



ORIGINAL ARTICLE

Exploring the Digital Financial Service in Bangladesh: Unraveling the Dynamics of Trust, Fear, and Privacy

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ABSTRACT

The main objective of this research is to understand the dynamics of trust, fear, and privacy in the onboarding process for digital financial services (DFS) that have been playing a crucial role in bringing unbanked and underbanked populations into the formal financial ecosystem. The study employed qualitative data collection methods, including in-depth case interviews, key informant interviews, focus group discussions, and observation, with diverse individuals from urban, semi-urban, and rural areas. Results showed that the onboarding pathway into DFS comprises three phases—pre, during, and post—and involves trust, fear, and privacy, which are context-dependent. Understanding the local dynamics of trust, fear, and privacy is crucial to comprehending the onboarding process, considering the collective nature of Bangladeshi culture, where privacy for sharing private information is a major concern. Findings would be an important guideline for service agents, development practitioners, and policymakers to foster financial inclusion.

1 | Introduction

Innovation of digital financial services (DFS) has the potential to significantly expand financial inclusion through the distribution of financial services to the poor who are unable to access traditional banking services (Ebong and George 2021; Sassi and Goaid 2013). Bangladesh has achieved remarkable success in DFS in the last decade, impacting people, especially those living in rural areas or out of the formal banking system (Murshid et al. 2020; Latifee and Tamanna 2022). Besides making the financial transaction easier, it contributed to growing the country’s overall economy and reducing poverty (Aziz and Naima 2021; Nuryakin et al. 2017). As of August 2022, Bangladesh has documented 110 million registered clients and 41 million active accounts, compared to 67 and 37 million in 2019, respectively (Bangladesh Bank 2022). Although the number of account registrations has

increased significantly, the nature of account usage gives a bleak picture, as most people utilize the basic DFS feature: fund transfer. Despite having numerous other services such as merchant payments, salary disbursement, bills, savings, and loans, a striking 86% of transactions happen solely for fund transfers (Parvez 2023). This implies that individuals frequently underutilize the full potential of DFS, even though it could be a pathway to reduce reliance on cash and improve the quality of financial inclusion.

This article encompasses several key concepts: DFS, onboarding, trust, fear, and privacy. DFS refers to the use of digital technology to deliver financial services and products. Onboarding refers to the process of acquiring new customers, introducing new customers to the system, and granting them access to the financial institution’s products, services, and facilities (Mateo 2021).

Trust, fear, and privacy—the key theoretical concepts of this investigation—are linked with DFS onboarding in various ways. Trust, the act of believing in someone or something, stands as an essential component in all social relationships, with significant importance in individual relationships, group dynamics, civic involvement, and society as a whole (Robbins 2016). Trust in a digital context is the belief or confidence that users have in the reliability, security, and effectiveness of a system or service (Mayer et al. 1995). In the financial sector, trust implies that users believe their transactions will be processed correctly and their personal and financial information will be kept secure (Gefen 2000). According to the Integrative Model of Organizational Trust, trust is developed based on perceived ability, benevolence, and integrity (Mayer et al. 1995). The technology acceptance model posits that trust affects users' perceptions of the ease of use and usefulness of technology, thereby impacting their acceptance and usage (Davis 1989). It is predicted that users will exhibit a higher degree of trust in familiar sources, such as family members or well-known brands, which will facilitate smoother onboarding and greater usage of DFS.

Fear, in the context of digital financial systems, refers to the apprehension or anxiety that users feel regarding potential risks associated with using these services. These risks can include financial loss, identity theft, fraud, and privacy breaches. Fear can significantly impact user behavior, often acting as a barrier to the adoption of DFS (Rogers 1983). The protection motivation theory (PMT) by Rogers (1983) suggests that fear of a threat can lead to protective behaviors, which, in the case of DFS, may include avoiding or discontinuing the use of these services. PMT suggests that fear stems from perceived severity and vulnerability to threats, leading users to adopt protective behaviors (Rogers 1975). Users, particularly those with low digital literacy, women, and the elderly, are likely to exhibit heightened fear, influencing their cautious approach toward using DFS. These fears can result in delayed decision-making, reluctance to share personal information, and dependence on trusted intermediaries for assistance. Understanding and mitigating these fears is essential for promoting wider acceptance and usage of DFS.

Privacy can be defined as an individual's right to choose which details can be shared with others (Pastalan 1970). According to Moor (1991), an individual has privacy if, in that specific context, the individual is protected from intrusion, interference, and information access by others. Privacy, as defined by Westin (2003), is the right of individuals to control the dissemination and use of their personal information. In the realm of digital financial systems, privacy concerns revolve around the protection of sensitive financial data and personal information from unauthorized access and misuse. These privacy concerns can lead to reluctance in adopting DFS due to fears of data breaches and misuse of personal information (Lahlou 2008; Coopamootoo 2020). Users are likely to take measures to safeguard their privacy, such as consulting trusted family members for decisions, visiting familiar agents, and carefully managing their PINs. Addressing privacy concerns through stringent data protection measures and transparent practices is crucial for building user trust and promoting DFS.

Based on the above conceptual and theoretical discussion, Table 1 provides a theoretical foundation for understanding how trust,

fear, and privacy are predicted to influence the onboarding and usage of DFS, offering insights into potential user behaviors and concerns.

DFS, technological innovation in the financial sector, requires proficiency to harness its potential (Broughel and Thierer 2019). Precisely, digital literacy is essential for using DFS, which presents a concern for Bangladesh, particularly for rural areas. Eighty-eight percent of its population has access to mobile phones but, not all of them are able to use them by themselves. Even among the most digitally literate persons in rural households, more than two-thirds cannot send/receive basic text messages, and 61% of mobile financial service (MFS) account holders cannot operate accounts without the help of agents (Shafi 2023). Access to digital devices is also a problem, especially for women in Bangladesh. Just over one-third (34.8%) of female use their own mobile phones to operate their accounts, compared to 62.5% of the male account holders, indicating that women were almost two times more likely than men to rely on others to operate their MFS accounts. Apart from digital literacy and access to the digital world, numerous issues such as the distance of financial institutions, improper funding, limited technical capability, poor network, lack of trust, and lack of awareness are some of the notable challenges that act against the progress of digital financial inclusion (Malladi et al. 2021; Rana et al. 2018).

In the context of the onboarding process, trust plays a significant role as it encourages individuals to adopt and utilize DFS (Heitmann et al. 2018). Fear, on the other hand, is a natural, powerful, and basic human emotion that arises and alerts people to the presence of danger for self-preservation (Izard 1991; Fritscher 2023). Inserting proper information, loss of funds, and fear of technology tend to be matters of great fear in the realm of DFS (González Páramo 2017). Several factors, including perceived usefulness, ease of use, perceived risk, customer-agent relationships, and perceived cost, drive the adoption of the new financial system (Rahman 2021).

Our research covers trust, fear, and privacy across financial services like mobile devices, digital money, and payments, with a primary focus on exploring the usage and impacts of DFS. However, there are many other crucial aspects of DFS or financial inclusion beyond usage and consequences, such as registration (i.e., decision-making, document preparation, visiting agent) and personal identification number (PIN) management. It indicates a lack of comprehensive evidence delving into individuals' experiences as they enter the realm of DFS, particularly in pinpointing the dynamics of trust, fear, and privacy.

Existing literature highlights the impact of various sociocultural factors, such as trust, fear, and privacy, in the adoption and use of DFS from diverse perspectives. For example, in terms of privacy, most pieces of literature talk about the breaching of privacy in digital technology, especially in mobile technology (Ahmed et al. 2019; Coopamootoo 2020; Haque et al. 2020; Sambasivan et al. 2019). Similarly, literature on fear emphasizes specific components of DFS, such as the fear of losing money and the fear of making mistakes (Aziz and Naima 2021; Hazra and Priyo 2021; Sobti 2019).

Against this backdrop, the present study focuses on the DFS onboarding pathway, aiming to analyze each juncture of an

TABLE 1 | Linkage of trust, fear, and privacy with DFS onboarding phases.

Concept	Phase of DFS onboarding	Description	Predicted impact
Trust	Information validation	Users rely on trusted sources (family, teachers, agents) for accurate information.	Higher likelihood of users engaging with DFS when information is validated by trusted sources.
	Decision-making	Trust in known individuals and brands influences user choices (SIM cards, MFS providers).	Users more likely to choose services and providers recommended by trusted sources.
	Document preparation	Trust in individuals for sharing and storing personal documents (photo of NID cards and user's face).	Increased willingness to share personal documents when trust is established.
	Visiting agents	Preference for trusted agents for security and comfort.	Users more likely to travel farther to visit trusted agents, despite the availability of closer options.
	Take a photo of the client	Rely on trusted agents and social practice.	Sometimes lack of trust deters users from complying with this step and using MFS.
	Postonboarding	Trust in agents for setting and managing PINs.	Higher reliance on agents for PIN management and other postonboarding tasks.
Fear	Information validation	Users verify information to avoid misinformation and potential negative outcomes.	Increased caution and delay in acting on information without verification.
	Decision-making	Fear of social norms and religious beliefs influencing female users' decisions.	Hesitation among female users to open accounts without male family members' approval.
	Visiting agents	Women's fear of navigating male-dominated public spaces and unfamiliar agents.	Reduced female participation at agent outlets and preference for familiar agents.
	Take a photo of the client	Women fear uncovering their faces and smiling due to sociocultural norms.	Dependent on particular agents and require accompany.
	Postonboarding	Fear in PIN setting and management, concern over financial loss and fraud.	Reluctance to change PINs and increased dependence on trusted individuals for managing PINs.
Privacy	Information validation	Users share information selectively to protect privacy.	Preference for discussing DFS matters within trusted circles to maintain privacy.
	Decision-making	Collective decision-making while consulting trusted individuals for privacy.	Reliance on family members and trusted individuals for making DFS-related decisions.
	Visiting agents	Preference for agents who respect user privacy and confidentiality.	Users choose agents based on their perceived respect for privacy.
	Take a photo of the client	Women are concerned about sharing the physical and emotional privacy.	Feel uncomfortable while taking photo.
	Postonboarding	Careful management of PINs to maintain privacy and prevent unauthorized access.	Practices like writing down PINs, saving them securely, and sharing only with trusted individuals.

Source: Authors.

Abbreviation: DFS, digital financial services.

individual's transition into the digital financial platform. Specifically, it aims to understand the relevance of trust, fear, and privacy in the onboarding pathway and explores how it affects financial inclusion. Furthermore, it explores the localized dynamics that influence trust, fear, and privacy. To interpret the findings, the study uses a digital anthropological lens that focuses on

the complex interplay between technology and human societies to understand how technology influences cultural norms and traits (Geismar and Knox 2021). The result of the study will be useful for improving the onboarding experience and fostering trust among stakeholders in the emerging financial sector. The recommendations have implications for key stakeholders such

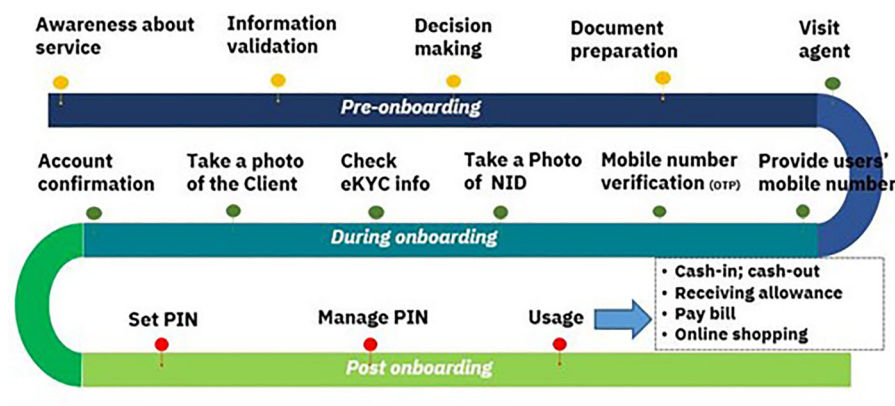


FIGURE 1 | Users' onboarding pathways into DFS. *Source:* Developed by authors.

as digital service providers, regulatory bodies, and policymakers, aiding them in the development of policies, guidelines, and practices that foster a trustworthy and user-friendly digital financial ecosystem.

To understand the relevance of trust, fear, and privacy with people's onboarding into DFS, the study divides the entire onboarding journey into three broad phases: preonboarding, during onboarding, and postonboarding, with distinct steps within each phase (Figure 1). The preonboarding phase includes awareness about service, information validation, decision-making, document preparation, and visiting the on-boarder, concentrating on preparations for onboarding or registration. The during-onboarding phase—providing the user's mobile number, mobile number verification, taking a photo of NID, checking e-KYC information, taking a live photo of the client, and account confirmation—involves navigating the registration systems following the given instructions for registration. Lastly, the postonboarding phase—includes PIN set, PIN manage, and usage—pertinent to using the account. Currently, Bangladesh is home to a total of 13 MFS providers, each with a different market share (Latifee and Tamanna 2022). However, for this study, the authors exclusively focus on analyzing the onboarding processes of the top three providers, which are bKash, Nagad, and Rocket.

2 | Methodology

2.1 | Study Location

This research encompassed three diverse locations—a rural, a peri-urban, and an urban community—in Bangladesh, providing extensive coverage across the country.

2.2 | Research Method and Data Collection Tools

This research employed multiple qualitative data collection methods, including in-depth case interviews, key informant interviews (KIIs), focused group discussions (FGDs), and observations. To ensure consistency and alignment with the research objectives, separate sets of guidelines were developed for in-depth case

interviews, KIIs, and FGDs, along with a checklist for the observation process.

2.3 | Sampling and Respondents

The study employed a purposive sampling procedure, conducting interviews with a total of 84 individuals categorized as banked, unbanked, and underbanked from three selected locations. KIIs were conducted with 17 individuals in intermediary roles, including agents, schoolteachers, social service officers, local UP members, and NGO personnel. Two FGDs were held, one with male and one with female participants from the banked community in the rural location. In addition, observations were carried out at agent shops situated at different points of the local union parishad (UP) to gain further insights into the business practices of local agents and the interactions and behaviors of users during cash transactions, deposits, and account openings.

2.4 | Data Analysis Techniques

The research applied a thematic approach for data analysis, focusing on three main themes: trust, fear, and privacy within the onboarding process of DFS. The study followed a procedure to generate field-level instant reports based on the findings from in-depth case interviews, FGDs, and KIIs. Field notes, including observations, were utilized to document the findings. Thorough manual coding and data editing processes were undertaken to ensure data accuracy and reliability.

2.5 | Research Ethics and IRB Approval

This research adhered to the ethical guidelines of the BRAC James P. Grant School of Public Health, BRAC University, which granted IRB permission. The research team enlisted three research associates and field-level data collectors with significant experience in qualitative data collection. The data collection instruments were prepared in clear Bangla language, and subsequently, the collected data were translated into English following appropriate procedures. Data collection took place between October 2022 and August 2023.

3 | Results

3.1 | Trust

3.1.1 | Trust in Information Seeking and Validation

Conversely, trust is less likely to be placed in information coming from unknown or informal sources such as peers, local elites, and neighbors. However, agents still play a significant role in people's onboarding pathways as the prime source of information about DFS. People often validate the obtained information before taking action, since misinformation coexists with correct information. Women tend to trust their close family members, particularly their husbands or children with technological knowledge, to validate the information. Conversely, men rely on people outside their household, such as agents, representatives of government agencies, and tech-savvy individuals, based on their trustworthy relationships.

3.1.2 | Trust in Decision-Making

Decision-making, a crucial part of the onboarding pathway, also involves trust in various ways. Decisions typically concern the SIM card provider (mobile network operator), MFS provider, and the onboarder (agent). Along with individual trust, trust in the brand or service matters in decision-making. People consult their most trusted circle and rely on local understanding for decisions. In certain situations, individuals are relieved from the need to make decisions about SIM cards, agents, or MFS providers because these are predetermined by authorities. Alamin, an MFS agent, said:

“People place more trust in bKash compared to other companies (MFS) due to its long-standing presence in the market, widespread accessibility, and adherence to the rules.”

3.1.3 | Trust in Document preparation

Furthermore, preparing documents, an essential step in the preonboarding phase, involves trust in various ways. While users typically need their own NID, many people use NIDs belonging to others due to reasons such as lacking their own NID or having a fingerprint mismatch. When people require others' NIDs, they rely on their trusted individuals, both within and outside their household, since it is a personal and sensitive document. For example, Raza Mia, a 56-year-old featured phone user, visited an agent to open an account with a new SIM but was unable to purchase a SIM card because his fingerprint was not working. He then took an NID from his brother-in-law, with whom he maintains a trusted relationship. In some cases, due to limited secure storage space, documents are kept at trusted individuals' houses, such as relatives or close family members. Similarly, trust takes precedence over elements like location, popularity,

and personal connections in choosing agents for accessing digital services.

3.1.4 | Trust in Visiting the Onboarder

Trust matters in visiting the onboarder or agent for several reasons, including security issues. Women opt for the company of someone they trust when heading to the agent point, as they experience discomfort navigating public spaces alone. Consequently, individuals are willing to venture far from their residences to locate a trusted agent, even if there are other agents available in a closer vicinity. In the onboarding phase, trust becomes crucial since people share personal devices, information, and documents, including phones and NIDs. As an illustration, people who are unable to recall or are unaware of their phone number pass their phone to the agent, allowing the agent access to their device. Similarly, for onboarding purposes, individuals provide their NID card to agents, and many people leave their NID at the agent point for varying durations, ranging from hours to days, depending on the level of trust. An agent said:

“Trust is crucial to our business. In many cases, my customers directly approach me and hand over their mobile phones and even their NID because they trust me.”

3.1.5 | Trust in Taking Client's Photo

Taking a client's live photo, a step in the onboarding phase, emphasizes the relevance of trust, particularly for women. Even though some women feel hesitant to display their faces in public, they allow agents to photograph their faces because they have faith in both the agents and the system. The widespread practice and absence of any adverse occurrences reinforced their trust in this practice. Furthermore, even though auto-generated instructions are displayed to users when taking a photo, they often opt to follow the agent's directions due to their heightened trust in the agent.

After taking a photo, a welcoming message is sent to the user's phone, marking the confirmation of the account registration. Usually, people, especially those with low digital literacy, ignore this message and resort to the agent for registration confirmation. Despite being notified by SMS and the agent's confirmation, some prefer to deposit a small amount of money into their recently opened account to test its functionality.

3.1.6 | Trust in PIN Setting and Accessing the Account

In the postonboarding phase, setting the PIN becomes a matter of trust, particularly for those with limited technical knowledge. Frequently, the agent takes charge of the PIN setting on behalf of the client and retains it for future support. Many individuals across locations find issues with both memorizing and effectively managing the PIN. Hence, people allow access to it based on

trust. For instance, Mirazul Islam, a 27-year-old small trader, said:

“Due to difficulty in remembering the PIN, I shared it with my wife and Rana bhai (brother) [the local agent]. I trust them too much.”

Trust plays a pivotal role in accessing the account for any service. To cash out, people primarily visit their most trusted agent instead of opting for a random one. At agent outlets, it is common practice for individuals with limited digital literacy to hand over their phone and PIN to the agent for processing the cash-out. Despite the confidentiality of the phone and PIN, their worries are minimal, as they have a higher trust in the agent. Moreover, users, especially those who receive government allowances and possess limited digital literacy, tend to promptly withdraw the entire amount of money due to a lack of trust in digital money. They believe that mobile money is not as safe as hard cash. An old man from a rural area said:

“I always approach a particular agent for cash out because he is known to us, he is from our village, and this is how we trust him.”

To provide a more structured understanding, it is helpful to distinguish between different types of trust that impact the adoption of digital technologies:

- **Interpersonal Trust:** This refers to trust placed in individuals, such as family members, friends, or local agents. This type of trust is built through personal relationships and is crucial in contexts where users rely on personal recommendations and assistance for onboarding and using DFS.
- **Institutional Trust:** This involves trust in institutions or organizations, such as banks, government bodies, or service providers. Institutional trust is essential for users to feel confident in the overall security and reliability of the DFS they are adopting.
- **Brand Trust:** This type of trust is associated with the reputation of a particular brand or service provider, such as bKash. Brand trust is built over time through consistent service quality, positive user experiences, and effective marketing.

Understanding these distinctions is of practical importance to users, companies, and policymakers. Interpersonal trust influences how individuals seek and validate information, institutional trust affects their overall confidence in using DFS, and brand trust impacts their choice of specific service providers. By recognizing and addressing these different forms of trust, strategies can be tailored to enhance user experience and increase the adoption rates of digital financial systems.

3.2 | Fear

The presence and influence of fear are prevalent in the digital onboarding pathway, affecting information validation, decision-making, and interactions with agents, which is reflected in people's service-seeking behavior. Alongside accurate informa-

tion, false information is also widespread in the community, potentially placing users in problematic situations. Consequently, people attempt to verify the information they receive from various sources before taking action. This fear of misinformation makes individuals, especially those with low digital literacy, women, and the elderly, more vulnerable and more likely to rely on agents for accessing the required services.

3.2.1 | Fear in Decision-Making

Fear related to religion and social norms impacts the decision-making steps of the onboarding pathway, particularly affecting female users more than males. Despite having opportunities and needs, women often hesitate to open accounts by themselves due to fear of social norms. A homemaker from a rural area mentioned:

“If I decide to open an account, my husband, who already has one, might become upset. Once he gives the clearance, I'll open the account.”

For men, fear holds little significance when it comes to visiting an agent outlet or an onboarder, whereas for women, it carries substantial weight due to several underlying reasons. Agent outlets are positioned within male-dominated public areas, leading to a reduced female presence. This gender disparity creates a sense of apprehension for women when traversing these public spaces. Moreover, women and less tech-savvy individuals often hesitate around unfamiliar agents due to reasons like lacking acquaintances or discomfort in voicing their needs.

3.2.2 | Fear of Sharing Information

People feel discomfort sharing their phone numbers aloud with agents while registering due to fear of making mistakes and disclosing the number in public places. To avoid mistakes in stating their mobile numbers, people either speak slowly or mix Bengali and English. Many people simply pass their mobile phones to the agents to find out their mobile numbers. Regarding document sharing, such as the National ID (NID) card, there is generally no fear involved if the agent is familiar and trusted. However, some people are cautious about sharing documents with others due to concerns about the potential misuse of their NID, which could result in unauthorized account creation or identity theft. Fear of losing an NID card is another concern, as the recovery process is time-consuming and unpleasant. Steps like taking a photo of the NID or the user's face, however, do not evoke fear for both males and females since these are carried out by agents, and users follow the agent's instructions.

3.2.3 | Fear in PIN Setting and Management

In the postonboarding phase, fear exists in PIN setting, PIN management, and accessing accounts, especially for financial transactions or savings. Literate people set their PINs themselves, doing so carefully out of fear of a breach. Conversely, people with limited literacy perceive it as the agent's responsibility,

resulting in minimal concern on their part. In the realm of PIN management, fear becomes a factor because several people cannot recall their PIN or effectively handle it. Consequently, they share it with trusted individuals to ensure a means of recovery in case of loss. People are aware of the potential repercussions of making a mistake, such as being locked out of their accounts or experiencing unauthorized access. Furthermore, among individuals with limited digital literacy, there is a prevalent fear of losing their PIN due to the intricate and time-consuming recovery process, which enhances their overall cautiousness. An elderly woman said:

“I kept my PIN to myself so that nobody could access it, especially my young granddaughter, as I feared that she might withdraw all the money.”

While setting the PIN, users are advised to change it later for security reasons, but fear often prevents them from doing so. For example, a social welfare officer from Sylhet expressed that during the mass account registration campaign, a common PIN is provided to all with a message to change it afterward. Yet, the majority of them do not alter their PIN due to the fear of making mistakes. They believe that any errors could result in the loss of the desired allowance. People, especially those who are digitally illiterate, poor, and elderly, are more fearful of changing their PIN.

3.2.4 | Fear of Digital Money

Digital money itself poses a significant source of fear for users, particularly those who are less familiar with technology and women, stemming from the dread of financial loss. The pervasive presence of fraud in DFS causes concerns among users over digital or mobile money. Fraudsters employ various tactics to siphon funds from mobile accounts, often involving unauthorized access to both the device and the account itself. Hence, individuals are inclined to swiftly withdraw their funds to alleviate the psychological burden caused by financial loss. A rural woman expressed:

“Once my sister sent Taka 20,000 to my account for an emergency in the evening, and I couldn’t sleep well the entire night due to the fear of this money.”

Results show that the digital onboarding pathway into DFS is a complex interplay of emotions and social norms. Users’ experiences are shaped by their trust in individuals and systems, their privacy concerns, and the fears they navigate, which are often rooted in broader social and cultural contexts. This nuanced understanding is crucial for developing more user-friendly and secure DFS solutions that address these multifaceted challenges.

3.3 | Privacy

Privacy in the context of registering an account with MFS involves various personal data and items that make users concerned about their privacy. People worry about the privacy of their NID cards,

physical appearance, information, financial transactions, PIN, and account ownership. Privacy concerns differ among individuals, with some displaying minimal worry and others expressing significantly heightened levels of concern. The findings confirm the relevance of privacy in each phase of the onboarding pathway into DFS.

3.3.1 | Collective Versus Individual Privacy Dynamics

Concerning privacy, it is essential to understand it within the framework of local social norms, where information like PIN numbers can be shared collectively among social groups. This collective dynamic of privacy does not eliminate the issue of privacy but rather redefines it in a way that is deeply embedded in social relationships. For instance, privacy concerns are apparent during information validation, as people tend to share DFS-related information with particular groups rather than random individuals to secure the privacy of their information.

3.3.2 | Privacy in Decision-Making

Similarly, privacy is a core concern in the decision-making stage of the onboarding pathway. While an MFS account is entitled to a single user and requires personal data, the decision to open and manage such an account often involves collective input. Women and low-tech savvy individuals, in particular, are not always able to make independent decisions about DFS and thus consult with others. Despite the collective nature of these decisions, individuals prefer to consult with those within their private domain to maintain the privacy of their decisions. For example, those who lack a safe place or confidence to preserve their NID prefer to keep it with trusted individuals like husbands, wives, mothers, or daughters, to ensure its privacy.

3.3.3 | Privacy in Agent Interactions

When visiting an onboarder or agent, individuals prioritize those who respect their privacy, allowing them to express themselves freely. To maintain their privacy, women prefer to visit agents during less busy times or go to the most familiar agent. Sometimes, users even visit the agent’s house for service to maintain their privacy. An agent mentioned:

“Some customers regularly visit my shop for service. If they find me busy or my shop is closed, they will wait but never consider going elsewhere.”

3.3.4 | Privacy Concerns for Women

The privacy of face and smile becomes particularly significant when taking photos, especially for Muslim women. Users are asked to blink their eyes and smile in public spaces to make the photo live, which creates a barrier as it contrasts with their ethics and religious beliefs. An agent noted:

“For taking live photos, it takes a blink of an eye, and then people must laugh for 19 seconds. Women feel hesitant to laugh here; they say their chuckles are for their husbands?”

3.3.5 | PIN Privacy Management

Privacy becomes crucial in PIN setting and management. Educated and tech-savvy individuals handle their PINs themselves to secure their privacy. Conversely, people with low digital literacy rely on others, especially agents, to set and manage their PINs. They trust the agent and believe that the agent will not disclose their privacy. Observations during account registration revealed cases where agents set the PIN without obtaining the client's permission, with clients being less concerned about privacy breaches. However, several practices are observed for securing PIN privacy, including memorizing it, writing it down on a small piece of paper or notebook, keeping it in a secure place, saving it in a mobile phone, and sharing it with trusted others. PINs are shared for various reasons, including lack of literacy, safety, convenience, lack of understanding, and religious beliefs.

3.3.6 | Privacy in Financial Transactions

When people move to agent outlets for cash out, privacy remains crucial. Although individuals, especially those with low digital literacy, share their phone and PIN with agents, they are less concerned about privacy breaches due to their trust in the agents. A housewife explained:

“For withdrawing money, I directly go to the bKash shop and hand over the phone, and the agent provides the money immediately. I don't need to worry about the PIN.”

These dynamics show that privacy in DFS is intertwined with collective social norms and relationships. It is more about managing shared privacy within trusted circles than about individual rights alone. This nuanced understanding of privacy, influenced by local social norms and collective dynamics, highlights the complexity and contradictions inherent in the concept, which is essential for users, companies, and policymakers to consider when designing and implementing DFS solutions.

4 | Discussion

This qualitative study delved into the intricate dynamics of trust, fear, and privacy within the onboarding pathway of DFS. It unearthed compelling insights into a critical subject with far-reaching implications for stakeholders at multiple levels. In summary, trust significantly influences people's adoption of digital financial behaviors, relying on trusted sources for information and decision-making. Fear, on the other hand, serves as a deterrent to entering the digital financial realm, driven by

concerns about technology, financial loss, and privacy. Privacy emerges as a paramount concern, with individuals carefully guarding their financial information and making onboarding decisions collaboratively, often within the confines of trusted relationships. These findings shed light on the complex interplay of these factors in shaping individuals' interactions with DFS.

4.1 | Trust Dynamics

Perceived trust influences users' intention to utilize mobile money because they are unsure if they will receive their money (Yang et al. 2015). Noreen et al. (2021) also found a link between perceived trust, risk, and mobile money adoption, arguing that trust helps reduce the fear of mobile money. Moreover, lack of user trust in DFS can impede people from using digital money (Chauhan 2015). Our study corroborates these findings, demonstrating that trust has a significant impact on mobile money adoption. Different types of trust play varying roles in the onboarding pathway, including trust in the brand, system, digital money, individuals, and information. Users' attitudes are crucial, and if they feel secure with the provider, the likelihood of using the service increases (Himel et al. 2021). People are willing to pay more for trusted services, and our study identified local dynamics such as locality, familiarity, honesty, relationships, business size, and reputation that build trust.

4.2 | Fear Dynamics

Fear, especially technological fear, is a crucial factor in DFS, intertwined with culture and often leaving a negative impression on the community (Bultum 2014; Hsiao 2003). Mallenius et al. (2007) stated that older people are more afraid of carrying and using mobile devices. Our findings reinforce that fear in technology-based financial transactions is deeply rooted in culture, where older people with low digital literacy fear using mobile phones, especially smartphones, leading them to depend on assisted service. People rely on agents out of fear of making mistakes and a lack of operating system knowledge (Sobti 2019). Women and older people primarily resort to male family members with technical expertise for DFS services.

Along with the fear of making mistakes, the fear of losing hard-earned money, fraud, and cyber issues are important concerns in digital payments (Vijayan et al. 2020; Sobti 2019). Our study findings indicate that the fear of losing money is the most widespread fear. Fraud is so prevalent that even tech-savvy individuals fear doing any transaction through MFS. Local factors that intensify the fear of fraud include low digital literacy, greed, fear of losing allowances, fear of being blocked from the account, and a complicated account recovery process.

4.3 | Privacy Dynamics

The concept of privacy associated with mobile phone devices is a Western model that does not fit all cultures, particularly in the global south (Haque et al. 2020; Sambasivan et al. 2019).

From a cultural standpoint, it is argued that people of the Indian subcontinent, including Bangladesh, are more collective than Westerners (Hofstede 1984; Kumaraguru and Cranor 2006). The ethnographic findings of our study mostly support this concept of privacy, which is different from other parts of the world. Sharing personal possessions, including mobile phones, NID cards, and mobile numbers with others, is common practice, and people are less concerned about it due to cultural and societal norms in Bangladesh. Our study also finds that the privacy of physical or facial expressions is a key factor for DFS onboarding, especially for women who are skeptical about sharing their faces in public.

4.4 | Cultural and Social Implications

The sense of privacy in Bangladesh is unique, where collective relationships extend beyond the individual to the household and broader community. Sedikides et al. (2011) distinguished three types of selves: individual, relational, and collective. In the context of privacy, our study supports this categorization in a modified way. Personal selves refer to individuals who never share their financial information with others; relational selves involve sharing information with specific individuals based on relationships (e.g., son or husband); and collective selves entail sharing personal information with a broader group (e.g., agents or organizations), adhering to societal norms or practices.

Hofstede (1984) showed that individuals in collectivist societies have more trust and faith in others than those in individualist societies. Haque et al. (2020) made a similar argument based on research conducted in digital service points in Dhaka, Bangladesh. They concluded that cultural resources such as bonding, trust, faith, and respect are closely linked to digital service. Our study reinforces the association of culture and privacy, particularly in digital services, as the concept of private ownership of personal belongings is different. For example, a woman cannot think of her husband as a separate entity; rather, both are viewed as one with different bodies. Here, trust and predominated culture matter in their everyday actions and necessities, including DFS.

4.5 | Technological and Societal Interplay

Digital anthropology explores the intersection of human behavior, culture, and technology, revealing a novel relationship between humans and technology (Horst and Miller 2012). The digital human, a pivotal element in digital anthropology, focuses on the reciprocal influence between technology and human characteristics, manifested in various facets of people's lives (Geismar and Knox 2021). Material culture is relevant to this discussion, emphasizing the reciprocal relationship between material and culture, as people's presence on online platforms is closely embedded with different machines, processes, and artifacts (Miller 2018; Blanchette 2011). People's digital financial experience combines various artifacts such as mobile phones, SIM cards, computers, and NID cards. When people engage with DFS, they experience unique feelings, including fear, concerns, and uncertainty, which depend on many sociocultural factors, including awareness of DFS, digital literacy, relationships with

onboarders, the amount of money, and the location of service points.

Given the technological infrastructure, a key aspect of digital anthropology, DFS is an individualistic product because its architectural design relies on individual ownership of phones, PINs, and SIMs. However, our study reveals a distinct manifestation of the relationship between technology and humans, rendering the concept of individualistic technology or services dysfunctional on a broader scale. For instance, the PIN necessary for MFS access, composed of binary digits intended to be confidential (Bowers et al. 2017), is extensively shared among trusted individuals due to broader sociocultural factors such as fear, social and familial relationships, trust levels, and apprehension about financial loss. Similarly, people's entire onboarding journey is intricately woven into their daily life experiences, where trust, fear, and privacy play key roles in shaping their financial journey through technology. A seamless technological innovation lies in how well it meets people's cognitive, cultural, and social expectations (Troisi et al. 2022).

4.6 | Complexity and Fragmentation of Social Dynamics

The sense of collectiveness in Bangladeshi society is complex and fragmented, with various nuances present. Society is predominantly collective, placing a high value on belonging to a group, family, or community, leading people to share personal account information with others. However, individualism also exists, as people sometimes prioritize their personal choices, rights, and achievements over collective preferences. Consequently, individuals do not always share their personal financial information, even with close family members, including spouses and children.

5 | Conclusions and Policy Implications

The framework of the onboarding pathway offers valuable insights into individuals' digital financial experiences by highlighting the integral roles of trust, fear, and privacy. This pathway encompasses various actors, phases, steps, documents, and objects, each influencing the quality of financial inclusion. The findings reveal that while DFS holds promise for broader financial inclusion, its adoption is significantly influenced by the complexities and challenges associated with onboarding processes.

The study underscores that trust, fear, and privacy are deeply interwoven with the onboarding experience. Trust, as reflected in users' reliance on familiar and credible sources, and privacy concerns about personal and financial information are critical in shaping the adoption of DFS. Additionally, fear—whether related to technological issues, financial loss, or privacy breaches—plays a crucial role in deterring or influencing individuals' engagement with DFS.

The findings highlight that DFS, while designed to be an individual product, operates within a context of shared use in Bangladesh due to prevailing sociocultural factors. This includes the common practice of sharing account information, such as NID and PIN, among trusted individuals, despite the inherent

risks. The complexity of these sociocultural dynamics, especially for low-tech users and vulnerable groups such as the elderly and women, poses significant challenges to achieving successful financial inclusion.

To address these challenges and enhance the effectiveness of DFS, the following policy recommendations are proposed that address the barriers related to trust, fear, and privacy in financial inclusion through DFS. Each policy recommendation is intricately linked to specific implementation strategies involving both DFS providers and government institutions, reflecting a coordinated effort to enhance the accessibility and effectiveness of DFS.

Simplifying DFS services for low-tech users is a crucial initiative. By focusing on creating user-friendly interfaces and providing adequate support, DFS providers, along with government institutions such as Bangladesh Bank, aim to address the needs of individuals with minimal digital skills. This strategy is designed to make DFS more approachable and manageable for users who may struggle with complex technologies.

Culturally aligned onboarding procedures are essential for increasing acceptance and adoption of DFS. Aligning these procedures with local cultural norms will involve both DFS providers and government institutions, ensuring that onboarding processes are respectful and effective. This approach is intended to build trust by integrating cultural practices into the onboarding experience, thus enhancing user comfort and confidence.

Enhanced privacy protections are a significant focus, with DFS providers, Bangladesh Bank, the Election Commission, and the Ministry of Information and Communication Technology tasked with strengthening data protection protocols. By implementing robust privacy measures and educating users about their rights, this policy aims to alleviate privacy concerns that might otherwise hinder adoption.

Addressing technological fear, particularly among older adults and less tech-savvy individuals, requires comprehensive educational programs and support services. The involvement of DFS providers, the Ministry of Information and Communication Technology, NGOs, and community organizations is vital in building user confidence and overcoming apprehensions about digital technologies. Community-based service points represent a practical solution for extending DFS reach to remote and underserved areas. By establishing these service points with the help of DFS providers, local governments, and NGOs like BRAC and Grameen Bank, essential services can be made more accessible. This policy aims to ensure that even individuals in remote locations can benefit from DFS without having to travel long distances.

Providing accurate information in hard-to-reach communities is another key strategy. This will be achieved through local channels and collaboration with community leaders, ensuring that misinformation is minimized and users are well-informed about DFS options. By focusing on these areas, DFS providers and policymakers can work toward creating a more inclusive and effective financial ecosystem that considers the diverse needs and contexts of users. Ensuring that the onboarding process is aligned with cultural practices and addresses key concerns related

to trust, fear, and privacy will be crucial for fostering broader and more equitable financial inclusion.

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Conflicts of Interest

The authors declare no conflicts of interest.

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