Wage digitization as a pathway to women's financial inclusion:

Lessons from the Bangladesh garment sector during the COVID-19 pandemic

During the COVID-19 lockdown in Bangladesh, a government stimulus package provided loans to ready-made garment factories in the form of digital wage payments to their workers, who are predominantly women. As a result, more than two million bank or mobile money accounts were opened by or for garment sector workers, prompting the majority of factories to digitize their wages. In partnership with Microfinance Opportunities (MFO) and Research and Policy Integration for Development (RAPID), Mathematica conducted a mixed-methods study to examine how rapid wage digitization catalyzed by the stimulus package affected women's financial inclusion. The stimulus package successfully lifted many barriers to wage digitization, leading to a rapid increase in women's account ownership that allowed women garment workers to receive their wages during a time of crisis. Digital financial ecosystem improvements by regulators and mobile financial service providers (MFSPs) prior to the stimulus enabled them to rise to the challenge of paying wage subsidies digitally for millions of workers– demonstrating that digital payments can enable access to critical funds during an emergency and generating trust in the system. However, the impact on women's financial inclusion was limited: most women only used their accounts to cash out wages or to transfer money, and many continued to prefer cash. Digital payments could not be used for many routine transactions, such as rent, school fees, or micro-merchant payments, and some women needed assistance to use their accounts. For women to fully benefit from digital accounts, the digital financial ecosystem needs additional strengthening to support use cases designed for women and to increase women's digital financial literacy.

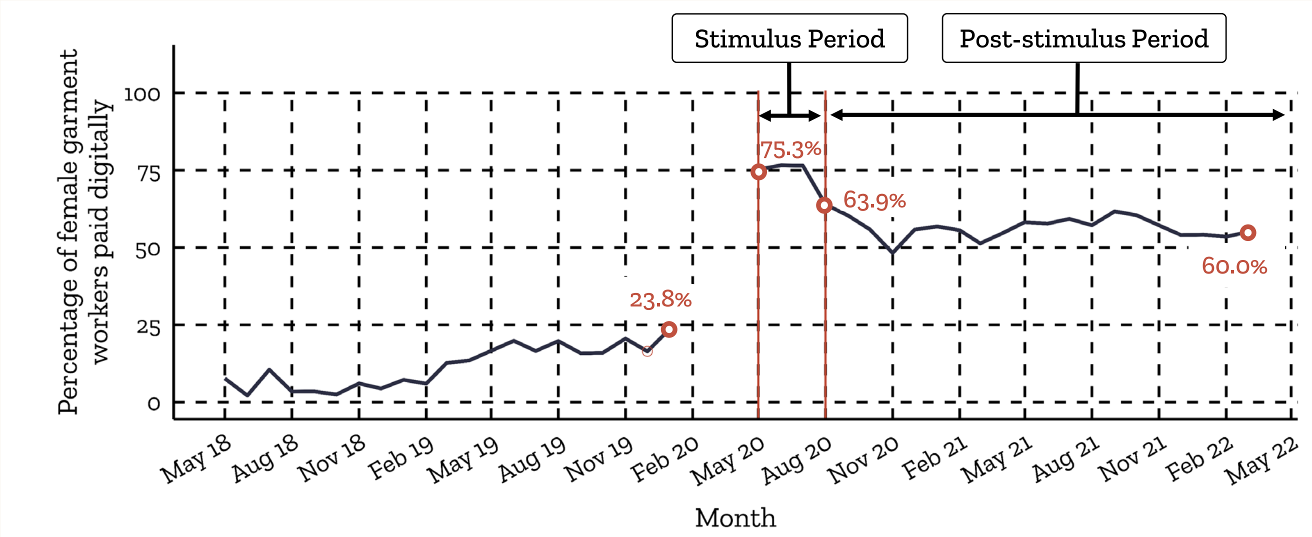
Background

Women's financial inclusion in Bangladesh has increased substantially over the past decade, with women's account ownership increasing from 26 to 43 percent between 2014 and 2021, and the share of women making or receiving digital payments growing from 6 percent to just over one-third (Demirgüç-Kunt et al. 2021). However, large gender gaps in account ownership and use of digital payments remain, perhaps partially due to lower mobile phone ownership and internet usage among women (Better than Cash Alliance [BTCA] 2022).

During the COVID-19 pandemic, women working in the ready-made garment industry in Bangladesh experienced rapid wage digitization as a result of a stimulus package sponsored by the Government of Bangladesh. The package covered workers' pay for four months (May to August 2020) during a government-mandated lockdown.

Bangladesh Bank mandated that federally regulated banks digitally disburse the stimulus funds into garment workers' bank or mobile money accounts. As a result, more than two million bank or mobile money accounts were opened by or for workers, and digital wage payments skyrocketed by fifty percentage points during the stimulus period (**Figure 1**).

Figure 1. Women garment workers' wage digitization before and after the COVID-19 stimulus



Source: Microfinance Opportunities Garment Worker Diaries (N = 633).

Note: Data are missing between February 2020 and April 2020 because the Garment Worker Diaries data collection effort was temporarily suspended due to lack of funding.

Most of these payments likely went to accounts women owned or could access because most garment workers are women (ILO 2020). As a result, the stimulus package provided an unprecedented catalyst for wage digitization and financial inclusion among women in the sector. Following the stimulus period, digital payments dropped slightly and some factories reverted to cash pay; however, a majority of factories continued to pay wages digitally.

Study overview

This study explored the facilitators of and barriers to wage digitization in the Bangladesh garment sector. The findings drew primarily on qualitative data collected from a variety of sources. The sources included key informant interviews with government officials, trade organizations, mobile financial services providers (MFSPs), and digital financial services (DFS) ecosystem stakeholders. These informants provided insights on the implementation of the stimulus package and factors that facilitated or hindered sustaining wage digitization. Interviews with factory management and focus groups with women workers also shed light on workers' and factory managers' experiences with and perceptions of wage digitization. To validate qualitative findings, the analysis incorporated rich quantitative data from weekly Garment Worker Diaries (GWD)[1] on topics such as type of payment, DFS training and onboarding, and perceived advantages and disadvantages of digital pay.

The study covered the trends, experiences, and perceptions of women workers and factory management primarily from two groups: (1) factories that paid wages in cash before the stimulus period but elected to digitize their payroll after the stimulus and (2) factories that paid in cash before the stimulus period and continued to pay in cash after the stimulus, even after their workers received the stimulus payments digitally.

Key findings

Enablers of and barriers to wage digitization before the pandemic

Before the COVID-19 pandemic, key regulatory and policy changes, as well as public-private commitments, effectively set the stage for rapid wage digitization to occur in the Bangladesh garment industry during the COVID-19 stimulus package (Figure 2). In January 2020, biometric national identification cards (NIDs) became available. In addition, Bangladesh Bank launched its

[1] MFO's GWD data is a weekly panel dataset launched in 2018 consisting of around 1,300 garment workers, 76 percent of whom are women. The workers are employed in factories in five industrial areas: Chittagong, Dhaka City, Gazipur, Narayanganj, and Savar. These workers are surveyed weekly by MFO on a series of core questions related to their employment, income, and resource allocation.

Figure 2. Enablers and barriers to wage digitization over time

	PRE-STIMULUS PERIOD	STIMULUS PERIOD	POST-STIMULUS PERIOD
Cash-out fees	- Too high	+ Lowered and shared fees	- Still too high; some factories no longer cover fees
Account opening fees	- Too high	+ Eliminated	
Cash-in-cash-out (CICO) system	+ Expanded CICO points and agents - But insufficient coverage	- Liquidity crunches and limited agent/ATM availability	- Limited agent/ATM availability
e-KYC guidelines and NIDs	+ Rollout by government but - NIDs not ubiquitous	+ Relaxed guidelines mean NIDs not required	- NIDs required again
Mid-level management	- Reluctance to digitize	+ Mandated digital pay overcomes reluctance	- Reluctance re-emerges
- Persistent barriers:	• Limited mobile phone ownership	• Limited digital financial literacy • Limited DFS ecosystem	• Concerns over control, decision-making authority, and privacy over income

Note: - barrier, + enabler

electronic know-your-customer (e-KYC)[2] guidelines—which allow for consumers' identities to be authenticated electronically using their NID—paving the way for opening digital accounts (although NIDs were not ubiquitous among garment workers before the pandemic).

The DFS infrastructure also expanded through the increase of MFSPs and a more inclusive agent network. The presence of MFSPs in Bangladesh (such as bKash and Rocket) expanded in the five years before the pandemic, and in 2019 the Government of Bangladesh created Nagad, which operates under the authority of the Bangladesh Post Office (BTCA 2022). Bangladesh Bank promoted agent banking to provide services to hard-to-reach rural populations and developed guidelines to encourage more women bank agents to increase women's DFS access and engagement.

Moreover, in 2019, the Digital Wages Summit marked growing public-private sector commitment towards wage digitization. Global brands, trade and labor organizations, and the government committed to and implemented wage digitization as a result of the Summit.

However, high cash-out fees, weaknesses in the DFS ecosystem, and reluctance among mid-level factory managers limited the demand for and use of digital accounts. Both factories and workers reported that workers were unwilling to pay (high) cash-out fees, but did not always have alternatives, since many merchants did not accept e-payments. Also, the lack of interoperability—or the inability to make transactions between or withdraw from different MFSPs—further limited use cases for women. Additionally, the qualitative data suggest that mid-level factory management remained reluctant to digitize wages, perhaps because doing so would increase payment transparency by eliminating the leakage and fraud possible with a cash payment system. For example, "ghost workers"—or payroll accounts for workers who do not exist—would be difficult to create and maintain with digital payments.

Workers' experiences with wage digitization during the stimulus period

The stimulus package successfully lifted many barriers to wage digitization, enabling a rapid rise in women's account ownership and access during the COVID-19 lockdown crisis. Mandates that were part of the stimulus further relaxed e-KYC guidelines and allowed workers to use their birth certificates or factory IDs as alternatives to NIDs, enabling women who lacked NIDs to open bank accounts for the first time (**Figure 2**). Bangladesh Bank also temporarily lifted account opening fees, which had been a barrier to account ownership. Moreover, by mandating that the government would make stimulus wage payments

[2] Know-your-customer (KYC) is the process of verifying a client's identity when opening a bank or mobile money account.

digitally directly into workers' accounts, the stimulus effectively bypassed the resistance from factories' mid-level managers.

Most workers opened their own accounts with no challenges during the stimulus period, which suggests that relaxing the identification requirements and removing account opening fees were effective in expanding account ownership. However, a small share of women used their husbands' or other family members' accounts, possibly because they were not aware of or could not take advantage of the relaxed e-KYC requirements.

The stimulus package also subsidized cash-out fees, which reduced the cost for workers to receive their wages digitally during the lockdown. Bangladesh Bank mandated that MFSPs could charge fees only to recover costs, and that they provide subsidies for cash-out charges. Some factories covered or shared the cost of cash-out fees with MFSPs during the stimulus, further lowering or even eliminating the fees for workers. Most workers appreciated being able to receive and withdraw their wages even during the lockdown as well as the security of digital wages.

Some women workers, however, still faced challenges in accessing their wages and using their accounts. Women from focus group discussions faced significant delays cashing out their wages during the lockdown due to limited availability of agents and ATMs, liquidity crunches at cash-in cash-out points, and network issues.

Most women workers could not fully benefit from their accounts, primarily using them for basic transactions because of limited digital financial literacy and the limited DFS ecosystem. Most women only knew how to use their accounts for basic purposes (such as cashing out wages) and often reported they were not confident in using their accounts. Some reported they did not like receiving digital wages because they needed assistance from their husbands or other family members to use their accounts. The limited training they received during the stimulus period was likely not sufficient to overcome gaps in digital financial literacy. Most women (78 percent in the GWD data) received only basic support and limited information about how to open and use an account. This information focused on basic functions, like PIN security and withdrawal, rather than more advanced topics like money transfers, account benefits, and risks.

Factory payroll digitization and workers' perceptions in the post-stimulus period

Production efficiencies were an important motivator for factories to sustain digital payments after the stimulus period. Many factories (64 percent of factories represented in the GWD data) elected to pay their workers digitally after the stimulus (**Figure 1**). Once all workers had an account, many factories found that paying digitally was more efficient than paying in cash, increasing the time that workers could spend on garment production. Managers also found that paying workers digitally was safer than cash, since they did not have to transport or store the cash before pay day.

Factories that continued paying in cash after the stimulus cited workers' preferences for cash as their reason for not digitizing wages. Factories acknowledged that cash-out fees were the biggest barrier for workers to accept digital wage payments, but managers from factories with majority cash payrolls after the stimulus were unwilling to cover these fees. These managers perceived that the potential benefits of wage digitization did not outweigh the costs of covering cash-out fees, which could be as much as 10 workers' salaries, according to one factory manager. The transparency of digital payments and related resistance from mid-level management may have re-emerged as barriers to digitizing wages since factories were not required to pay workers' wages digitally once the stimulus period ended.

> ***"From the factory perspective, digital wages are preferred. It's more comfortable because we don't have to open booths and call workers one-by-one and pay. And there is always some human error every month [with cash]. We get complaints from accounting because there is some mistake in calculation and they end up paying out of pocket. We also lose a few minutes per worker in productive time: if we have 2,000 workers, they lose 3-4 minutes each; this makes 6,000 minutes or 100 hours of production lost."***
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> -Factory manager

Most women workers preferred to be paid in cash, likely because of persistent challenges with account access and usage rooted in weaknesses within the digital financial ecosystem. While some barriers to wage digitization were relaxed, many persisted, and some that were lifted during the stimulus re-emerged after it ended (**Figure 2**). Most women preferred to receive cash payments after the stimulus. In focus group discussions with workers, cash-out fees—which were no longer subsidized after the stimulus period—re-emerged as the main barrier to digital account use. Women workers explained that cash-out fees were expensive relative to their incomes. After the stimulus period, some workers also continued to struggle with the accessibility and availability of ATMs and agents. Although these challenges could be avoided if women workers made digital transactions or transfers, most women continued to withdraw most of their salaries to make cash transactions and were unable to use their accounts for other transactions because of low digital financial literacy and a digital ecosystem that does not widely support digital payments.

"We know that when we earn 200 Taka as overtime, that requires 4 to 6 hours work. And we can spend this 200 Taka on our children's needs, but now [MFSP provider] is taking this amount as a cash-out charge."

-Woman worker

A subset of women workers said they preferred cash wages because digital payments resulted in a loss of control, decision-making authority, and privacy. Women workers described these losses in two ways: (1) women who registered accounts under another name did not receive their pay directly and had to rely on the account owner to hand over their pay (if they handed it over at all) and (2) women who registered accounts in their own name could not keep payment text messages showing their full salary amounts from their husbands or other family members, who would then try to control and decide how to spend the woman worker's income.

Some women workers, primarily those who were still paid digitally after the stimulus, found digital pay increased payment timeliness, ease of making transactions, and their ability to save—but they still preferred cash payments. Women who mostly received wages digitally after the stimulus were more likely to cite payment timeliness as an advantage (68 percent) than women who mostly received cash (45 percent). Women from factories that continued digital payroll after the stimulus were also more likely to have received information and support during the stimulus and were more comfortable using their accounts to make transactions. Focus group participants explained that they were able to save with digital payments because they tended to only withdraw what was necessary for daily expenditures, whereas with cash wages they would often spend their entire salaries. Although these women acknowledged the benefits of digital pay, they still largely preferred cash.

"When my salary comes as digital payments, I have control over my money. It can be spent [only] as much as needed. By reducing the expenses in this way, money can be saved."

-Woman worker

Recommendations

The COVID-19 stimulus package in Bangladesh was successful in enabling women garment workers to receive their wages during a time of crisis, promoting rapid wage digitization among factories, and increasing women's account ownership– demonstrating the reliability of the digital financial system built by MFSPs and regulators and creating trust that the system could work. However, its lasting impact on women's financial inclusion seems limited. Account usage remained low because of other interrelated barriers to women's digital financial inclusion: high cash out fees, low digital financial literacy, and a limited DFS ecosystem.

In the short term, strategies to minimize or cover cash out fees (which continue to be the primary barrier to digital wage acceptance, both from the factory and worker perspective) are needed. The stimulus showed that relieving cash out fees through a cost-sharing mechanism among the government, financial service providers, and factories eased account access for women. Covering cash out fees for garment workers may also be a valuable investment for MFSPs to capture a sizeable new segment of customers—women garment workers can potentially spend up to 5.4 million USD per month on airtime top-up and 126 million USD per month on remittances (Business for Social Responsibility [BSR], 2021). Allowing a certain number of free withdrawals per month, either through the public sector such as in India (Central Bank of India) or the private sector such as in Pakistan (SadaPay), can also be another strategy to support women workers' use of digital accounts.

In the long term, for women in the Bangladesh garment sector to fully benefit from wage digitization, the DFS ecosystem needs further strengthening to digitize common payments made by women—such as to micro-merchants, landlords, and schools. Increased acceptance of digital consumer payments for services women use would allow them to avoid cash-out fees.

Globally, government incentives prove critical in pushing the private sector to support micro-retailers (and their suppliers) to digitize (Better Than Cash Alliance, 2021). Interoperability between different financial service providers can also increase use and convenience for women by expanding access and availability of agent and ATM options (Negre and Cook, 2021).

In addition, women workers need comprehensive and gender-responsive digital financial literacy training to increase their access to and confidence in using digital accounts. Women workers appear to only use their accounts for basic functions and could benefit from training on money management and financial products that would empower them to use their accounts more effectively and to participate in the digital economy. This would also enable women to bypass cash out fees. Trainings need to be gender responsive to ensure that women are not left behind. For example, as women in Bangladesh are less likely to have a smart phone, trainings should include a segment on how to make payments or transfers using a feature phone.

Finally, continued collaboration between all private and public sector stakeholders will be needed to sustain and expand wage digitization and ensure that digital wages continue to be a priority as part of the government's Smart Bangladesh Vision 2041. The government mandate to digitize wages as part of the stimulus was critical to overcoming factory reluctance and addressing cost concerns in transitioning to digital wages. A similar push or incentive could further scale wage digitization in the garment sector. Labor organizations could continue to advocate for the benefits of supply-chain transparency and efficiency through digital wages. Researchers, trade organizations, and global brands could generate and disseminate evidence on the business case for wage digitization and put pressure on factories to digitize wages. External support for factories to prepare for the transition to digital wages could help ensure that wage digitization is sustained over time and that women benefit from participating. For example, factory management could use BSR's HERfinance Digital Wages Toolkit as a resource to transition their payrolls, prepare their workforce for digitization, and coordinate payday.

The COVID-19 stimulus package demonstrated the advantages of digital wages in the garment sector, both for factories and workers. For women's financial inclusion and economic empowerment to be fully achieved, actors will need to closely collaborate on strengthening Bangladesh's digital financial ecosystem and promoting digital financial literacy.

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