



READY-MADE GARMENT SECTOR DIGITAL MARKET ASSESSMENT: *BANGLADESH*



Unlocking Public and Private
Finance for the Poor

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LIST OF ABBREVIATIONS

AI	Artificial Intelligence
B2B	Business to Business
B2P	Business to People
BCC	Bangladesh Computer Council
BFIU	Bangladesh Financial Intelligence Unit
BGMEA	Bangladesh Garment Manufacturers and Exporters Association
BTCA	Better than Cash Alliance
CAD	Computer-Aided Design
CAF	Converged Assessment Framework
DBBL	Dutch-Bangla Bank Limited
DFS	Digital Financial Service
e-KYC	Electronic-Know Your Customer
ERP	Enterprise Resource Planning
ESG	Environmental, Social, and Governance
FGD	Focus Group Discussion
FI	Financial Institution
GDP	Gross Domestic Product
GoB	Government of Bangladesh
GRI	Global Reporting Initiative
HR	Human Resources
IBM	International Business Machines
ICT	Information and Communications Technology
IDTP	Interoperable Digital Transactions Platform
ILO	International Labour Organization
IPDC	Industrial Promotion and Development Company
IR	Industrial Revolution
IT	Information Technology
ITES	Information Technology Enabled Services
KII	Key Informant Interview
LICT	Leveraging ICT for Employment and Growth of the IT-ITES Industry
LMS	Learning Management System
MFI	Microfinance Institution
MFS	Mobile Financial Service
NBFI	Non-Bank Financial Institution
NBR	National Board of Revenue
NGO	Non-Governmental Organization
NSDA	National Skills Development Authority
OSH	Occupational Safety and Health
RMG	Ready-Made Garment

SAC	Sustainable Apparel Coalition
SDG	Sustainable Development Goals
SEIP	Skills for Employment Investment Program
SLCP	Social & Labor Convergence Program
SME	Small and Medium Enterprises
SMS	Short Message Service
SSC	Secondary School Certificate
UNCDF	United Nations Capital Development Fund
USSD	Unstructured Supplementary Service Data
WRAP	Worldwide Responsible Accredited Production

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EXECUTIVE SUMMARY

The ready-made garment (RMG) sector is a cornerstone of Bangladesh's export prowess and overall economic growth. The sector employs an estimated 4.22 million people, of whom 2.5 million are women, across 5,000 factories (Haque and Bari, 2020; BGMEA, n.d.). The sector is undergoing a digital transformation as digitalization can play a pivotal role in reducing costs and increasing efficiency, and has the potential to improve the livelihoods of people employed in the sector and its overall sustainability and competitiveness. The COVID-19 pandemic has accelerated this digital transformation process.

This report provides a summary assessment of the digitalization opportunities in the RMG sector. The assessment considers three segments of stakeholders: *demand-side*, including RMG manufacturers and RMG employees; *supply-side*, including digital service providers and technology companies; and lastly, *enabling environment*, which includes civil society organizations, investors, employer organizations, development organizations and the government.

In recent years, RMG employees have been exposed to digitalization primarily through digitization of their wages. The COVID-19 pandemic has accelerated the push for RMG employees to become more digitally integrated; however, this continues to be restricted mainly to wage digitization. According to a report by the Better than Cash Alliance (BTCA, 2021), the current level of wage digitization in the RMG sector in Bangladesh stands at 54 percent, having fallen from its peak of 90 percent at the onset of the COVID-19 pandemic. Digitization of wages can improve efficiency and cut costs from an enterprise perspective, and benefits livelihood from employee perspective. However, it is not yet general practice as challenges include the high cost of money transfer, the lack of an interoperable digital payment ecosystem, and low digital and financial literacy of digital financial services (DFS)' users leading to missed opportunities.

Opportunities for digitalization to improve livelihoods and overall sustainability in the RMG sector are not limited to wage digitization. Rather, the objective is to promote use of DFS, including digital wallets, and other digital services for livelihood improvements. A number of barriers currently impede the potential benefits of digitalization in the sector. From the RMG employee perspective, a major barrier is low ownership of, and access to, smartphones. From this assessment, it was found that 59.3 percent of female RMG employees and 31.3 percent of male RMG employees do not use smartphones. Of the female RMG employees who do use smartphones, 39.3 percent do not own them but rather use smartphones owned by their partners or family members. RMG employees who actively use smartphones use them mostly for phone calls, social media, messaging and video streaming. Service providers and cross-industrial stakeholders suggest development of plans allowing RMG employees to purchase smartphones with small and flexible instalments. However, this proposition has not garnered interest with employees, as only 42.7 percent of female RMG employees and 47 percent of male RMG employees indicated they were interested in the model. Furthermore, RMG employees have concerns about the specifications, durability and battery life of

the smartphones. Regarding Internet connectivity, male RMG employees (77.1 percent) have better access than their female counterparts (44 percent). Overall, RMG employees desire lower Internet costs and reported that their usage of digital services would increase with lower Internet data costs.

Stakeholders strongly advocate for a better digital payment ecosystem, and deemed it a prerequisite for RMG employees to be using mobile and DFS more efficiently. Digitalization of different payment use-cases for house rent, payment of groceries and school fees, can take place to achieve a larger ecosystem. Stakeholders urge expedition of digitization of payments as this could have positive rollover effects for the financial lives of RMG employees. However, overall, RMG employees show low readiness to use digital payments. In focus group discussions, RMG employees reported one of the reasons behind unwillingness to use digital payments for groceries as a fear that the transaction costs for the merchant will result in receiving poorer deals for merchandise. Many are also uncomfortable with the idea of paying digitally because of security concerns, human errors or fraud. RMG employees have mixed feelings about saving money digitally, with the majority of male RMG employees responding positively (55.4 percent) and the majority of female RMG employees responding negatively (55.3 percent) to do so. Negative perception of saving digitally is primarily a result of not being aware of the technology and associated financial products such as savings and micro-loans. Moreover, RMG employees reported distrust in digital financial products as they are concerned that their savings may get stolen or that they may end up forgetting their pin and as a consequence lose access to their savings. However, RMG employees are interested in long-term saving products and facilities for digital pensions if they can take their savings with them in case of switching employer. RMG employees are also intrigued that they might be able to track their pension funds in real time. Another barrier towards use of DFS is the low level of digital and financial literacy. A large share of RMG employees reported no understanding of how to download apps, let alone use them. From the RMG manufacturer perspective, the manufacturers have taken various initiatives to orient and educate employees on the use of DFS as part of their wage digitization initiatives.

Finally, stakeholders ubiquitously mentioned that to enhance financial inclusion and build the digital payment ecosystem, interoperability must be ensured among DFS providers. From a health service perspective, RMG employees have little exposure to HealthTech solutions. Less than 5 percent of RMG employees in the assessment survey use HealthTech solutions, although 81.9 percent of male and 53.3 percent of female RMG employees are aware of available telemedicine and digital health services. Multiple HealthTech service providers directly target RMG employees as customers and have devised innovative solutions such as kiosks at factories and toll-free telemedicine hotlines. It is important to note that the benefits of using HealthTech services are not entirely clear for RMG employees and there appears to be significant friction in regard to how services are being perceived by workers. Stakeholders emphasize better communication to RMG employees in which the benefits of using digital health services could be, for example, communicated using real-life testimonials from early adopters and champion users in their communities. This manner of communicating benefits of use was echoed not only in the digital health sector but also in the digital finance and education technology sectors. According to digital service providers, RMG employees trust face-to-face interactions more and do not yet feel comfortable with digital services and messages.

At the same time, HealthTech companies are developing different health and insurance services and offering RMG employees both online and in-person health support. HealthTech companies, in addition to their existing service offering to the RMG industry, have offered such services as factory onsite COVID-19 testing facilities and free video call telemedicine consultation during COVID-19. For HealthTech companies engaged in mental wellness, having in-person training and consultation sessions became a great challenge as a consequence of the COVID-19 pandemic. Additionally, employer organizations have collaborated with several HealthTech companies to improve RMG employees' health and well-being, and RMG manufacturers have reported increased productivity after introducing these services.

Buyers and brands consider RMG employee health and well-being to be high priority, yet acknowledge the health-related issues existing in the industry and the lack of related real-time reporting and monitoring mechanisms. Factory management confirmed that maintenance of health, well-being and safety information of their employees, and the process of collecting this information, is ad-hoc. Buyers and brands believe that the primary responsibility to ensure overall health and well-being of RMG employees falls on the manufacturer as the employer and confirm that great strides have been made in safety aspects in recent years. The manufacturers stress the importance of securing long-term sustainability by ensuring employee health and well-being matters. Non-governmental organizations (NGOs) interviewed further articulated that they are also working to empower RMG employees through digital health services and health insurance schemes in collaboration with DFS and insurance companies. Stakeholders agreed on the potential of collaborations, including with HealthTech and EdTech service providers, to improve the livelihood of RMG employees from the health perspective.

The assessment also reviewed the impact of digitalization trends such as Industrial Revolution 4.0 (IR 4.0) and the potential of using EdTech services to reskill (revising the existing skill base for better efficiency in existing work) and upskill (teaching new skills to perform next-level functions) employees in the sector. The majority of RMG employees indicated that they are aware (67.5 percent male and 48.7 percent female) of IR 4.0 and automation trends that have started to take place in the sector. Of those who are aware of the trends, many are worried (63 percent female and 58.93 percent male) about possibly losing their jobs to automation. The changes resulting from IR 4.0 are likely to more adversely impact female RMG employees, as female employees are currently more engaged in lower skilled jobs that have a higher likelihood of being substituted by automation, and thus this risks decreasing further the share of female workers in the sector. It will be important to reskill and upskill female RMG employees to reduce the gender skills gap. Considering the scale of the potential impact, it is clear that the private sector cannot solve this issue single-handedly. Providing access to digital devices and services will help to provide opportunities for reskilling and upskilling as a response to IR 4.0 and automation trends.

With regard to EdTech services, RMG employees, in general, are not aware of different EdTech services and platforms that are currently available on the market. Further, there is a gender gap in the extent of awareness as 55 percent of female and 33 percent of male RMG employees responded that they are not aware of such services. In the focus group discussions, many RMG employees reported that they spend time watching video streaming services such as YouTube to learn about how to do their tasks at work more efficiently. At the same time, EdTech firms are

introducing innovative methods to offer training modules that engage RMG employees by including interactive modules. Overall, RMG employees are interested to learn new skills related to their current job and more on other topics such as soft management skills, spoken English, computer skills, health and nutrition and worker's rights. According to stakeholders, it is important to build learning tools and develop trust of employees to increase use and exposure to these tools to learn new skills with regards to IR 4.0-related changes.

From the enterprise perspective, manufacturers must increase efficiency and competitiveness on delivery time and price to survive against strong competition internationally. The manufacturers know that change is inevitable; however, they are also confident that reskilling and upskilling will enable the existing workforce to cope with new machinery and technology. Aligning with the manufacturers, buyers and brands also take up the challenge of IR 4.0 and plan to offer support to RMG employees and manufacturers to adapt and be more well-equipped going forward. Although the employer organizations' roles in IR 4.0 developments are critical, they can only encourage manufacturers to upgrade equipment, introduce more efficient practices and digitalize processes to prepare for IR 4.0. The employer organizations believe that by bringing change in knowledge, skills and working styles through reskilling and upskilling, the potential job loss threat of IR 4.0 can be averted. The NGOs reiterate this message and believe that there is no alternative but to leverage transformative technological innovation across the value chain to cope with the changes of IR 4.0.

Finally, the assessment reviewed the opportunities for digitalization from the enterprise perspective to increase overall sustainability of the sector. This includes, for example, implementation of systems to manage, and disclose, sustainability data across the environmental, social and governance (ESG) and Sustainable Development Goals (SDGs) spectrum. From this perspective, RMG manufacturers currently record environmental sustainability aspects digitally while some aspects of governance and social sustainability parameters are also administered and monitored primarily through standard human resources (HR) modules of the manufacturers' enterprise resource planning (ERP) software. The Sustainable Apparel Coalition (SAC) is commonly used as a platform to connect multiple brands on factories' social and environmental sustainability data, even though data accuracy on social sustainability aspects including on productivity, automation, technology and RMG employee turnover is a big challenge. Digital service providers and ESG data verifiers are working with RMG manufacturers and buyers to introduce grievance management systems via, for example, hotlines to which RMG employees can call in and report cases anonymously. Services such as these can complement the tracking of social sustainability parameters by manufacturers. According to employer organizations interviewed, Bangladesh is a trailblazer on the overall sustainability reporting, particularly through use of Global Reporting Initiative (GRI) framework indicators, where sustainability data are also currently being digitized. Comprehensively digitizing tracking of sustainability data at enterprise level allows for provision of high-integrity, low-cost and verified data on sustainability performance, with multiple possible applications ranging from public disclosure to increase trust and strengthen competitive advantage to application in sustainability-linked finance instruments and credit assessments.

A summary of the digitalization opportunities and market-based recommendations for further digitalization to improve livelihoods and overall sustainability in the RMG sector is presented based on the findings of the assessment.

1. INTRODUCTION

KEY INSIGHTS

4.2 MILLION PEOPLE

in Bangladesh are employed by the RMG sector, of whom 2.5 million are women.

9.7% OF GDP

comes from the RMG sector, contributing to empowering women through formal job creation.

1.1. BACKGROUND

The ready-made garment sector in Bangladesh employs an estimated 4.22 million people, of whom 2.5 million are women, across almost 5,000 factories (Haque and Bari, 2020; BGMEA, n.d.), and is a cornerstone of the overall growth in exports and economic growth of the country. The sector has contributed immensely to empowering women through formal job creation while contributing to almost 9.7 percent of the country's GDP and 81 percent of total export earnings (BGMEA, 2021).

In light of Bangladesh's Digital Agenda and Vision 2041, the sector is undergoing a digital transformation, accelerated by the COVID-19 pandemic, as digitalization plays a pivotal role in reducing costs and increasing efficiency with the potential to improve the livelihoods of people employed in the sector. Such a transformative change has the potential to increase the sector's overall sustainability, competitiveness and investibility. This digital transformation includes achievements in digitization of wages in the sector in recent years. However, opportunities for digitalization are not limited to wage digitization and include further integration of digital financial services in digital financial, health, EdTech and enterprise-level services. Current trends related to IR 4.0 and automation further impact the momentum of digital transformation in this sector.

This report, an initiative under UNCDF's 'Leaving No One Behind in the Digital Era' strategy, summarizes the findings of a research commissioned by UNCDF aiming to provide an overview of the status quo and a mapping of further digitalization opportunities to improve livelihoods and overall sustainability in the sector in Bangladesh. This study aims to highlight these opportunities through conversations with stakeholders including digital service providers, RMG manufacturers and their employees and other digital ecosystem players. The research summarizes views from the demand-side of digital services, that is RMG manufacturers and their employees, and supply-side of digital services, that is digital service providers and technology companies, with insights from the enabling environment perspective, including civil society organizations, employer organizations, development organizations and government counterparts.

BOX 1 – DEFINITION OF KEY CONCEPTS

Digitization – the process of converting information into a digital format, primarily relating to data and document encoding.

Digitalization – the adoption of digital technologies in place of analog or offline systems such as paper or whiteboards in business processes.

RMG employees – refer to factory workers and does not include senior management of manufacturers.

The findings aim to accelerate the digital transformation and ensure that access to and use of digital services have a net positive effect on the lives of RMG employees and the sector's overall sustainability across the ESG spectrum and the SDGs. Through this, UNCDF aims to support introduction of further digitally enabled business models and solutions to RMG manufacturers and their employees, especially for women.

The report findings are presented at employee, enterprise and enabling environment levels and summarized finally for recommendations and opportunities for digital services using defined sustainability areas across the ESG spectrum.

1.2. METHODOLOGY

The research was conducted with four components:

1. **Desk review** – review of secondary research sources including sustainability assessment frameworks and reporting standards. A data checklist was developed to gather insights of available demand- and supply-side secondary data.
2. **Key informant interviews (KIIs)** – stakeholders were interviewed including representatives from digital service providers, RMG manufacturers, buyers, regulators and other players in the digital service ecosystem.
3. **Quantitative non-representative sample survey** – female and male RMG employees at participating research enterprises were interviewed. The survey generated information to determine the extent of digital inclusion in specific use-cases where information gaps were presented in available secondary data. This filled the gaps in existing literature regarding, for example, the extent of digital literacy and the use of digital tools by employees and enterprises.
4. **Focus group discussions (FGDs)** – female and male RMG employees at participating research enterprises were interviewed. The discussions generated a deeper understanding of RMG employees' awareness, perceptions and attitudes towards current and future digital services.

A summary of number of stakeholders and respondents in each step is summarized below.

Table 1 | Summary of key informants and respondents

Method	Respondent	Number
FGDs: RMG employees (gender non-mixed groups; in separate FGDs); 6 participants in each FGD	Female	4
	Male	2
	Total	6
Quantitative non-representative sample survey with male and female RMG employees	Female	150
	Male	83
	Total	233
KIs: Stakeholders as per UNCDF prioritized list	Digital service provider	18
	RMG manufacturer	5
	Development organization	4
	Brand / Buyer	3
	Employer organization / Business association	2
	Financial institution / Bank	1
	Non-bank financial institution	1
	Government representative	1
	Total	35

1.2.1 Limitations

The RMG employee survey conducted in the study aimed to provide non-representative quantitative findings in addition to qualitative findings from KIs and FGDs. Because of the small sample size, the findings do not necessarily represent the target population. The research was only conducted in the formal RMG sector. Furthermore, the study presents sample bias in the selection of RMG manufacturers – all of whom are invariably suppliers for large international brands.

2. DIGITALIZATION FOR IMPROVED LIVELIHOODS OF RMG EMPLOYEES

This study conducted a survey and FGDs with RMG employees across five participating research factories, selected with support from the Bangladesh Garment Manufacturers and Exporters Association (BGMEA). The survey and focus groups aimed to assess awareness, perceptions and attitudes towards digital tools and services and specific use-cases across financial, health and EdTech services from the RMG employee perspective. This section also includes findings from KIs with stakeholders where relevant.

2.1. DEMOGRAPHIC COMPOSITION OF SAMPLE

An overview of the general demographic composition of the sample (total 233 survey respondents) in relation to overall estimated RMG workforce in Bangladesh is presented below.

Table 2 | Summary of survey and overall estimated workforce demographics

	Female	Male	Below 30 years of age	Primary education completed or below	Married	Domestic labour migrants
Sample survey, %	64.4	35.6	82	66.1	75.5	78.1
Overall estimated workforce, %	59.2	40.8	72.4	81.4	74	89

Source: Primary sample survey conducted as part of this research; ILO, 2020; Haque and Bari, 2020

The majority (91.6 percent) of the respondents were from factories in rural locations outside of city corporations. Of the respondents, 74.3 percent were junior sewing operators, senior sewing operators or helpers, while the remaining 25.7 percent were of other designations. The education level of most workers interviewed was having completed primary education or below, while 33.9 percent had a secondary school certificate (SSC) or higher. In general, the characteristics of the survey respondents reflect similar characteristics in the overall estimated population, except for the education levels in which the respondents had generally higher levels of SSC completion rate.

2.2. ACCESS TO SMARTPHONES

While 68.7 percent of male RMG employees responded that they use a smartphone, only 40.7 percent of female RMG employees do. Overall, for those who use smartphones almost 40 percent use a smartphone owned by someone else in their household – either the husband or the household head. Out of the respondents that indicate they use a smartphone, 60.7 percent of female RMG employees answered they own a smartphone in comparison to 98.2 percent of men, corresponding to a gender gap of 37.5 percentage points in smartphone ownership.

KEY INSIGHTS

40.7% OF FEMALE

RMG employees use a smartphone, compared to 68.7% of male RMG employees.

60.7% OF FEMALE

RMG employees own a smartphone compared to 98.2% of men. That is a 37.5% gender gap.

In the FGDs RMG employees mentioned a few reasons for not purchasing smartphones including insufficient disposable income, being too busy and not having sufficient time to fully use a smartphone, lack of knowledge or experience in using smartphones and not being able to afford the added expense of Internet connectivity. Additionally, female RMG employees indicated that, as they used their husbands' smartphones, it was not necessary to purchase smartphones for themselves, and in some cases husbands forbid them from doing so.

2.2.1 Smartphone usage activities

RMG employees who use smartphones spend most of their time on phone calls and text messaging. In the FGDs female RMG employees indicated that as they have very little time available after working in the factory, they often do not wish to use other apps in their leisure.

In addition to smartphones, a few organizations have set up digital booths using tablet devices in factory locations from which RMG employees can access health-related services, such as virtual doctor consultations. In most cases, the booths are manned by someone who can assist the RMG employee with these services as required. RMG employees who have used this service also consulted doctors regarding the health problems of other household members.

Figure 1 | Smartphone usage of RMG employees

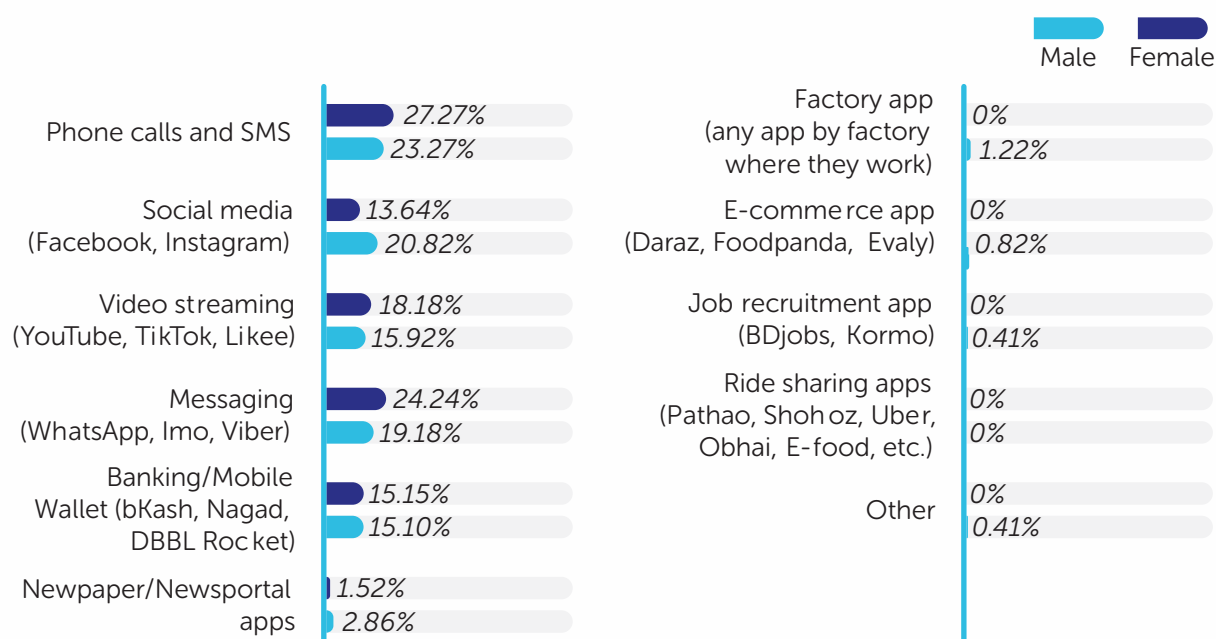
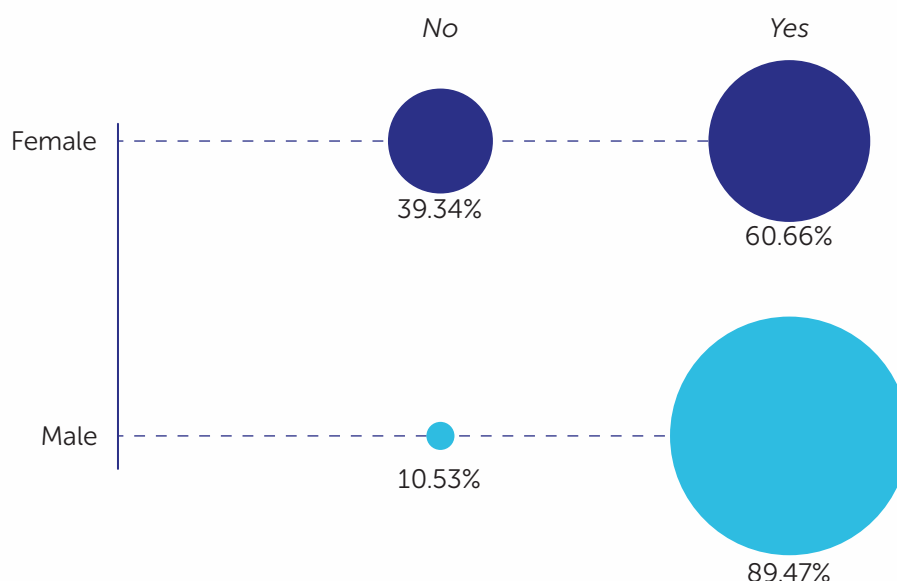


Figure 2 | Internet usage of RMG employees



RMG employees also used their phones to call available toll-free dedicated hotline services such as Shastho Batayon. The FGDs indicate that RMG employees prefer such hotlines over the use of smartphone apps as they are easier, cheaper (as apps require both a smartphone and purchase of Internet data) and less time-consuming. This was further validated in the survey, in which over 70 percent of RMG employees mentioned that they preferred hotlines over mobile applications.

RMG employees also visit agent points around the factories or in their neighbourhoods to access necessary DFS, for example, to cash out their wages.

2.2.2. Usage of Internet and access to data

Of those who actively use smartphones, almost 40 percent of the female RMG employees responded that they do not actively use the Internet while only 10.5 percent of their male counterparts indicated the same. However, 77.1 percent of female RMG employees answered that Internet is necessary or very necessary in their lives while only 44 percent of male RMG employees indicated so. The survey found that active Internet users tend to spend BDT 30–55 per week on data, an expense that is high for many RMG employees to bear.

2.2.3. Pricing to access smartphones

RMG employees responded that a reasonable average price to pay for a smartphone is around BDT 10,000. However, this was lower for female RMG employees at BDT 8,300 in comparison to BDT 10,735 for their male counterparts. Respondents are not only price-sensitive, but also concerned about specifications, quality and durability when purchasing a smartphone. Durability is the most desirable aspect of a smartphone to a median RMG employee.

2.2.4. Opportunities

Stakeholders advocate for affordable access to smartphones and recommend collaboration between local smartphone manufacturing and distribution companies to make smartphones more affordable. Collaborations with financial institutions (FIs), non-bank financial institutions (NBFIs),

local mobile phone manufacturers and distributions to introduce instalment-based affordable smartphones targeted towards RMG employees offer a possible solution. Such instalments could be directly deducted from salaries. The survey indicates that 43 percent of female and 47 percent of male RMG employees would be interested or highly interested in such a scheme. Major deterrents towards such a scheme are difficulty to maintain even a small monthly instalment and unfavourable intra-household decision dynamics faced by a typical female RMG employee. However, the FGDs provided some suggestions to make the scheme more appealing, for example, for female RMG employees, the possibility of purchasing a smartphone based on monthly instalments with contributions from both husband and wife, or more flexibility in duration and number of instalments. Female RMG employees who already actively use smartphones were more positive towards the idea of purchasing smartphones via small monthly instalments. Overall, RMG employees responded that an average monthly amount of between BDT 437 and 495 would be appropriate for such instalments. However, for RMG employees who do not currently actively use smartphones the reasonable average monthly amount is lower at between BDT 365 and 385. It is recommended that such a scheme would also include the cost for an insurance plan.

As Internet connectivity is a challenge for RMG employees, telecom providers can look to offer economical Internet bundles for certain services used by RMG employees.

2.3. BUSINESS-TO-PERSON (B2P) DIGITAL PAYMENTS – WAGE DIGITIZATION

Wage digitization is the primary aspect that has made significant strides for digital and financial inclusion for RMG employees in Bangladesh in recent years. In November 2019, at a conference organized by the Better than Cash Alliance (BTCA) in collaboration with a2i and BGMEA, the participants committed that by 2021, 90 percent of all wages in the RMG sector will be paid digitally. The digitization of wages has been accelerated by the COVID-19 pandemic, particularly by the Government of Bangladesh (GoB)'s BDT 50 billion response stimulus package for export-oriented manufacturers to pay their employees' wages. In April 2020, the Bangladesh Bank mandated all RMG factories to digitize wages to use the stimulus package meant for employee salary expenses. In less than two weeks, 1.92 million new mobile money accounts were opened and 77 percent of RMG employees were paid digitally (BTCA, 2021). However, as soon as the government concluded this support, the level of wage digitization dropped. According to a report by BTCA (2021), the current level of wage digitization in the RMG sector stands at 54 percent, falling from its peak of 90 percent during the COVID-19 stimulus package payouts in 2020. In the survey for this report, 100 percent of RMG employees received their wages digitally without the requirement for a smartphone as wages could be received on more basic feature phones.

KEY INSIGHTS

WAGE DIGITIZATION

in the RMG sector stands at 54%, falling from its peak of 90% during the COVID-19 stimulus package payouts in 2020.

100% OF EMPLOYEES

in this survey received their wages digitally.

On the front of financial inclusion, wage digitization has enhanced access to accounts and provided RMG employees a greater ability to save, particularly for women (BTCA, 2017).

2.3.1. Challenges in wage digitization

A major challenge for wage digitization is cash-out charges. Several stakeholders advocate for a reduction of cash-out charges, as, for RMG employees, spending 1–2 percent of their salaries on such charges is a major burden. At the same time, DFS providers face difficulties in negotiating cash-out charges with manufacturers who also do not want the burden of paying these charges and indicate that they cannot be reduced further citing the issue of their own financial sustainability.

An increase in the use of mobile wallets and relevant DFS across various use-cases would be more efficient for all stakeholders including RMG employees, their employers and DFS providers. At the same time, RMG employees fear they will lose out on good grocery deals in case of payments being digitized for groceries as merchants will most likely backward shift their own cash-out charges on to them in terms of higher price margins on the merchandise. Such concerns should be tracked and managed while piloting new payment use-cases and increased promotion of merchant payments around factories.

Stakeholders also emphasize that wage digitization is not always associated with positive impacts on RMG employees' lives. There have been reports of increased verbal and physical abuse against female RMG employees in the household resulting from the transparency digital wages brings. More specifically, it is a common practice that female RMG employees hand over all or part of their earnings to a male household member each month. Women can exert greater control over their salaries when paid in cash while digital payments make negotiations difficult with husbands or household heads. This needs to be carefully considered and monitored during further wage digitization initiatives.

2.3.2. Opportunities

As DFS access and usage has increased in recent years, and been accelerated by COVID-19, new cross-service opportunities have surfaced across digital finance, health and EdTech services. Overall, services should be designed to be as simple and intuitive as possible to promote use as RMG employees deem digital services to be a little too complex to operate.

2.4. PERSON-TO-BUSINESS (P2B) DIGITAL PAYMENTS – ECOSYSTEM OF DIGITAL FINANCIAL SERVICES

Now that most RMG employees have access to a mobile wallet account, stakeholders have expressed concerns regarding full use of these accounts. Incentivizing RMG employees to use their mobile money accounts and offering various financial services and products could eventually result in the improvement of livelihoods. Most important is to create services fitting the lifestyle of RMG employees across these use-cases, including rent, food and groceries, school fees, loan repayments and local remittances.

2.4.1. Rent

In the survey, 41 percent of female and 45 percent of male RMG employees replied positively¹ when asked about their willingness to pay rent digitally. However, when asking RMG employees who currently actively pay rent and who use smartphones, this skews towards 50 percent of female and 61 percent of male replying positively.

2.4.2. Food and groceries

Digital merchant payments come with the benefit of reduction or complete avoidance of cash-out charges from the RMG employee perspective. In the FGDs RMG employees expressed that they fear they will lose bargaining leverage as the seller or merchant will backward shift their own cash-out charges onto them in terms of higher price margins on the merchandise. This was perceived as highly undesirable and there was a belief this could result in more expensive deals for the RMG employee. Another challenge presented is that, overall, 37.7 percent of RMG employees' wages are cashed out by someone else in the household, robbing them of the decision-making power in choosing the mode of payment. When asked if RMG employees would be willing to use e-commerce for doorstep delivery of groceries, 32.7 percent of female and 48.2 percent of male RMG employees were positive towards this option. RMG employees expressed a concern that they want to check the quality of produce before purchasing it, a step that is impossible in e-commerce. Fair price shops, such as Apon, have become popular alternatives for affordable and convenient groceries specifically targeted for RMG employees. The payments for these purchases are automatically deducted from RMG employees' pay slips. Apart from receiving good quality products, the service can help save up to a whole month's salary per year compared with the cost of purchasing the same at other merchant locations. When asked whether they would be interested in purchasing groceries from fair price shops located within factory premises, 36.7 percent of female and 44.6 percent of male RMG employees were positive towards this option.

Figure 3 | Willingness to pay rent digitally among RMG employees overall

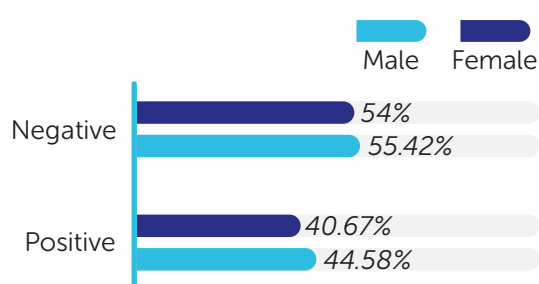
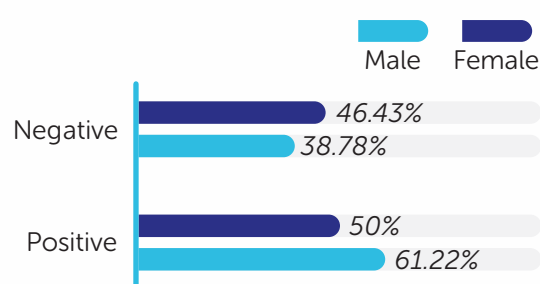


Figure 4 | Willingness to pay rent digitally among RMG employees who actively pay rent and also use smartphones



¹ Respondents were asked to answer using a scale between 1 and 5, where 1 indicated "Not willing at all" and 5 indicated "Very willing". In the graphs presented, 1–2 indicate a negative response, while 4–5 indicate a positive response and 3 indicates a neutral response.

KEY INSIGHTS

32.7% OF FEMALE

employees and 48.2% of male employees were positive toward using e-commerce for doorstep delivery of groceries.

ONLY 39% OF FEMALE

and 33% of male RMG employees reported that they save regularly. Of those that save, female employees tend to save 12% more per month (BDT 1,269) than men (BDT 1,137).

2.4.3. Education fees

On the question of paying education fees digitally, 41.2 percent of female and 46.2 percent of male parents of children going to school responded positively.

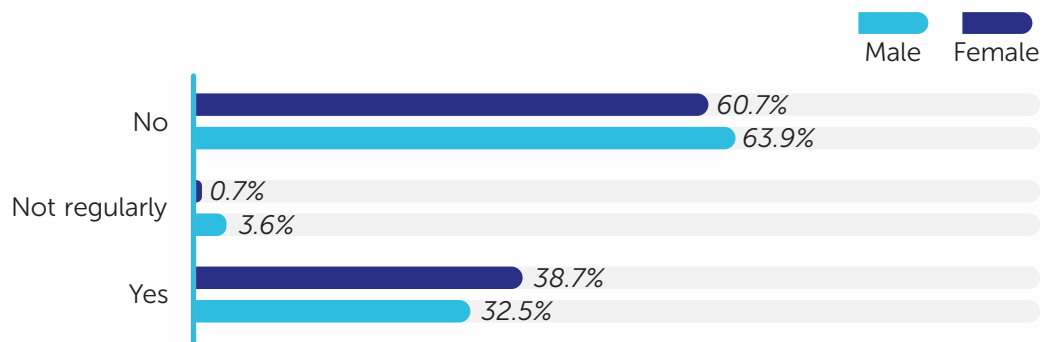
2.4.4. Savings

Because of their low salary structure, RMG employees have limited opportunities to save regularly and limited capability to deal with any unanticipated expenses, putting tremendous pressure on their lives and mental health. For such unanticipated expenses, many rely on borrowing from friends and family.

Only 39 percent of female and 33 percent of male RMG employees reported that they save regularly. From the FGDs, one of the fundamental reasons for not saving was identified as insufficient means to meet life expenses. Of the RMG employees who do save regularly, female RMG employees tend to save a 12 percent higher monthly amount on average at BDT 1,269 in comparison with BDT 1,137 for their male counterparts.

When RMG employees were asked about introduction of savings products within mobile wallets, 45 percent of female and 55 percent of male employees responded positively. Of those who were unwilling, 35 percent of female and 57 percent of male respondents responded positively to the idea of an equal amount matched by the employer each month. On average, regular savers wish to save around BDT 1,000 per month, whereas non-savers wish to save BDT 500 per month in mobile wallets. Cash-out charges, fear of fraud and theft are revealed as major deterrents to saving in mobile wallets. Additionally, RMG employees expressed concerns about a matching contribution from the employer as they might switch jobs in which employers may not want to make the same equal contribution.

Figure 5 | Saving habits among RMG employees



2.4.5. Long-term savings and social protection

A number of DFS providers are offering micro pension and insurance schemes for RMG employees. At the same time, there are cases of providers joining hands, together with Ministry of Finance and pension fund regulators, in attempting to create national-level social protection programmes where beneficiaries from different industries could be connected, thereby contributing to a larger fund and database. In this model, an employee can open a pension account from any of the member employers and become part of a larger-scale pension scheme. Development organizations interviewed urge exposition of digitalization of payments as they could facilitate social protection programmes initiated jointly by the government and digital service providers.

Stakeholders acknowledge that RMG employees need incentives to save digitally. For this, RMG employees were asked whether they would be interested to lock-up their savings in mobile wallets in return for a higher interest rate. In response, 47 percent of female and 53 percent of male employees were positive towards this proposition. FGDs revealed that many RMG employees are unwilling to put their money into interest-bearing savings product as this contradicts religious norms. Inability to liquidate savings during personal emergencies is another major deterrent. At the same time, RMG employees were more positive towards the idea of shariah-based banking services with more flexibilities for monthly denominations and emergency withdrawals. However, non-savers are even more positive towards the idea with 49 percent of female and 59 percent of male respondents responding positively. Overall, most of those who were willing to save digitally for a higher return lobbied for having access to at least 20 percent of their locked-up savings in case of emergencies.

Social protection schemes such as pension funds are absent from most factories in the sector, particularly in the informal sector, which fell outside the scope of this research. However, 68 percent of female and 73 percent of male respondents claimed to have pension funds at the factories they work, although 19 percent of females and 17 percent of males were unaware of this. Most respondents were found to be aware of the benefits from pension funds but unsure of the process and fearful of losing funds in case of job switches. Being able to view their contributions through a digital interface is considered highly desirable by many respondents as well. A few of the interviewees indicated that if a reliable, trustworthy third-party could take care of their savings, they would be willing to try this service.

In the FGDs RMG employees expressed fear of fraud as a general concern for making digital payments. RMG employees are generally anxious of being defrauded and cited anecdotal incidents of fraud in their communities. They are also worried about their PIN number being stolen or

KEY INSIGHTS

68% OF FEMALE

and 73% of male respondents claimed to have pension funds at the factories they work, although 19% of females and 17% of males were unaware of this.

95.3% OF FEMALE

and 96.4% of male respondents reported that they now use DFS more than they did before the pandemic.

forgotten and making payments to wrong numbers by accident. RMG employees expressed that they find interfaces or user journeys for making digital payments a complex process and difficult to operate, and many are not well aware of digital payment options or have never tried them before. Lastly, they expressed that cash is still more convenient to them overall.

2.4.6. Impact of COVID-19

COVID-19 has accelerated the use of digital financial services among RMG employees. This was validated by the survey, from which 95.3 percent of female and 96.4 percent of male respondents reported that they now use DFS more than they did before the COVID-19 pandemic.

2.4.7. Opportunities

Stakeholders recommend introduction of savings products and long-term savings and pension products tailored to the job nature and socio-economic realities of RMG employees, independent of the employer. Such a solution could provide RMG employees the freedom to explore career choices without forsaking their long-term savings or pensions.

Introducing shariah-based banking products could open up new opportunities for DFS for RMG employees. Another avenue is that of introducing flexible long-term savings products allowing flexible instalments and the option for emergency withdrawals.

Various stakeholders including employer organizations, digital service providers and development partners urge collaboration to provide pension and social protection schemes for RMG employees. Solutions could also include RMG employees having access to future salaries in a more flexible manner to cope with everyday living.

2.5. HEALTH, WELL-BEING AND SAFETY

Nutrition is a challenge for RMG employees in Bangladesh. According to BGMEA, RMG employees exhibit poor food and nutrition habits consisting mainly of high daily intake of rice and low intake of vegetables. Studies have revealed that respiratory problems, hearing loss, cardiovascular diseases, anaemia and iron deficiency are some of the major physical health vulnerabilities among RMG workers in Bangladesh. In terms of psychological health, insomnia, hypertension and chronic anxiety are some of the leading symptoms.

There are multiple digital health service providers active in Bangladesh, with a few targeting RMG employees specifically. Services offered include, for example, mental health consultations, workshops and sessions, telemedicine, e-pharmacy, SMS prescriptions, community paramedics and

KEY INSIGHTS

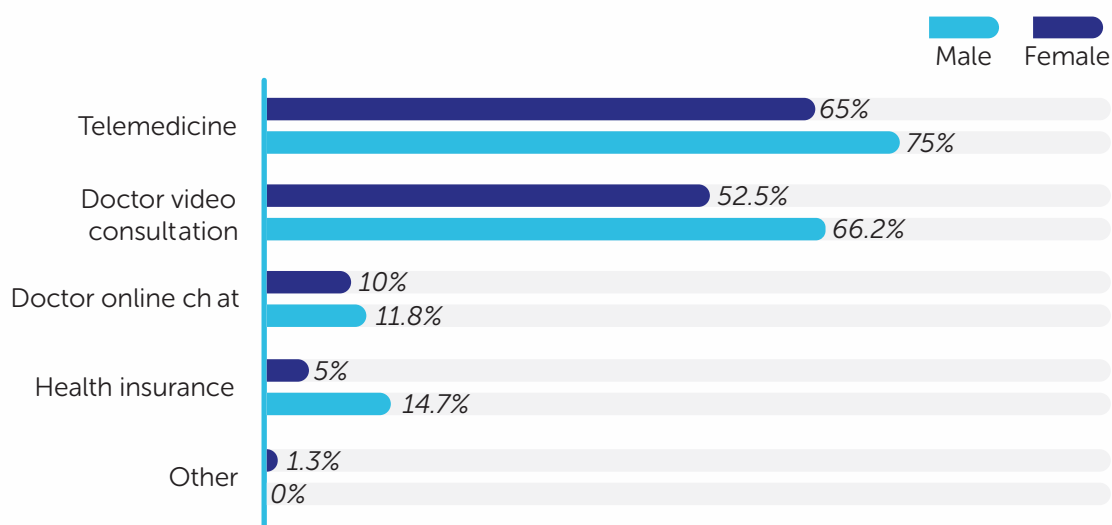
53% OF FEMALE

and 82% of males are aware of telemedicine and related digital health services. That is a gender gap of 29%.

LOW USAGE

Despite being aware of digital health services, 99% of respondents said they had not used them.

Figure 6 | Awareness of digital healthcare services among RMG employees



COVID-19 testing. Many of these have been launched targeting women specifically as customers. Of the RMG employees interviewed in the survey, none of those who faced health emergencies in the past year actually used digital health services. In such cases, most RMG employees went to visit either a doctor or local pharmacy for consultation and basic treatment. Some interviewees also indicated they would either go to the doctor in the factory or at a hospital, and sometimes factory doctors referred them to a hospital.

With regards to digital health services, the majority of respondents claimed to have heard of telemedicine and related services; 53 percent of female and 82 percent of males are aware of such services, indicating a gender gap of 29 percentage points. Despite being aware of these services, 99 percent of respondents said they had not used them. Some of the major reasons for this are RMG employees' preference for in-person doctor consultations, access to factory doctors, the fact that tests cannot be done via telemedicine, peer pressure, lack of awareness and perceived overall complexity of digital health service interfaces.

On average, respondents thought it would be reasonable to pay BDT 150–170 for digital health services such as virtual doctor consultations. When asked about their interest in a monthly subscription-based product, the majority of RMG employees (55 percent of females and 66 percent of males) responded that they were not interested. Those who responded positively were asked what a reasonable price for such a service would be, with an average response of between BDT 240 and 275 per month. Finally, respondents were asked about their interest in a health insurance product, for which they would pay a monthly amount and in return received assistance with certain health-based services such as partial or full support of doctor fees and hospital and medicine bills up to a certain limit; to which a majority also responded they were not interested (56 percent of females and 54 percent of males). Those that responded positively considered a reasonable price for such a service to be, on average, BDT 265. Some of the major challenges in this regard are having to pay for something that may not be needed regularly, perceived complexity of digital health service interfaces and a general lack of awareness. RMG employees are also generally not interested in doorstep delivery of medicines citing delivery charges, quality concerns and delivery

KEY INSIGHTS

BDT 240-275

was considered by respondents as a reasonable price to pay for a monthly subscription-based digital health service.

2.7% OF FEMALE

and 2.4% of male survey respondents reported that they used digital health services more than they did before the pandemic.

lead times as major reasons. According to digital health service providers, RMG employees prefer face-to-face interactions and do not yet feel comfortable with digital services and messages. Many of the digital health services available specifically to RMG employees are paid for by the manufacturers on behalf of their employees. According to manufacturers, there has also been evidence of improved productivity after introducing such services.

2.5.1. Impact of COVID-19

The COVID-19 pandemic has been an accelerator of the adoption of telemedicine and virtual doctor consultations in the country. However, only 2.7 percent of female and 2.4 percent of male survey respondents reported that they have used digital health services more than they did before the COVID-19 outbreak.

2.5.2. Opportunities

Stakeholders believe that designing suitable health insurance packages for RMG employees could be a 'game-changer' in terms of improving overall RMG employee health and well-being, as could monthly subscription-based or insurance products provided financially wholly or partially by the employer. Life insurance and other types of insurance that meet the lifestyle demands of RMG employees could further add value.

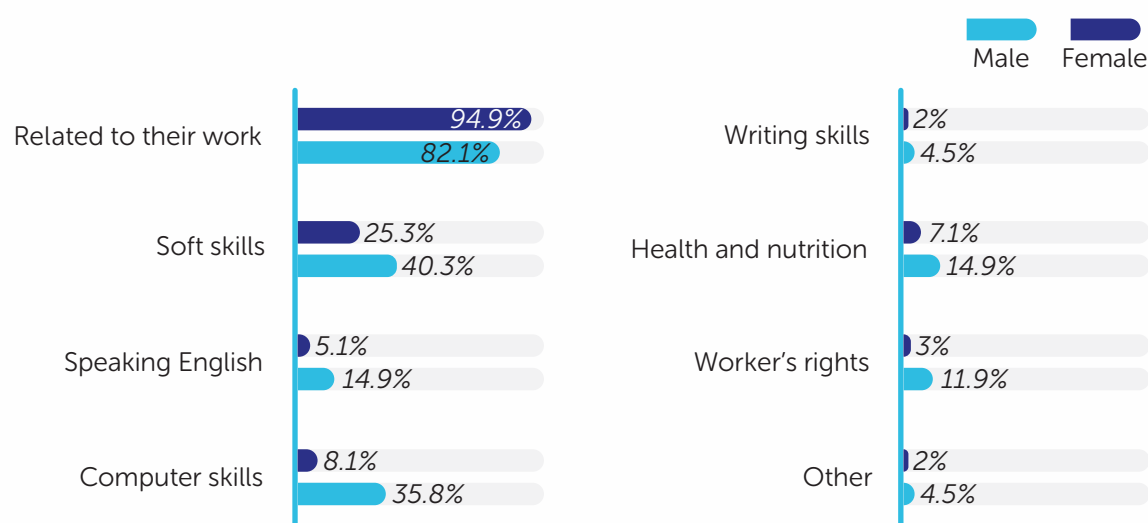
According to digital service providers, provision of digital health services is not yet profitable. Process innovation is a crucial aspect to provide these services sustainably. Integration and collaboration between HealthTech service providers and FinTech service providers could create sustainable business opportunities. For example, a digital health service provider could be insurance-backed and claimed via a FinTech service provider – providing access not only to health services but also digital health insurance offerings under the same umbrella.

2.6. RMG EMPLOYEES AND EDTECH

EdTech is making education more accessible and affordable, and raising the standard of educational content in Bangladesh. Although the EdTech industry in Bangladesh is fairly new, with the growing number of Internet-using youth in Bangladesh and rapid digitalization, the scene is now set for rapid growth. A number of startups in this vertical have been chasing this goal over the past couple of years and some have already experienced success. According to experts, the market size of EdTechs in Bangladesh is set to reach US\$700 million by 2025 (Upskill Classroom, 2021).

Generally, RMG employees are not aware of different EdTech and digital education platforms that are currently available on the market. There is a gender gap in the extent of awareness, with 55 percent of female and 33 percent of male RMG employees responding that they are not aware of

Figure 7 | Desired skills/education topics for RMG employees



such services. Overall, RMG employees are interested to learn new skills related to their current job and other topics such as soft management skills, spoken English, computer skills, health and nutrition and workers' rights. Specifically, 80.7 percent of male and 66 percent of female respondents indicated that they are interested in learning new skills related to their jobs.

RMG employees face significant difficulties using DFS; they find it difficult to navigate the interfaces, wrap their heads around product features and cannot afford to invest time in learning about these services. Many stated that after working an entire day and completing household chores, they are not interested in investing time in learning about different apps or services that are not directly related to their current jobs.

Low digital literacy levels and time poverty of RMG employees are standing challenges to use of EdTech services both in and outside the factory. Stakeholders who work with RMG employees acknowledge the low status of both digital and financial literacy as pressing challenges. However, a few EdTech service providers, such as 10 Minute School and QuizRR, have been able to reach RMG employees via their employers through buyer and manufacturer joint efforts in building capacity, with positive feedback from RMG employees. Outside of the factory, the case for use of EdTech is not strong for RMG employees considering the low digital literacy levels and time poverty, and the cost of mobile data. Another barrier is that, for some apps, unstructured supplementary service data (USSD) menus are in English – a provision for the Bengali language should be provided as a minimum to ensure uptake of services. According to EdTech service providers, if interactivity could be increased in education modules, capacity development would be even more effective.

2.6.1. IR 4.0 and automation and upskilling and reskilling of RMG employees

The RMG sector is a labour-intensive sector and the level of impact of IR 4.0 and automation is anticipated to be high. Changes can already be seen where, for example, one automated machine could replace 20–32 RMG employees across heavy knit, light knit and woven manufacturing. The impact of IR 4.0 and automation is likely to be more adverse on female RMG employees than their male counterparts, as female employees are currently engaged to a higher extent in lower skilled

KEY INSIGHTS

51% OF FEMALE

and 68% of male RMG employees answered that they were aware of automation and robotic machinery.

OF THOSE AWARE

37% of female and 39.3% of male respondents were worried about their job security in light of these trends.

jobs with higher chances of being substituted by automation. According to the International Labour Organization (ILO) and UNWOMEN, the proportion of women in the RMG sector in Bangladesh declined from 63.4 percent in 2010 to 60.5 percent in 2018. As female RMG employees have lower formal education on average and are involved more in production rather than supervisory roles (the number of female RMG employees in managerial positions has declined and their overall average representation in such roles remained low and unchanged between 2010 and 2018 [ILO, 2020]), this could decrease further the share of female workers in the sector. This tendency is likely to create a direct negative impact on the employability of female RMG employees under the changed scenarios induced by IR 4.0 without the required training and education opportunities.

There is a general belief among stakeholders that RMG employees are unaware of IR 4.0 and automation trends. However, 51 percent of female and 68 percent of male RMG employees answered that they were aware of automation and robotic machinery. In addition, of those who were aware, 37 percent and 39.3 percent of female and male respondents, respectively, were worried about their job security in light of these trends. In the FGDs the RMG employees were asked about IR 4.0 using terms 'robotic machinery' and 'advanced machinery'. Responses included that they have 'heard about it from colleagues', and that some factories had made attempts to use advanced, more efficient robots.

2.6.2. Impact of COVID-19

The COVID-19 pandemic has accelerated adoption of EdTech services, albeit not to the same extent as digital financial and health services. Among RMG employees in the survey, 11.3 percent of female and 20.5 percent of male respondents reported that they have used EdTech services more than they did before the COVID-19 pandemic. Buyers and brands stress that it is now more important than ever to ensure that RMG employees are digitally included and literate, to gain access to information and services related to health and career management.

2.6.3. Opportunities

Development of reskilling and upskilling programmes through EdTech services in light of IR 4.0 and automation market trends has the potential to gradually close the gender skill gap. It will be important to build trust to increase the uptake of these services to meet upcoming changes and market demands. Collaboration between academia, government agencies, NGOS, manufacturers and employer organizations such as BGMEA, will be key to create the necessary impact. Government could offer necessary subsidies to manufacturers and other actors for RMG employees to learn new skills. If not through manufacturer-led initiatives, it will be crucial to make EdTech platforms and Internet bandwidth available and affordable to RMG employees to use

KEY INSIGHTS

11.3% OF FEMALE

and 20.5% of male respondents reported that they have used EdTech services more than they did before the pandemic.

EDTECH PLATFORMS

and Internet bandwidth need to be available and affordable to RMG employees to use, including more content in Bangla language.

these tools, including offering more content in Bangla language. Other areas in which workers are interested to learn are soft management skills, spoken English, computer skills, health and nutrition and workers' rights. To this end, collaborations between digital health service and EdTech service providers could unlock further opportunities.

In terms of EdTech opportunities outside of working hours, telecom providers could introduce economical bundles for certain services used by RMG employees, including not only for tutorials and training but also digital health services such as doctor video consultations and other digital health and EdTech services.

Access to smartphones is key and microfinance institutions (MFIs) or other financial service providers can collaborate with employer organizations, manufacturers and telecom manufacturers and distributors to provide flexible smartphone instalment facilities that would be more financially accessible to RMG employees.

3. DIGITALIZATION FOR IMPROVED SUSTAINABILITY OF RMG ENTERPRISES

This study conducted KIIs with five participating research factories, selected through support of BGMEA. The interviews aimed to assess awareness, perceptions and attitudes towards digital tools and services and specific use-cases across financial, health and EdTech services from the RMG enterprise perspective as well as enterprise-level services. This section also includes findings from KIIs with other stakeholders, where relevant.

3.1. WAGE DIGITIZATION

Insights into overall status of wage digitization and more details from the employee perspective can be found in Section 2.3. From an enterprise perspective, digitizing wages can realize significant efficiency gains in payroll with an 85 percent reduction in wage payment transaction costs through implementing a hybrid bank and mobile financial services (MFS)-based payment solution (BTCA, 2017). Additional organizational benefits include increased transparency of transactions and reduced risks of handling large amounts of cash to pay wages. While all the participating factories paid salaries digitally, the overtime and bonuses were paid in cash.

The payroll data, that is salary accounts, are generally maintained by enterprise resource planning (ERP) software that maintains overall company operations. However, MFS-based salary distribution lists are not integrated within ERP systems; rather there is a manual process in transferring salaries where manufacturers upload information to DFS providers, which then disburse payments to relevant RMG employees' MFS accounts.

Factories are reportedly taking responsibility for building financial literacy of RMG employees, but currently this is mainly limited to the scope of wage digitization. When it comes to financial products, RMG employees are further disinterested as they believe that they have no extra income left to spend on financial products such as short-term or long-term savings accounts.

3.1.1. Impact of COVID-19

From an enterprise perspective, the COVID-19 pandemic has had vast economic impacts across the sector leading to cancellation of orders and causing vast job losses in the sector during 2020 and ongoing to 2021. At the same time, as discussed in Sections 2.3 and 2.4, the COVID-19 pandemic, and specifically the stimulus package being stipulated to be paid through mobile wallet accounts to employees, have resulted in increased DFS use among RMG employees. As of August 2021, the RMG sector is showing signs of stability and recovery. However, prices offered by buyers remain below expectations, posing a challenge for manufacturers.

3.1.2. Opportunities from the enterprise perspective

As DFS access and usage has increased in recent years, and as accelerated by COVID-19, new cross-service opportunities have surfaced across digital finance, health and EdTech services.

3.2. HEALTH, WELL-BEING AND SAFETY

Insights into overall status of digital health services and more details from the employee perspective can be found in Section 2.5. Although manufacturers provide various health programmes for their employees currently, including hepatitis B vaccinations, prenatal care for mothers-to-be and on-site factory clinics, they also see substantial scope to introduce further digital health services including health insurance and doctor consultation services. Of the digital health services available, some have been created in collaboration with manufacturers, where the manufacturers provide space and utilities for the services. Access to services such as doctor consultations are facilitated by the digital health service provider via mobile apps or hotlines. In most cases these services are free to use for employees, with the manufacturers paying on their behalf. According to the service providers, supporting employees to understand the benefits of the digital health service and making them familiar with these services are the hardest challenges to implementation.

As more digital health services become available, such as digital booths in factories, telemedicine, doctor video consultations and medicine prescriptions over SMS, digital health service providers advocate for the 'co-payer' model, in which the manufacturer and employee share the cost of the service, to pay for these services as most sustainable.

Buyers and brands interviewed acknowledge the health and nutrition-related challenges of RMG employees and stress the lack of real-time reporting and monitoring mechanisms. A digital monitoring mechanism on ESG sustainability parameters (including RMG employee health and well-being indicators) could provide insights into improving livelihoods and overall sustainability. Manufacturers have information on health, well-being and safety of their employees in manual Excel files, rather than using specific software to manage these data.

3.2.1. Opportunities

Ensuring communication of instructions and benefits of services, using testimonials and real-life examples, and managing expectations of both RMG employees and manufacturers is crucial in implementing new digital health services. Building service models for employees that are either wholly or partially paid for by the employer are deemed to be most sustainable.

3.3. RMG EMPLOYEE SKILL DEVELOPMENT AND EDTECH

Insights into overall status of digital EdTech services and more details about IR 4.0 and automation trends from the employee perspective can be found in Section 2.6. From the manufacturer's perspective, there is a confidence that reskilling and upskilling will enable the existing workforce to cope with new machinery and technology and some factories have already started to take initiative to upskill their employees.

Buyers and brands are also catalysts in pressuring manufacturers for digital innovation and automation and urging manufacturers to reskill and upskill their employees and mid-level management.

3.3.1. Opportunities

Manufacturers believe that integration of health and safety into upskilling and reskilling vocational education is important, in line with current market demand.

3.4. RMG EMPLOYEE SOCIAL PROTECTION

Insights into social protection from the employee perspective can be found in Section 2.5 and are further elaborated from the enabling environment perspective in Section 4.3.

3.5. SUSTAINABILITY DATA MANAGEMENT SYSTEMS AND ESG DATA VERIFICATIONS

This study additionally reviewed the opportunities of digitalization from an enterprise perspective to increase overall sustainability of the sector and therefore its competitiveness and possibility to attract further investment. This includes, for example, implementation of high-integrity, low-cost systems to manage, and disclose, sustainability data across the ESG spectrum and the SDGs. Such digital systems will enhance transparency and allow manufacturers to actively track and seek ways to improve their own sustainability. They can help manufacturers in communication of information on sustainability performance to buyers and brands and other stakeholders, to gain trust and competitive advantage.

Digitized tracking of sustainability at enterprise level can open up opportunities of providing high-integrity, low-cost and verified data on sustainability performance with possible applications ranging from public disclosure to increase trust and strengthen competitive advantage to use in tracking sustainability performance targets for sustainability-linked finance instruments and application in credit assessments.

At a sectoral level, the RMG sector in Bangladesh is already trailblazing overall sustainability reporting, particularly through using GRI framework indicators, where sustainability data are also being digitized. Different silo-based databases are being developed and maintained to collect and record environmental sustainability performance data across energy, water and chemical management topics, which should be fully digitized and integrated for comprehensive real-time reporting and monitoring.

KEY INSIGHTS

DIGITIZED TRACKING

of sustainability at enterprise level can open up opportunities of providing high integrity, low-cost and verified data on sustainability performance.

SUSTAINABILITY DATA

can be used for public disclosure to strengthen competitive advantage and in tracking targets for sustainability-linked financing instruments, among other use cases.

From the manufacturer's perspective, there are multiple sustainability performance databases mandated for use by buyers and brands. These include the HIGG index, WRAP and the Social & Labor Convergence Program (SLCP).

Firstly, the HIGG index, developed by the Sustainable Apparel Coalition (SAC), is an apparel and footwear industry self-assessment standard for assessing environmental and social sustainability throughout the supply chain. The SAC HIGG digital platform is commonly used to connect multiple brands and buyers with manufacturers' social and environmental sustainability data, even though the data accuracy on social sustainability aspects such as on productivity, automation, technology and employee turnover is a big challenge. HIGG auditors inspect and check the validity of the relevant sustainability data at regular intervals.

Secondly, WRAP is another standard aiming to promote safe, lawful, humane and ethical manufacturing. As opposed to the self-assessment approach of the HIGG index, WRAP assigns, based on their performance from audits, a score to manufacturers. Manufacturers are currently working on a better integrated system to auto-insert sustainability data under the WRAP sustainability standard.

Thirdly, some manufacturers use the SLCP (Social & Labor Convergence Program) by conducting self-assessments and submitting information on a platform mandated by buyers. SLCP is an initiative designed to simplify the auditing of labour standards in apparel and footwear facilities using a converged assessment framework (CAF).

Across these three platforms, the manufacturers upload the data in bulk format through Excel-based programmes being initially collected from manufacturers' ERP software. The required data are extracted from the ERP and manually uploaded as Excel files to the sustainability data platforms. Some larger manufacturers are also integrated with Internet of Things (IoT) technology, which enables exchange of data between a central server and an array of networked devices to measure environmental sustainability parameters such as emissions or water usage without having to manually bulk upload.

The challenge for manufacturers is working with multiple platforms to track and report sustainability data, requiring regular upgrades of integration of their existing ERP systems, which are currently focused on business-related data starting from product sourcing to product export; with less focus on social and environmental sustainability parameters. From a technical perspective, an ERP keeps track of everyday activities while sustainability performance monitoring initiated by buyers and brands is done for overall sustainability performance and digs down into particular

sustainability parameter(s) as required. An integrated application should cover social sustainability topics related to employee information, grievance handling and reporting among other social and environmental sustainability areas. Enterprise-level digital service providers, such as ESG data verifiers (organizations that provide general sustainability consultancy and/or digital services in managing and verifying sustainability data of different stakeholders including manufacturers), can provide key data streams to their clients (buyers and brands and manufacturers) so that they can holistically review their sustainability performance with various data splits, including gender. The aggregate data can be used for benchmarking of sustainability standards among manufacturers locally and globally.

Another aspect of application of sustainability data management systems is in sustainability ratings and performance targets related to financing and investment, particularly in implementing sustainability-linked finance instruments. This could help lenders and investors to better assess and monitor sustainability of borrowers when providing financing, while at the same time providing a financial incentive for the borrower (i.e. the manufacturer) to improve sustainability performance. Digital platforms can offer high-integrity, low-cost and verified data to track the manufacturers' sustainability performance while applying such financial instruments. Credit-providing financial institutions may also review manufacturers' sustainability performance to manage risks in their credit rating.

Having more integrated and organized sustainability data management systems could aid in integration of ESG sustainability metrics in credit ratings and development of more sustainability-linked financing options for manufacturers to increase the sector's sustainability. More high-integrity and low-cost sustainability data management systems need to be developed and offered to make them more attractive for manufacturers and credit-providing financial institutions. As a case in point, there are two examples of the first sustainability-linked loans in Bangladesh implemented during 2020 linking environmental sustainability performance targets to the interest rate of the loan, specifically the use of clean energy.² There is potential for implementing similar types of financial instruments as incentives to improve in other areas of sustainability performance, also using targets on social sustainability indicators or overall sustainability ratings. The cost of capital could, for example, be linked to progress on a particular social sustainability performance indicator. This is contingent on the availability of low-cost, high-integrity data available on social sustainability performance at the manufacturer level, which the credit-providing financial institution or investor can use to track the manufacturer's progress.

Technological advancements, such as blockchain, have started to gain familiarity in Bangladesh, although the country has yet to see market-wide industrial-scale applications of artificial intelligence (AI) and blockchain. Blockchain could be the way forward for trusted and standardized sustainability data and reporting in the sector. Service providers such as Diginex, which offer

² <https://www.thedailystar.net/business/news/hsbc-lends-square-tk-1000cr-bangladeshs-first-sustainability-linked-loan-1919613>; <https://www.thedailystar.net/business/news/hsbc-arranges-tk250cr-sustainability-linked-loan-bsrm-2003841>

blockchain-enabled services to track sustainability data for enterprises, including Small and Medium Enterprises (SMEs), could have a role to play. Decentralization makes blockchains attractive as a governance technology that facilitates collaboration. With the rise of IoT technologies leading to more networked devices and machine ecosystems, blockchain technology can work as a trust layer, integrating data from varying sources and database technologies for enterprise, value chain and ecosystem levels.

With regards to blockchain, one interviewed financial institution in partnership with International Business Machines Corporation (IBM) has introduced a blockchain-based financial product that is being used to automate Business to Business (B2B) banking processes. Blockchain could facilitate availability of high-integrity data at a low cost.

4. DIGITALIZATION FOR IMPROVED LIVELIHOODS AND SUSTAINABILITY OF RMG ENTERPRISES: THE PERSPECTIVE OF THE ENABLING ENVIRONMENT

This section summarizes findings from KIIs conducted with various stakeholders in the enabling environment including government representatives, development organizations and employer organizations. This section also includes findings from the surveys and FGDs with RMG employees to illustrate relevant points.

4.1. HEALTH, WELL-BEING AND SAFETY

As an employer organization, BGMEA has collaborated with a number of digital health service providers such as Maya and Digital Healthcare Solutions to improve RMG employees' health and well-being. For example, BGMEA and Maya have an agreement to provide services free-of-charge for RMG employees to assist, prevent and control the spread of COVID-19, as well as to address general medical and mental health concerns, mainly through telehealth channels.

BGMEA also acknowledges the nutrition challenge for RMG employees and plans to launch a nutrition campaign in collaboration with a multinational food company to promote healthy living and more balanced dieting with higher consumption of vitamins and nutrients. BGMEA also aspires to work on sexual reproductive health projects for female RMG employees, including training on sexual and reproductive health via factory clinics.

Stakeholders advocate for digital health services including health insurance through collaboration between digital finance and health service providers and insurance companies. At the same time, there are opportunities to ensure that insurance services meet the needs of RMG employees and are easy to use. For example, the ease of filing for claims for medical expenses.

4.2. RMG EMPLOYEE SKILL DEVELOPMENT AND EDTECH

The government acknowledges the importance and urgency of initiatives to cope with IR 4.0 and changes anticipated from automation, and has made significant strides in development of prerequisites. This includes setting up the National Skills Development Authority (NSDA), which works in conjunction with government agencies that aim to develop the capacity necessary for IR 4.0, particularly for youth. The government has also worked with BGMEA and Bangladesh Bank to launch a BDT 15 billion revolving fund for the RMG and textile sectors to upgrade machinery, software and technology systems to cope with the changes. To this end, considerable focus must

KEY INSIGHTS

INTEROPERABILITY

The government of Bangladesh is currently in the process of rolling out the Interoperable Digital Transactions Platform (IDTP), which will ensure complete interoperability between DFS providers with a single ID that can be tracked.

CYBERSECURITY

Stakeholders state that with interoperability and proliferation of DFS, and digital services overall, cybersecurity and data privacy measures need to be improved.

be devoted to the already deteriorating skills gap in terms of increased investments in EdTech platforms tailored to the learning needs of RMG employees. The government has also, through the Bangladesh Computer Council (BCC), initiated Leveraging ICT (LICT) for Employment and Growth of the Information Technology-Information Technology Enabled Services (IT-ITES) industry, in which youth are trained for future jobs, and has also initiated the Skills for Employment Investment Program (SEIP) to build capacity for all sectors including the RMG sector. BGMEA is soon to launch a 'Center for Innovation, Efficiency and Occupational Safety and Health (OSH)', an institute for teaching lean manufacturing and other IR 4.0-related topics to help supply manufacturers with the required skilled workforce. A2i additionally has a structured programme for capacity development of youth, which is fully compatible with the requirements of the RMG sector, including computer aided design (CAD).

Stakeholders agree that a major challenge towards reskilling and upskilling RMG employees is the lack of digital infrastructure (i.e. access to smartphones, Internet connectivity, uninterrupted electricity supply, etc.). A collaborative approach is required between the public and private sectors to bridge this gap in infrastructure and counter this challenge.

4.3. RMG EMPLOYEE SOCIAL PROTECTION

BGMEA has made mandatory a health insurance scheme (covering life insurance and medical bills up to BDT 20,000 per year) to cover all RMG employees. However, stakeholders stressed that there is no universal social protection programme, including pension fund coverage, for RMG employees in Bangladesh.

Standalone social protection programmes, including pensions and long-term saving tools, in collaboration between public and private sector actors could provide possible solutions.

4.4. INTEROPERABILITY OF DIGITAL PAYMENTS

Stakeholders agree that interoperability is among the next key steps that will unlock further opportunities towards further usage of DFS. The government, through Bangladesh Bank and the Information and Communications Technology Division is currently in the process of rolling out the Interoperable Digital Transactions Platform (IDTP), which will ensure complete interoperability between DFS providers with a single ID that can be tracked. This will have countless benefits and will give way to more affordable and efficient DFS for all sectors of the economy, including the RMG sector. Potential use-cases for the interoperable platform include social protection

programmes covering cross-provider payments and transfers, pensions and long-term saving tools, integrated savings that could be linked with mobile wallets, among many others. However, stakeholders state that with interoperability and proliferation of DFS, and digital services overall, cybersecurity and data privacy measures need to be improved.

4.5. E-KYC

An e-KYC Guideline was introduced by the Bangladesh Financial Intelligence Unit (BFIU) in January 2020, which facilitated opening of mobile wallet accounts, particularly for the COVID-19 stimulus package provided for RMG manufacturers and their employees.

5. RECOMMENDATIONS FOR DIGITALIZATION TO IMPROVE LIVELIHOODS AND SUSTAINABILITY IN THE RMG SECTOR

The RMG sector in Bangladesh is undergoing digital transformation at both enterprise and employee levels, much driven by wage digitization initiatives during recent years. The previous chapters of the report assessed the landscape of further digitalization opportunities to improve livelihoods and overall sustainability in the sector, building on progress and achievements already made in wage digitization and other areas. This section presents a summary of these opportunities to drive the industry towards sustainable and SDG-inclusive growth.

In this section, sustainability framework mapping, developed through review of available industry sustainability assessment frameworks and standards, is used to present a summary of recommendations and opportunities for digitalization to improve livelihoods and sustainability in the RMG sector. The list of sustainability topics and sub-topics is not an exhaustive list of what is important to the industry, rather it details topics that have been identified for relevance to the aim of this report to map out digitalization opportunities to improve livelihoods and overall sustainability in the sector.

Stakeholders, including digital service providers, RMG manufacturers, brands, FIs, NBFIs, NGOs, development partners, employer organizations and RMG employees can work together to act on these recommendations to drive digitalization to improve sustainability and livelihoods in the RMG sector in Bangladesh, and, in doing so, increase competitiveness of the sector and the potential for further investment.

Table 3 | Summary of digitalization opportunities to improve livelihoods and overall sustainability in the RMG manufacturing sector in Bangladesh

ESG sustainability area ENVIRONMENTAL	
Topic: Infrastructure modernization (water, clean energy, greenhouse gas emissions, waste and chemical management)	
Digitalization level RMG employee/household	Digitalization level Enterprise
<ul style="list-style-type: none"> Application of EdTech to educate on environmental topics 	<ul style="list-style-type: none"> Support in choosing appropriate technology service providers and funding to modernize equipment and integrate IoT to track and reduce emissions

ESG sustainability area SOCIAL	
<i>Topic: Wage, compensation and benefits</i>	
<i>Sub-Topic(s): Digital wage payments, Fair wage, Digital skills</i>	
<i>Digitalization level</i> RMG employee/household	<i>Digitalization level</i> Enterprise
<ul style="list-style-type: none"> • Build digital payment use-cases across rent, food and groceries (including merchant payments, carefully monitoring beneficiary attitudes towards negotiation leverage with merchants and impact on prices for products), education fees and savings (including long-term savings and social protection) • Introduction of flexible savings products within mobile wallets that fit the lifestyle demands of RMG employees • Create long-term savings and pension products that are independent of the employer • Introduce shariah-based banking products • Create flexible long-term savings products allowing flexible instalments and the option for taking out part of savings in case of emergencies • Collaboration between employer organizations, digital service providers, development organizations and other stakeholders to provide pension and insurance schemes • Create products allowing flexible access to unpaid salaries to cope with everyday living expenses and emergencies • Reward and loyalty programmes for both purchases (RMG employee) and seller (merchant) where, based on transaction frequency and amount, both earn reward points that can be redeemed for various discounts or cashback offers and other incentives for merchants to digitize payments 	<ul style="list-style-type: none"> • Continue digitizing wages with proven enterprise- and employee-level benefits

<ul style="list-style-type: none"> • Tax breaks and incentives to digitize payments. For example, the National Board of Revenue (NBR) could mandate tax breaks if rents are received digitally • Integrations among DFS, HealthTech and EdTech to develop and cross-sell new digital tools • Continue application of EdTech to educate on financial literacy topics including fraud, data privacy and security to increase usage and trust 	
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ESG sustainability area SOCIAL	
<u>Topic:</u> Hours of work	
Digitalization level RMG employee/household	Digitalization level Enterprise
	<ul style="list-style-type: none"> • Digitize overtime wage payments, while closely monitoring employees' household power dynamics to manage any possible negative impacts. For example, collaboration with NGOs or development organizations can be done in conjunction with rollout to offer support services in cases of victims of domestic abuse

ESG sustainability area SOCIAL	
<u>Topic:</u> Health, well-being and safety	
Digitalization level RMG employee/household	Digitalization level Enterprise
<ul style="list-style-type: none"> • Development of integrated digital finance and health services including monthly subscription-based or health and life insurance products with financial contributions from the employer or via a 'co-payer' model 	

<ul style="list-style-type: none"> Integrating testimonials and real-life examples to build trust in services. For example, an effective brand communication campaign for a digital mental health service provider could be to host a seminar at which previous patients speak about how the service has helped them Telecom providers can subsidize price of internet when used for video consultations and accessing healthcare services 	
<ul style="list-style-type: none"> Collaboration between digital health and EdTech service providers to improve the lives of RMG employees 	

ESG sustainability area SOCIAL	
<i>Topic: Qualification, training (including digital literacy) and communications</i>	
<i>Digitalization level</i> RMG employee/household	<i>Digitalization level</i> Enterprise
<ul style="list-style-type: none"> Application of EdTech (including video and interactive learning and Learning Management Systems [LMSs]) to various training topics such as equipment, work culture and digital literacy, and track training results Integrating testimonials and real-life examples to build trust in services Flexible instalment-based smartphone purchases to increase access to digital infrastructure Collaboration between phone manufacturers and distributors, RMG manufacturers, digital financial service providers and other actors to distribute affordable smartphones (with or without flexible instalment-based purchase model) that does not sacrifice quality 	<ul style="list-style-type: none"> Integrate different stakeholders' (including buyers and brands) curricula across various topics into one single training to save time for manufacturers and their employers and prevent training fatigue Government could offer subsidies to manufacturers and other actors for RMG employees to learn new skills to cope with IR 4.0 and automation trends

<ul style="list-style-type: none"> • Collaboration between phone manufacturers and distributors, RMG manufacturers, digital financial service providers and other actors to distribute affordable smartphones (with or without flexible instalment-based purchase model) that does not sacrifice quality • Create learning programmes on skills related to job and coping with IR 4.0 and automation trends including reskilling and upskilling, soft management skills, English speaking, computer skills, health and nutrition and worker's rights programmes in line with market demands and specifically to also shrink the existing gender skill gap • Collaboration between digital health and EdTech service providers to improve the lives of RMG employees. 	
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ESG sustainability area SOCIAL	
<i>Topic(s): Freedom of association and collective bargaining, Harassment and abuse, Prohibition of forced labour, Recruitment and hiring, Discrimination, Sexual harassment and gender-based violence in the workplace</i>	
<i>Digitalization level</i> RMG employee/household	<i>Digitalization level</i> Enterprise
<ul style="list-style-type: none"> • Application of EdTech to educate on worker's and human rights topics 	<ul style="list-style-type: none"> • Integrating available sustainability standards into an industry-wide standard. An integrated sustainability data management system can play a strong role in making sustainability performance data more accessible for manufacturers, buyers and brands, credit-providing financial institutions and other stakeholders

ESG sustainability area SOCIAL	
<u>Topic:</u> Compliance with laws and workplace regulations	
Digitalization level RMG employee/household	Digitalization level Enterprise
<ul style="list-style-type: none"> Application of EdTech to educate on worker's and human rights topics 	<ul style="list-style-type: none"> Integrated sustainability data management systems to track social sustainability performance indicators

ESG sustainability area SOCIAL	
<u>Topic:</u> Employee privacy	
Digitalization level RMG employee/household	Digitalization level Enterprise
<ul style="list-style-type: none"> Application of EdTech to educate on digital security topics including MFS fraud, social media hacking, cyberbullying, blackmail and phishing, which would also help in building trust in digital services 	<ul style="list-style-type: none"> Securing sensitive data through integrated ERP and sustainability data management systems

ESG sustainability area GOVERNANCE	
<u>Topic(s):</u> Transparency, Sustainability data management	
Digitalization level RMG employee/household	Digitalization level Enterprise
	<ul style="list-style-type: none"> Integrated sustainability data management system to keep track of social sustainability aspects with a clear business case for manufacturers to implement. Application of blockchain technology can increase integrity and verification level of data at a reasonable cost. With increased transparency the scope to attract further investment becomes more accessible as investors and credit-providing institutions are increasingly taking ESG factors into account

	<ul style="list-style-type: none"> • Sustainability-linked financing instruments could be used as incentives to improve on sustainability performance requiring low-cost, high-integrity, verified data on sustainability performance. Integrated sustainability data management systems could allow manufacturers to gain access and credit-providing institutions to provide sustainability-linked funds • A government-established monitoring mechanism on ESG sustainability parameters (including social areas) could help in boosting overall transparency and sustainability of the sector
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ESG sustainability area GOVERNANCE	
<i>Topic(s): Corruption, conflict of interest, privileged information and ethical behaviour</i>	
<i>Digitalization level</i> RMG employee/household	<i>Digitalization level</i> Enterprise
<ul style="list-style-type: none"> • Application of EdTech to educate on work ethics and ethical behaviour topics 	<ul style="list-style-type: none"> • Management systems for automation in areas prone to corruption related to accountability and audits

ESG sustainability area GOVERNANCE	
<i>Topic(s): Performance management for value chain (responsible sourcing from subcontractors and suppliers by manufacturers)</i>	
<i>Digitalization level</i> RMG employee/household	<i>Digitalization level</i> Enterprise
<ul style="list-style-type: none"> • Application of EdTech to educate responsible sourcing and ethical standards topics 	

ANNEX

LIST OF STAKEHOLDERS INTERVIEWED

#	Stakeholder	Categorization
1	bKash	Digital service provider, DFS (mobile money)
2	Nagad	Digital service provider, DFS (mobile money)
3	BRAC (Urban Development Program)	Digital service provider, DFS (savings and loans)
4	pinBox	Digital service provider, DFS (long-term savings/pension)
5	SSD-TECH (Carnival)	Digital service provider, Insurtech aggregator platform and MNO support/add-on services
6	BRAC Microfinance	Non-bank financial institution, DFS (savings and loans)
7	IPDC	Financial institution, enterprise lending and sustainability-linked finance and savings/loans
8	Digital Finance Forum Bangladesh	Business association
9	Apon	Digital service provider, grocery store offering e-payments in factories
10	Moner Bondhu	Digital service provider, E-health services (psychiatric counselling)
11	Milvik (Bima)	Digital service provider, E-health services and insurance
12	dh Health	Digital service provider, E-health services
13	Praava	Digital service provider, E-health services
14	Maya	Digital service provider, E-health services
15	QuizRR	Digital service provider, EdTech platform
16	Ghoori Learning	Digital service provider, EdTech platform
17	10 MS	Digital service provider, EdTech platform
18	Robi	Digital service provider, telecom provider
19	Ulula	Digital service provider (enterprise), ESG data verification
20	ELEVATE	Digital service provider, RMG employee engagement
21	Diginex	Digital service provider (enterprise), ESG data verification using blockchain
22	Team	RMG manufacturer, large
23	dbl	RMG manufacturer, large
24	Fakir Group	RMG manufacturer, large
25	Babylon	RMG manufacturer, large
26	Cute Dress	RMG manufacturer, small

27	BGMEA	Employer organization
28	H&M	Brand/buyer
29	Primark	Brand/buyer
30	C&A	Brand/buyer
31	BTCA	Development organization
32	BSR	Development organization
33	BRAC SIL	Development organization
34	a2i	Development organization, government
35	e-Governance Wing, Cabinet Division Representative	Government

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