in a more effective manner, as they are reaching more people. By talking to conveners, the research team was able to understand the unique characteristics of these networks, and the preconditions they pose to the appropriate deployment of DFS.
- Enabling Organizations: Enablers are the organizations creating and maintaining the institutions that DFS needs to function as an integrated system. They help in the design of regulations, policies, and programs, as well as in the identification of organizational gaps and diffusion of best practices. From them, the team learned more about the history of DFS in the country, major sectoral initiatives, and current DFS challenges and opportunities at a systemic level.

Figure 2 – Sampling Framework for Supply-side Stakeholders



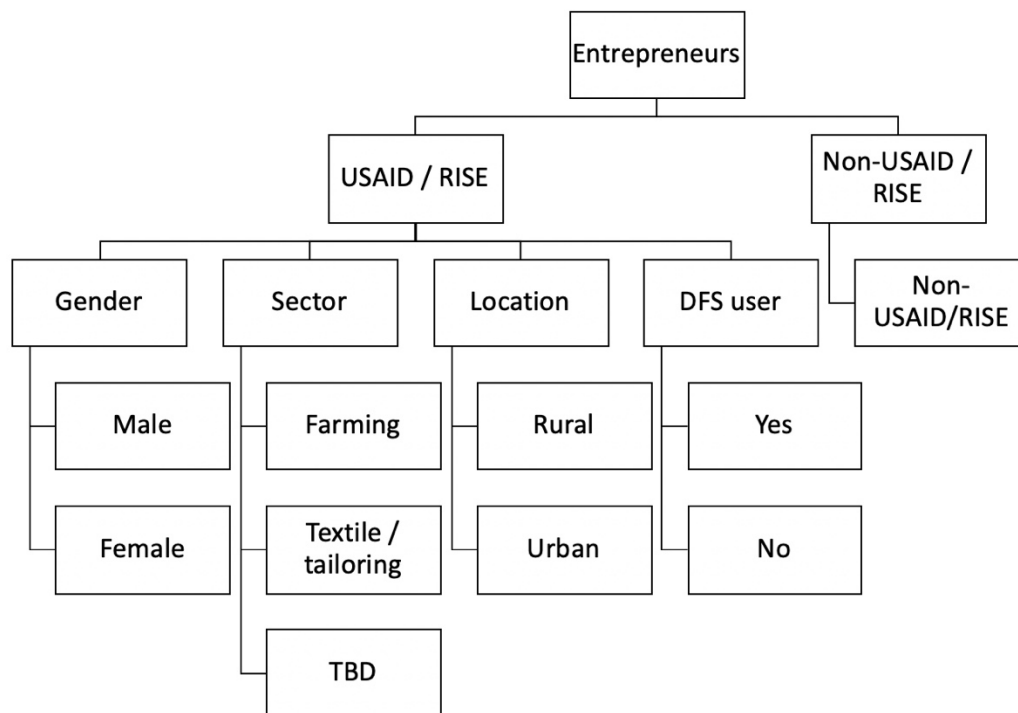
¹ Financial service provider ² Microfinance institution

The operational framework for entrepreneurs, which we call the “demand-side,” was designed according to the following criteria (see Figure 3):

- Institutional Partners: Since USAID is the main institutional partner of the study, the research took advantage of its infrastructure and contacts in the field for data collection. However, the research sought to minimize potential selection bias by also collecting data through additional partners. These were organizations without formal connections to USAID, such as local DFS providers or workers’ cooperatives.

- **Location:** The study focused on areas where access was feasible, where a population of entrepreneurs existed, and where business practices were diverse and representative of the local context. Recognizing USAID as our main implementing partner, it was critical that research sites overlap with areas where USAID projects are operational.
- **Gender:** Local social norms and other contextual factors mean that women and men have different experiences when it comes to DFS access and use, whether for personal or professional purposes. Given the gender focus of the study, female entrepreneurs comprised the majority of the sample, with male entrepreneurs included in the sample for comparative purposes.
- **Sectoral Variety:** Effort was made to include entrepreneurs engaged in myriad business activities to gain a breadth of experiences and perspectives.
- **DFS Adoption:** One of the objectives of the study was to understand the differences of behavior patterns between smallholder farmers that adopt DFS and those who do not. As such, research sampling, methods, and questions were designed to capture the experiences of DFS users and non-users alike.¹²

Figure 3 – Sampling Framework Demand-side Entrepreneurs



¹² Because focus group discussions were coded and analyzed at the group level, DFS user versus non-user analysis is largely not possible. With additional analysis, subsequent publications will provide a more detailed analysis by individual.

2.2.2. Sampling strategy

Based on the research framework, strategy, and targeted sample populations, a sampling strategy was developed to address methodological issues (reducing bias, ensuring representativeness) as well as logistical issues (feasibility given time and resources).

On the supply side, the priority was to create a variability sample,¹³ where respondents provide a diverse set of perspectives about DFS and its relevance to entrepreneurs. As shown in Figure 2, we were able to meet with representatives from every segment except a savings group and the government.¹⁴ However, we met our goal of conducting interviews with representatives from the three supply-side categories: conveners, providers, and enablers. On the demand side, we used purposive sampling to ensure that our respondent pool was representative across different groups of entrepreneurs. Where possible, we used supply-side stakeholders to help recruit potential entrepreneurs. Orange and United Nations Capital Development Fund (UNCDF) were particularly helpful in recruiting potential demand-side respondents.

Both the supply- and demand-side samples were split between urban and rural areas. For urban areas, we focused on various neighborhoods within the capital of Ouagadougou, as well as Kaya, the capital of the Center-North region. For rural areas, we focused on two departments in the Center-North region, Boussouma and Korsimoro. These locations were chosen due to the fact that they were within RISE II's operational coverage, they were accessible from the capital (where the research team was based), and they were deemed to have lower security risks relative to other parts of the country.

2.3. Research Method

The research method was qualitative in nature, drawing on interviews and group discussions with recruited respondents. Time and resources prohibited a quantitative approach, such as a survey, that would have required a large sample size across a sizable geographic area and a substantial staff of research assistants and enumerators. The fact that the study was not evaluating a specific project or program precluded other quantitative approaches, such as an impact evaluation.

The qualitative research approach allowed for the study of subjective data in a flexible yet systematic manner. Protocols were developed for both the interviews and focus group discussions so that across all of them, a similar structure and set of topics was covered. Because so much of DFS use and adoption is based on subjective experiences and perceptions, a qualitative method assisted the research team in capturing people's thoughts and ideas in their own words.

¹³ Daniel, J. (2011). *Sampling essentials: Practical guidelines for making sampling choices*. SAGE Publishing.

¹⁴ Repeated attempts were made to schedule meetings with leadership in relevant government organizations and savings group, but without success.

2.3.1. Semi-structured interviews

The researchers conducted interviews with representatives of organizational stakeholders outlined in the research framework. An interview protocol was prepared to structure each interview,¹⁵ which lasted between 45 minutes and one hour.

The interview protocol consisted of four parts, with various subsections:

- Organizational characteristics: organizational history and key milestones, current and future projects;
- The DFS landscape: engagement with DFS, identification of DFS system gaps;
- Role of DFS in entrepreneurship: perception of links between DFS, entrepreneurship, and resiliency; and
- Perception of barriers and incentives to DFS use: why people are comfortable or not using DFS, gender dynamics.

2.3.2. Focus group discussions

Focus group discussions, or FGDs, were used as a mechanism for data collection among entrepreneurs. This methodology allows for the collection of information from a relatively large number of respondents within a short timeframe.¹⁶ Additionally, those who cannot read or write (such as several of the entrepreneurs in our sample) and people who may feel uncomfortable with individual interviews appear to be more amenable to FGDs.¹⁷

Each FGD consisted of five people, either all women or all men. The goal was to have 75% of FGD participants be women and 25% be men (for comparative purposes). Each FGD lasted approximately an hour, and each participant was compensated monetarily for their participation. Burkinabe research assistants were instructed on how to conduct the group discussions over the course of two training sessions. The protocol for each FGD consisted of five parts:

- 1) Participant descriptions of their entrepreneurial activity;
- 2) Participant definitions of (D)FS: transfers, payments, savings, credit, insurance;
- 3) How participants use (D)FS for professional and personal activities;
- 4) Participant perspectives on barriers and incentives to DFS use with a focus on gender dynamics; and
- 5) Exploration of the links between DFS, entrepreneurship, and resiliency.

2.3.3. Analysis: transcription and coding

Each interview and FGD was recorded (with permission), transcribed, and translated by research assistants. The transcriptions were then analyzed using Dedoose, a software package designed

¹⁵ Kallio, H., Pietilä, A. M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: developing a framework for a qualitative semi-structured interview guide. *Journal of advanced nursing*, 72(12), 2954-2965.

¹⁶ Stewart, D. W., & Shamdasani, P. N. (2014). *Focus groups: Theory and practice* (Vol. 20). SAGE Publishing.

¹⁷ Kitzinger, J. (1995). Qualitative research: introducing focus groups. *Bmj*, 311(7000), 299-302.

for qualitative and mixed methods research. We employed a “grounded approach” to the analysis, whereby each transcript was read in its entirety (several times) and codes were applied to specific phrases or sentences. The codes emerged from the texts themselves as they were read, though they stem largely from the structure of the interviews and discussions. In total, there were 127 unique codes created, 508 excerpts coded, and 1,050 code applications.

2.4. Research Strengths and Limitations

The qualitative nature of the study allows for research subjects to relate their experiences in their own terms. It allows for the emergence of rich descriptions and explanations that are difficult to get from more quantitative, standardized methods. As a result, quotes from research participants that are representative of the themes and issues we discussed are included in our results.

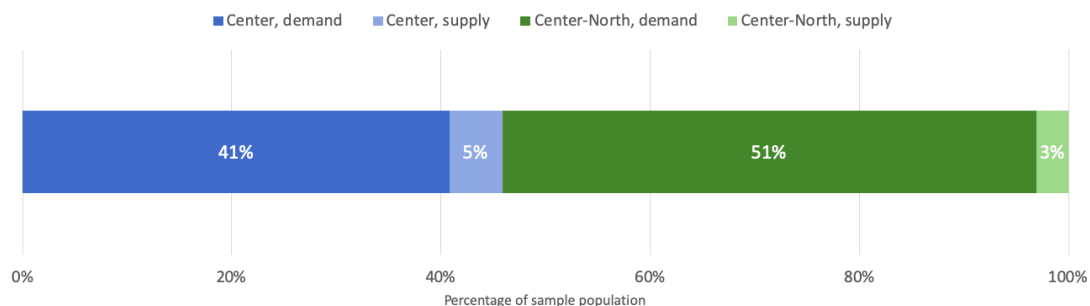
Limitations of the study stem from its small sample size, narrow geographic representation, and cross-sectional data, representing a snapshot in time rather than tracking dynamics over time.

3. RESULTS

3.1. Sample Characteristics

In total, 11 interviews and 18 FGDs were conducted. Of the interview participants, eight consented to recording and were included in the formal analysis. Of the FGDs, 14 were female only (70 participants) and four were male only (20 participants). One FGD was excluded from analysis because it was considered a pilot discussion, having been administered before the final FGD protocol was standardized. Figure 4 shows the research population by region and type. In total, 98 research subjects were included in the final dataset.

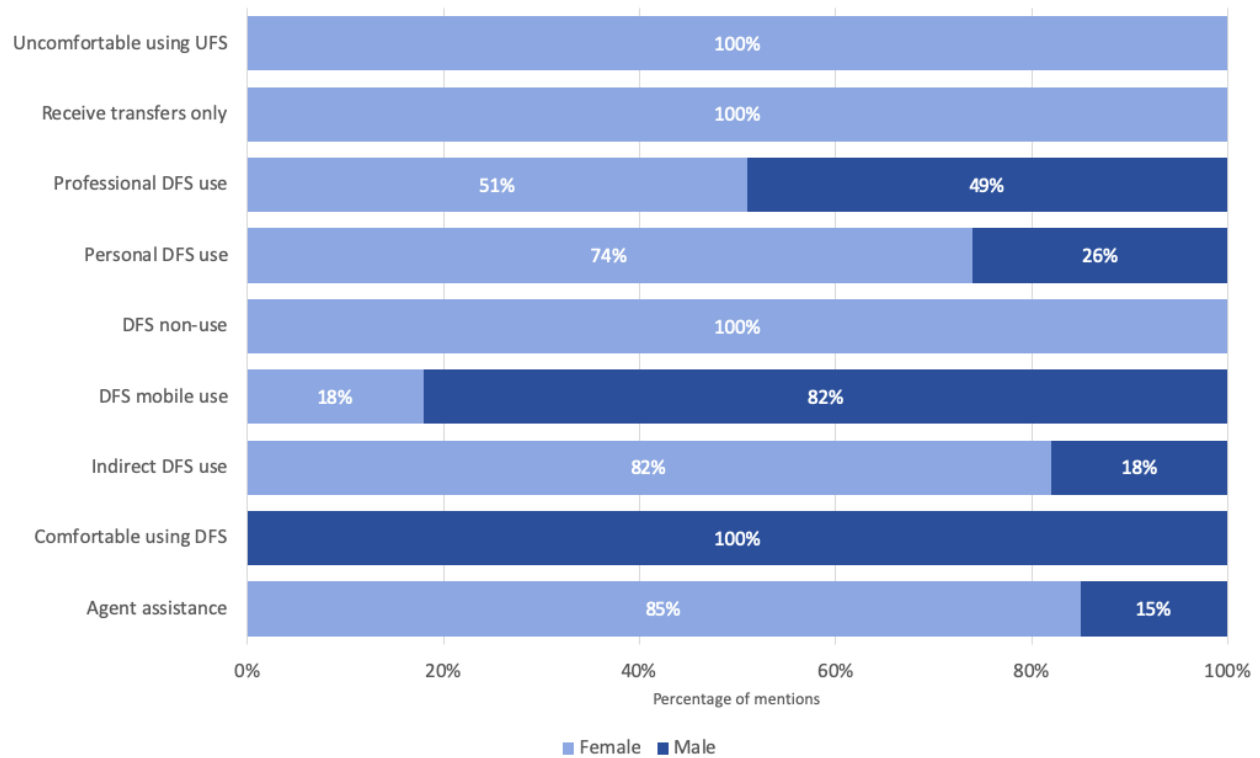
Figure 4 – Sample, by Region and Type



Among the demand-side respondents, there were 68 DFS users (38 female, 30 male) and 32 non-users (all female). Our sample, in alignment with previous research, finds a gendered pattern to DFS use. As shown in Figure 5, women (relative to men) were more likely to express:

- Using agent assistance;
- Discomfort or unease in using DFS;
- Indirect use (reliance on a family member or friend to complete transactions);
- Personal use of DFS, as opposed to professional use; and
- Only receiving transfers, as opposed to also sending money digitally.

Figure 5 – DFS Use Patterns, by Gender



3.2. Key Findings

Below are the key findings from the analysis completed thus far.

3.2.1. Code co-occurrence analysis highlights the interconnectedness of DFS barriers

Code co-occurrence is the degree to which one text excerpt is flagged with two different codes. Figure 6 shows an example of a visual representation of a co-occurrence matrix. For example, the following quote was coded both as “Lack of education” and “Lack of means/resources”:

[Prompt: Why do some women not use DFS?] *“It’s related to education and the lack of means for women to finance their projects. Women’s education has been neglected for a very long time by our leaders, which is why people like me do not currently have as much as we could. It will be necessary to improve our education and thus give us the means to increase our activities.” (Female FGD participant)*

Code co-occurrence analysis helps us understand how themes and topics relate to one another. In our sample, the highest instances of co-occurrence were for the following codes (with the number of co-occurrence instances in parentheses):

- Financial/work activity & DFS (unmet) needs (17)
- Gender & Lack of means/resources (12)
- Lack of means/resources & Lack of education (12)

- Quick access to money in an emergency & DFS resilience (12)
- Gender & Lack of awareness/knowledge of DFS (10)
- Lack of means/resources x Lack of awareness/knowledge of DFS (10)

Figure 6 – Example Visual Representation of Code Co-occurrence

	Demand-side	Barriers to DFS use	Age	Agent non-availability	Can't cash out	Errors or mistakes during transfer/service	Fear of being taken advantage of	Issues with non-physical money	Lack of (large) enough financial activity	Lack of awareness / knowledge of DFS options	Lack of education / literacy	Lack of means / resources	Lack of skills / low confidence
Demand-side													
Barriers to DFS use									3	3	7	2	3
Age											1		
Agent non-availability													1
Can't cash out													
Errors or mistakes during transfer/service							1			1		1	1
Fear of being taken advantage of						1				1	4		2
Issues with non-physical money										1	1		
Lack of (large) enough financial activity		3									1	5	3
Lack of awareness / knowledge on DFS options		3				1	1	1			8	10	5
Lack of education / literacy		7	1				4	1	1	8		12	5
Lack of means / resources		2				1			5	10	12		5
Lack of skills / low confidence		3		1		1	2		3	5	5	5	

The co-occurrence analysis reveals several interesting points, which are discussed in greater detail in the following section. First, there seems to be a mismatch between the nature of women's entrepreneurial activities, which tend to consist of numerous transactions of small monetary

amounts, and their DFS needs. Second, a lack of means/resources, education, and awareness/knowledge (which often co-occur) appear to be significant barriers to greater DFS use and adoption.

3.2.2. DFS does not meet the needs of women's entrepreneurial activities

Female entrepreneurs do not perceive DFS as conducive to, or compatible with, their professional lives. For instance, high transaction costs are prohibitive for people making several small transactions over the course of a day.¹⁸ As one female FGD participant notes:

"The transaction costs are very high. For a withdrawal of 5,000 FCFA (\$8.30) from an account, you pay 250 FCFA (\$0.40) [in fees]. If we could reduce the cost of withdrawal to 100 FCFA (\$0.15) for those with an account, it would be able to help us women. For those who do not have an account, it is worse, they have to pay 400 FCFA (\$0.65) and there is a code. ... One strategy to help women and get them to use these services is to make account transfers free of charge for women." (Female FGD participant)

The use of DFS to make small transactions appeared gendered in our sample. As the first and second quote below show, men and agents point to the fact that DFS is conducive to small transactions. As the third and fourth quotes show, however, this same perception is not shared among female entrepreneurs.

"Yes, I use DFS. The advantage with using the phone is that you can remove small amounts like 2,000 FCFA (\$3.30) whereas in the bank you would feel ashamed to withdraw such a small amount. With your phone, you remove the amount equivalent you need without shame or embarrassment." (Male FGD participant)

"Often, [women] believe that their activities are not conducive to using these services. However, this is not true because you can deposit any amount, even 500 FCFA (\$0.80)." (Mobile money agent interview respondent)

"We do not have the means (money) like men. We can hold 15,000 FCFA (\$25), which is a small amount so we cannot take this amount to go deposit into the account. The level of our activities is low." (Female FGD participant)

"[Men] have much more financial means than we women. As an example, a woman who sells cakes will not be able to use these services in her work because her turnover is small." (Female FGD participant)

This seems to point to the need for information campaigns among female entrepreneurs to raise awareness about the benefits of DFS when it comes to transactions involving relatively small amounts of money.

¹⁸ Each company and service has its own fee schedule, but generally the costs scale relative to the amount of money being transferred.

3.2.3. Lack of trust, within households and between women and agents, hampers confidence in (D)FS use

Beyond (perceived) unmet needs based on the kinds of transactions being made, a lack of trust—between women and their husbands, and between women and agents—seems to impede greater DFS use, and FS use more broadly. Women often expressed that they are not financially independent and require their husband’s approval or knowledge to manage financial resources and conduct business activities. However, they also expressed doubt about their husband’s ability to manage financial resources more responsibly than them, leading to situations such as this:

“For me, I know women have been prevented [from working] because at some point, if the man sees his wife is doing better financially than him he becomes embittered and seeks to limit his wife’s activities, but with time, they have understood that if the woman wins it is for the good of the whole family and begins to encourage us. As for the opening of accounts, a man often does not object, but when he realizes that you can have 10,000 FCFA (\$16,65), he begins to withdraw those funds from the house instead of leaving them in our hands. This is why we prefer to inform the eldest son of the opening of the account.” (Female FGD participant)

For the most part, women spoke about these tactics in reference to financial services generally, and not necessarily DFS. A handful did mention specifically keeping some of their earnings hidden from their husband so they could exercise greater freedom over their money, and so it could act as a “rainy day” fund. In any event, a situation like this can create divisions within the household that may undermine women’s empowerment through financial inclusion. Such household dynamics, which may act as strong deterrents to DFS use, should be taken into account when designing programs targeted toward women.

Beyond the household, women expressed concern over using agents for assistance, though they often need their help as they lack the confidence or know-how to make digital transactions alone using a phone, website, or application. This concern is tied to a lack of education and the fear that they might be taken advantage of, as expressed in this quote:

“It’s not easy if you haven’t attended school. You expose yourself to significant risks. The agent or operator can easily rip you off. I have been a victim. Once I counted 200,000 FCFA (\$333.30) over five times to make sure it was the right amount. The next day I went to the agent to deposit it in my supplier’s account, and, to my surprise, he told me that it was only 190,000 FCFA (\$316.65). This happens again and again, but I have no choice because my supplier requires a deposit is made in his account a day before the delivery of eggs.” (Female FGD participant)

Supply-side DFS agents expressed similar points of view:

“For some women, it is fear [that explains why they don’t use DFS]. Fear that they will not be able to recover their money in the event that it is lost. There is an

education problem, which limits their understanding of things. There was a woman who came this morning to open an account to deposit money. She asked me what the risk was if her cell phone were lost. You immediately see the fear in their eyes...[barriers to DFS use] are mainly the transaction costs. Indeed, customers often think that we want to defraud them. They don't understand certain things about these costs.” (Male agent interview respondent)

This is complicated by the fact that women are more likely to use agents, or to enlist the help of a friend or family member to use DFS:

“There are operators everywhere who can help us, or even our children.” (Female FGD participant)

“For me, it is the children who help me with everything because I don't know how to handle these [transactions]. It is mainly related to school. I do not use mobile transactions in my work but the children send me money and whoever is with me takes care of withdrawals at the market.” (Female FGD participant)

This means that women rely on others to use DFS, even when, at times, they do not trust those other people to act in their best interest. Trust, as discussed elsewhere,¹⁹ is an important factor when promoting digital technologies among women. This study corroborates this point when it comes to DFS among female entrepreneurs in Burkina Faso. Programs that not only increase women's awareness of, or access to, DFS, but that also include strategies to build trust—such as enlisting trusted intermediaries, events to foster mutual exchange, and hiring agents with ties to local communities—will be more likely to succeed.

3.2.4. Barriers and benefits to DFS

As shown in Figure 7, the three primary barriers that emerged from the coding analysis are: lack of means, education, and awareness. “Lack of means” generally referred to lack of financial resources, though this also encompassed a general lack of resources such as capital assets. Lack of education typically meant the absence of formal education, while lack of awareness meant not knowing about what types of DFS are available and from whom.

These barriers were not always evenly distributed geographically. Barriers were concentrated mostly in rural areas, since last-mile customers are more difficult to reach and tend to have less access to services compared to urban customers. Among women, lack of awareness, lack of skills, and unmet (D)FS needs were most concentrated in rural areas. Among men, all barriers exhibited a rural bias. Some barriers, however, such as network connectivity and lack of financial activity, were shared more equitably across geographies. Among women, lack of means was more equitably spread across geographies than the other barriers, implying that limited access to financial resources was a barrier, regardless of location. These barriers point to important social

¹⁹ Spencer, S., Nakhai, M., and Weinstock, J. (2018). The role of trust in increasing women's access to finance through digital technologies. USAID.

factors underlying DFS use—namely, the lower educational attainment of women and fewer financial resources available to them.

Women also noted on occasion that they had more responsibilities than men, which limited their time and ability to use DFS. While perceived as a barrier, this could be an opportunity to instead understand how DFS can and should fit into the busy, demanding lives of women for their benefit—for instance, by highlighting how using DFS saves time by reducing travel requirements to transfer or deposit money, and facilitates secure business transactions. This also suggests that co-locating DFS access points in places women frequent may help facilitate greater DFS use through greater DFS integration into the established daily routines of women.

Figure 7 – Barriers to DFS Use, by Gender and Geography²⁰

Descriptor	Codes									
	Lack of awareness / knowledge of DFS options	Lack of education / literacy	Lack of means / resources	(D)FS (unmet) needs	Lack of skills / low confidence	Network / connectivity issues	Lack of (large) enough financial activity	Fear of being taken advantage of	Issue with non-physical money	Negative past experience
Female	56	54	76	49	33	27	20	10	10	7
Female (large urban area)	13	19	24	10	10	1	11	6	1	
Female (small urban area)		6	10	3		11			9	
Female (rural area)	43	30	41	36	23	14	9	4		7
Male	25	30	5	45	20	45	10	25	40	
Male (large urban area)										
Male (small urban area)						5			10	
Male (rural area)	25	30	5	35	20	20		25	25	

Percentage of code count by descriptor

²⁰ “Urban large” refers to Ouagadougou, while “urban small” refers to Kaya. Rural refers to respondents in the departments of Boussouma and Korsimoro.

The main benefits associated with DFS use among women were convenience and safety/security (among men, ease of use was an additional benefit), as shown in Figure 8. These benefits were concentrated mostly in rural areas—that is, rural residents were more likely to list benefits than their urban counterparts, implying a greater demand or desire for DFS. As with barriers, this makes sense since last-mile users tend to be in remote rural areas that are underserved by traditional finance institutions. Among women, convenience, saving money, and ease of use exhibited a larger bias toward rural areas, implying a greater need or appreciation for these benefits. Among men, convenience and safety/security were the main benefits that exhibited a rural bias, while ease of use was spread more equally across urban and rural areas. This demonstrates the gendered nature of DFS use. First, it shows that men are more comfortable using DFS, since they list ease of use as a main benefit while women do not. Second, while there is some overlap (convenience), men and women seem to evaluate DFS differently. This supports the view that perceptions of DFS are gendered, and that programs and approaches that consciously target women need to understand their specific needs and viewpoints.

Figure 8 – Benefits to DFS Use, by Gender and Geography

Descriptor	Codes				
	Helps save money	Convenience: Saves time, reduces travel	Ease of use	Quick access to money when needed	Safety / security
Female	10	34	13	13	43
Female urban large	1	7	1	7	16
Female urban small	1	6	3		3
Female rural	7	21	9	6	24
Male	10	45	45	30	60
Male urban large	10	15	15	20	25
Male urban small			10		
Male rural		30	20	10	35

Percentage of code count by descriptor

3.2.5. Entrepreneurship is viewed as a necessity, not a “calling”

In many developed country contexts, entrepreneurship is seen as a “calling” for individuals who want to be innovative, take risks, and solve problems. However, in this study, women engaged in entrepreneurship as more a necessity than a choice:

“If I am at the market it is because of lack of employment. I studied and I even have the BEPC level. In our [Muslim] religion, once you're married, it's hard for your husband to let you work unless he's studying. This is the main cause of my presence in the market. Being here was not part of my plans. It was to help my husband because he alone could not support the children.” (Female FGD participant)

This “push” rather than “pull” to business, provides important context for DFS use (or lack thereof) among female entrepreneurs. For instance, typical media campaigns targeted to entrepreneurs that focus on the excitement surrounding innovation, new technologies, or opportunities to create new products, will likely not resonate with these women.

3.2.6. Link between DFS and resilience mostly in personal, not professional, terms

The use of DFS to increase resilience among the study population was mainly understood in informal terms—that is, being able to receive (or send) money quickly when you need it or something unexpected occurs:

“In the event of a catastrophe, for example a problem of money or sickness or, when you have an account you can easily make a withdrawal and solve your problem or ask people you know for assistance to send you money. The use of DFS greatly enhances our resiliency.” (Female FGD participant)

The fact that DFS was not linked to entrepreneurial activity may stem from the larger issue, discussed in the findings above, that women perceive DFS to be incompatible with their business activities. However, there was one case in which a participant mentioned that credit (ostensibly through digital means) would be conducive to improving resilience by helping manage risks:

“Once I asked my supplier to send me goods and I paid for it using Orange money. When I went to pick it up, I couldn't find it. We called around and asked everyone, without success. Fortunately, he still had the shipping numbers and I was partially compensated. If the telephone operators could allow us to access credit to cover our risks, it would help us.” (Female FGD participant)

Making such cases more explicit to women and communicating the benefits in ways that resonate more with them, such as helping them better to provide for their children and households, would be an important step toward fostering greater DFS adoption for improving resilience.

4. CONCLUSION

The analysis of the interviews and FGDs shows a clear and significant gender difference in DFS use, barriers, and perceptions. Use patterns are gendered. Unease and lack of confidence concerning proper DFS use make women more likely to express needing assistance from friends, family, or DFS agents, despite voicing anxiety about easily being taken advantage of. DFS use among women is typically for personal use only, and to receive funds as opposed to send funds, which many women considered more difficult. Lack of means, education, and awareness are the main barriers to women's DFS use. Trust is identified as another key barrier hampering DFS uptake among women, whether it is between a wife and her husband or between a woman and a DFS agent. Finally, the link between entrepreneurship and resilience and DFS as a tool to enhance resilience, was not well understood by the research participants. The weight placed upon different DFS barriers and benefits vary by gender as well as geography. This points to 1) the danger in assuming broad-based similarities in the ways people evaluate DFS and the need for gendered understandings of technology use; and 2) the particular challenge of reaching last-mile customers concentrated in rural areas, who generally specified more barriers to DFS use as well as more benefits, which can be interpreted as greater demand or need for DFS.

These barriers, which rest on gendered norms related to the power and role of women, operate at the societal level and will take time to modify, requiring long-term and sustained advocacy, policy, and programmatic efforts by donors, governments, NGOs, and other stakeholders. Serious thought should be directed toward designing a coherent, integrated DFS strategy that lays out the timing and sequencing to address key issues that would disrupt barriers and reinforce benefits to facilitate Burkina Faso's realization of women's resilience and financial empowerment. Key issues include women's formal education, control over financial resources, ability to earn income, level of digital literacy, and belief in the convenience and safety/security of DFS.

We can therefore begin to provide initial answers to the two main research questions that drove this study:

- **Research question 1 – The role DFS plays in making female entrepreneurs more resilient:** At present, DFS has a rather limited role in fostering resiliency among female entrepreneurs. Two main reasons account for this. First, female entrepreneurs believed that their professional financial transactions, high in volume but low in monetary amount, did not make DFS attractive due to transaction fees. This meant that women did not often use DFS for their day-to-day entrepreneurial activities. Second, resilience was largely understood in personal terms, dealing with unexpected shocks such as fires or sudden health issues. Mentions of any entrepreneurial-resilience link were largely absent from focus group discussions. However, women did understand the benefits of DFS and did express interest in using it more, indicating a real opportunity to meet that demand with targeted supply. The recommendations in the next section speak to these opportunities in more detail.

- **Research question 2 – The conditions that permit greater DFS access and use among women:** Our study supports earlier research that household dynamics play a key role in DFS use, and FS use more generally. On the one hand, power dynamics between wives and husbands often means that women lack the agency to make independent financial decisions. In some cases, women have hidden their financial activity—opening bank accounts, saving money—from their husbands, to reclaim some sense of independence. On the other hand, access to trusted friends and family, often younger individuals with greater digital literacy, can help facilitate indirect DFS use by completing digital transfers and payments on behalf of women. This is a seemingly common practice that is not fully captured in current academic studies on DFS. Further, women often expressed fears that, because they were not well-educated, they could be easily taken advantage of by agents whom women did not always trust to faithfully execute transactions. This suggests numerous strategies to improve women’s DFS use: improving digital literacy, promoting trust between women customers and agents, and/or creating new monitoring and customer protection mechanisms that give women the means to verify digital transactions or contest them meaningfully if needed. Women also expressed having many responsibilities which hinder their ability to use DFS, even if they wanted. Co-locating DFS access points in places and spaces that women frequent could help integrate DFS easily into their lives by building on their existing routines.

4.1. Recommendations

Based on the findings above, the following recommendations are presented.

- 1) **Present the value proposition of DFS to female entrepreneurs and provide the tools and information necessary for informed decision-making.** Many women think that their entrepreneurial financial activity, based on small but frequent transactions, precludes them from using DFS professionally. Service providers could think about ways to design and market targeted financial products, such as those for small transactions, which might better serve female entrepreneurs. Donors, NGOs, and other enablers could implement awareness campaigns to help women understand that small transaction amounts can be compatible with DFS use, in addition to the more general benefits, such as saving time and facilitating more secure transactions that do not require transporting cash. This represents an opportunity for the donor community to catalyze private sector activities that would positively impact financial empowerment. Donor support could include, for instance, funding pilot studies of new financial products compatible with small but frequent transactions or sponsoring gendered market segment analyses that make the business case for such products. In addition, as highlighted in USAID’s Digital Strategy 2020, DFS requires women to be well informed not only about benefits but also the risks that come with adoption, such as data privacy and security, fraud, or financial terms that may lead to over-indebtedness. Thus, training activities should highlight the potential risks of DFS, as well as the benefits. Promoting digital and financial literacy should be included in any DFS promotional campaign among women, as it advances consumer protection and forms a core part of responsible DFS advocacy.

- 2) Address norms that discourage gender-equitable financial inclusion through a holistic household- and community-wide approach.** While other research has demonstrated that it is important to include men in programs designed to empower women, our study supports thinking about the whole household, or even community. Bringing other household members, as well as trusted community members, into programs and conversations about DFS use for women, can help foster greater support and minimize potential familial and social divisions—though “how” such participation happens is just as important as “who” is involved.²¹ Norms that view women’s financial empowerment as a threat—for instance, to male authority—can be reframed in positive terms as opportunities or examples of women’s prestige and responsibility in contributing to their household’s well-being.²² Activities that support this positive reframing could include households (wives and husbands jointly) pledging public support for women’s digital and financial independence or community leader-led training and information sessions that harness social ties in support of gender-equitable empowerment. Generally, programs that seek to expand DFS use among women might benefit from thinking through why they were excluded in the first place. They could then address the reasons for the exclusion of women, instead of simply trying to expand DFS to include more people.²³ Put another way, there exist several preconditions that need to be met, and complementary work to be done, if efforts to promote DFS are to be genuinely gender inclusive and equitable.
- 3) Design programs and policies that build trust between women and husbands and women and DFS agents while safeguarding women’s financial autonomy.** When thinking about incorporating DFS into programming that empowers women, especially female entrepreneurs, it may be important to focus on their relationships with their husbands and with DFS agents. Wives sometimes hide financial activity from their husbands because they think men will view their financial activity as a threat to their authority or because men might wish to use those funds in ways women find suspect. As potential barriers to women’s financial empowerment, changing men’s attitudes and perceptions requires careful consideration. However, doing so should not come at the expense of women’s ability to maintain their freedom and safety, financial or otherwise. If men’s attitudes do begin to change and women feel secure, initiatives such as joint financial accounting or public savings/spending commitments could be employed as a way to generate trust and transparency between wives and their husbands. However, care

²¹ Agarwal, B. (1997). "Bargaining" and gender relations: Within and beyond the household. *Feminist economics*, 3(1), 1-51.

²² Lenjiso, B. M., Smits, J., & Ruben, R. (2016). Transforming gender relations through the market: Smallholder milk market participation and womens intra-household bargaining power in Ethiopia. *The Journal of Development Studies*, 52(7), 1002-1018.

²³ Natile, S. (2020). *The Exclusionary Politics of Digital Financial Inclusion: Mobile Money, Gendered Walls*. Routledge.

must be taken to ensure that “joint” activities become the basis for equitable decision-making, as this is not a given.²⁴ In the interim, if men’s attitudes have yet to change, women will continue to need private access to financial means, which could be facilitated through independent DFS training as well as reliable availability of agents, mobile phones, and internet. It is equally important to facilitate interaction and opportunities to form trust between women and DFS agents. Since DFS agents tend to be the primary point of interaction, efforts to build trust between women and agents should be a focal point of future DFS programs. Women describe being placed in a difficult position with few alternative options. On the one hand, women prefer the assistance of agents because they lack the know-how and confidence to complete DFS activities on their own. On the other hand, women do not always trust agents not to exploit their lack of education and knowledge about DFS. Enhancing women’s confidence through improved digital and financial literacy could help close the knowledge gap typical of women-agent relationships and make financial abuses less likely. Strengthening digital-financial ecosystems could have a similar effect. Policies that strengthen accountability measures, such as legally-enforced and easy-to access complaint mechanisms, or that incentivize agent performance, such as rewards for good customer service, would help safeguard women and create an environment where trust can flourish. Future programs could also try to address women-agent trust gaps by testing, for instance, whether women DFS agents are considered more trustworthy by women clients.

- 4) Demonstrate the potential link between resilience and entrepreneurial activity among female entrepreneurs.** Among female entrepreneurs, resilience was primarily understood as the ability to get cash quickly for personal emergencies. The relationship of resilience to entrepreneurial activity was virtually non-existent among the female entrepreneurs with whom we spoke. This is perhaps linked to the fact that most women began their entrepreneurial activity out of what they believe was a necessity, rather than a choice. Campaigns should clearly articulate how DFS use can help women in their entrepreneurial activities, which can then help them better provide for their families and contribute to resilience. Moreover, previous research has suggested that spouses who increase their economic opportunities through work outside the home wield greater household decision-making power.²⁵ To the extent that it can further female entrepreneurs’ gainful employment, DFS could help enhance the bargaining power of wives relative to their husbands’. As of yet, a resilience-entrepreneurship-DFS link is not evident for most women engaged in entrepreneurial activity. Positive marketing to female entrepreneurs could counter and elevate perceptions about the nature of their work by characterizing it as a way they contribute meaningfully to their own and to their households’ resilience.

²⁴ Acosta, M., van Wessel, M., Van Bommel, S., Ampaire, E. L., Twyman, J., Jassogne, L., & Feindt, P. H. (2020). What does it mean to make a ‘joint’ decision? Unpacking intra-household decision making in agriculture: implications for policy and practice. *The Journal of Development Studies*, 56(6), 1210-1229.

²⁵ See, for instance, Antman, F.M. (2014). Spousal employment and intra-household bargaining power. *Applied economics letters*, 21(8), 560-563.

Such promotion, however, must be paired with service packages and programs that provide training and information to engender sufficient digital and financial understanding to minimize risks while maximizing benefits.

4.2. Potential Next Steps

Potential next steps fall into two categories, short-term and long-term.

In the short-term, further analysis of the transcripts may provide additional insights related to the research questions. For instance, these findings have primarily drawn from analysis of demand-side FGDs. Closer readings of supply-side interviews could produce additional insights to the findings presented here. Dissemination activities, such as presentations, webinars, and design workshops are planned to spread the word on these findings.

In the medium-term, identifying actors and organizations that are well positioned to take action on these recommendations will be an important step. Pursuing partnerships with practitioners willing to explore how to incorporate these recommendations into their programming will not only showcase ways in which to translate the research into real-world applications, but also further build the evidence base for improving DFS delivery to female entrepreneurs.

In the long-term, a more ambitious study, such as a nationwide survey, could expand upon and could further validate the findings from this study. One exciting avenue would be to analyze existing data and to shape future data collection. UNCDF in Burkina Faso expressed early interest in these kinds of activities. Such future activities are subject to additional funding and identification of appropriate organizational partners.

In general, while the research provides new insights about the gender dynamics that underpin DFS use, especially for female entrepreneurs, our study also raises additional research questions. For instance, a main finding of the study indicates that, to date, the (conscious) link between DFS for entrepreneurial activities and improved resilience is relatively low among women. Indeed, DFS use remains largely for personal or informal means, such as sending or receiving money in the event of a crisis. Further research could illuminate how this DFS-entrepreneurship-resilience linkage could be communicated in such a way that would prompt greater uptake and positive outcomes, such as more savings. And, while it is understood that certain conditions—such as a fear of being taken advantage of, or being able to trust an agent, or larger issues of education and resource levels—diminish DFS access and use among female entrepreneurs, future research could examine specific strategies for overcoming each of these barriers.