

## **Empowering Female Tea Workers through Digital Payments– An exploratory study**

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In recent times, there have been rapid advances in financial technology that have resulted in many countries enacting regulations supporting digital finance. These developments not only contribute to benefits in terms of convenience and efficiency but also represent an opportunity to provide greater access to financial services for women and other underserved segments of the population. Facilitating better access for women and other financially excluded groups is important for various reasons. First, an inability to access financial services forces such individuals to deal mostly in cash, with its attendant problems of safe keeping. Second, the lack of access to safe and formal saving avenues could reduce their incentives to save. When saving occurs, safety and interest rate benefits may not be adequate or to the extent available in the formal system. Inadequate savings could lead these households to depend on outside sources of funds in times of need. Often these sources are unregulated and charge exorbitant interest rates. The high interest rates increase the risk of default by borrowers. Third, the lack of credit products results in such individuals being unable to make investments required to expand and diversify their income sources and improve their standards of living. Fourth, the lack of remittance products leads to money transfers being cumbersome and high risk. Fifth, the lack of insurance products means lack of opportunities for risk management.

During the Covid-19 pandemic, governments in many countries used digital means to make transfers to citizens under the various social assistance schemes that were enacted for vulnerable segments of the society. Digital payments were in many cases the only sustainable way of delivering aid in a timely manner to a large and widely dispersed population. This resulted in more bank accounts being opened by low-income groups and more widespread awareness of the benefits

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of digitalisation. Digital payments can be made not only through bank transfers but also through mobile money, QR<sup>2</sup> codes, and payment instruments such as credit, debit and prepaid cards.

As digital payments enable the receiver to receive the money digitally rather than via cash, they have advantages in terms of safety and security. Handling cash involves risks of thievery and loss especially in areas with high levels of crime. Digital payments also have the advantage of transparency as there is an electronic record of the exact amount received. Furthermore, the receiver can more easily save the amount received till they need to spend it.

Female recipients can especially benefit from digital payments by gaining greater control over the proceeds. Cash receipts entail risks of being taken away forcibly, sometimes even by members of their own household. However, it is important that women have safe, secure and direct access to the digital payments for such benefits to materialise. As digital payments can provide women reliable and convenient avenues to save, they could help them use their earnings to accumulate assets in their own name and hence over time, digital payments can give women greater autonomy over their finances. By giving them the ability to save for emergencies and important life events, digital payments can help them develop greater independence and self-reliance. The digital footprint created by women who use digital payments could aid them in accessing other financial services such as loans as they build up a track record in the formal financial system. Once they are part of the financial system, increased awareness and use of other financial services such as insurance is also likely as their financial literacy<sup>3</sup> increases. It is important that first time users of financial services be given some basic training on financial literacy so that they are able to understand how to use the services in an optimal and safe manner. Such training also gives them greater self-confidence while using the services.

This paper examines the benefits and challenges of providing digital payments for female workers in the tea sector in Assam, India and the positive impact it could have on their autonomy. While the focus is on Assam, the study will draw on research and learnings from other developing country contexts too. **Section 1** provides a brief overview of the Assam tea sector. **Section 2** describes the

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<sup>2</sup> Quick Response codes are more commonly known as QR codes.

<sup>3</sup> Financial literacy refers to the basic understanding of financial concepts

typical payment systems prevalent for female tea workers in Assam today. **Section 3** describes the potential benefits of digital payments for female tea workers. **Section 4** explains the challenges involved in introducing digital payments for these workers. **Section 5** describes some case studies of tea plantations seeking to introduce digital payments. **Section 6** concludes the paper by summarising the findings and providing recommendations.

## **Section 1: Overview of the Assam Tea Sector**

India is the second largest producer of tea in the world and Assam is the largest tea producing state in India. The tea sector in Assam has a 200-year history and is home to around 762 large tea estates<sup>4</sup>. More recently, there has been an emergence of many small tea growers too in the state. The state of Assam produces nearly 700 million<sup>5</sup> kg of tea annually and accounts for around half of India's overall tea production. As per the Tea Board database, the large tea plantations in Assam employ nearly 700,000 people daily. It is estimated that women comprise greater than 50% of the employees of the tea sector in Assam<sup>6</sup>, typically employed for plucking tea. Overall, the tea sector employs around one million women in Assam<sup>7</sup>.

Tea in Assam is a nine-month crop with the harvesting mainly taking place between March to November each year. The first harvest of the year (known in the tea industry as the first flush) happens between late February and often lasts to April depending on the elevation of the tea garden<sup>8</sup>. The first flush teas are usually quite light in flavour and there is high demand for them, as they are of high quality. The second flush takes place between April and May/June. The tea bushes benefit from more sun and rain, resulting in a stronger, bolder taste that makes them appropriate for breakfast teas. The autumn or final flush is in October/ November. During the winter months from December to February, tea plantations are primarily involved in maintenance activities.

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<sup>4</sup> A large tea estate is one that is larger than 10.12 hectares (statistics based on Economic Survey, Assam, 2023-24).

<sup>5</sup> <https://des.assam.gov.in/information-services/economic-survey-assam>

<sup>6</sup> <https://etp-global.org/wp-content/uploads/2023/10/Women-in-Tea-Factsheet.pdf>

<sup>7</sup> <https://etp-global.org/resources/women-assam-factsheet/>

<sup>8</sup> <https://www.ahmadtea.com/tea-flushes-explained/>

Tea cultivation being labor intensive in nature the tea industry in Assam has traditionally been dependent on migrant labor. During the colonial period, people from multiple tribal and caste groups in other states of India were brought to Assam as indentured laborers in multiple phases. Many of them settled permanently in Assam and their descendants continue to work in tea plantations. They are known as Tea and Ex-Tea Garden Tribes and are recognised by the Assamese Government as a socially and educationally underprivileged group having low literacy levels<sup>9</sup>.

## **Section 2: Typical payment Systems for Female Tea Workers in Assam**

Tea workers live within the tea plantations and hence reside in remote, rural locations. As most female tea workers are engaged in tea plucking, their wages fall on the lower end of the range of tea plantation wages. They are usually paid on a weekly basis with each plantation having its payday on a certain day of the week when wages are paid in cash to employees. Cash payments are supplemented by the provision of food rations and free housing, healthcare and primary education for immediate dependents, as required by the Plantations Labor Act of 1951. During the harvest months, temporary workers are hired to supplement the permanent workforce.

On the payday, it is customary for a temporary market to be set up at the plantation by local businesses so that workers can purchase groceries and clothes. Workers commonly spend the entire cash payment they receive on the same day in the market. Consequently, they do not save any part of their income for emergencies and life events. This makes them dependent on local moneylenders in times of need. These moneylenders charge usurious rates of interest (sometimes as high as 10% or even 20% per month) that can lead to lifelong debt burdens.

An annual bonus payment is made by plantations to tea workers which is also customarily made in cash. Payment of bonus is an important annual event at plantations. As it is known in the local community that the tea workers will be receiving a cash bonus on that day, local vendors and moneylenders often congregate at the plantations on the bonus day. While the former try to sell

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<sup>9</sup> <https://ttwd.assam.gov.in/about-us/our-history>

goods to the workers, the latter use this opportunity to collect the amounts workers owe them. As a result, there are many instances of workers being left empty handed by the end of the bonus day.

Payments for many of the supervisory staff members at the plantations are however now often made through bank accounts. Most staff members and workers now have basic bank accounts because of a government scheme entitled “Pradhan Mantri Jan-Dhan Yojana”<sup>10</sup> launched in 2014. Yet most of the workers are still paid by cash because there are very few accessible ATMs or bank branches in the plantations which workers can use to withdraw cash from. Travelling to the nearest bank branch may result in their missing work and their daily wage. Even when there are ATMs within the plantation, many female workers are not comfortable using them. As a result, female workers may entrust the task of withdrawing money to one of the younger members of their families, exposing them to risks of inadequate control on the amounts withdrawn. To avoid such issues, most plantations pay the workers in cash even though they may have bank accounts.

The increasing availability of internet connectivity in Assam and spread of mobile phones among low-income groups offer yet another route to reducing dependence on cash. However, not many female tea workers have their own mobile phones though younger members of their family may have phones. Using mobile money to replace cash wages would again cause the workers to depend on younger family members to access their hard -earned wages. This makes this option undesirable until there is greater usage of mobile phones among female tea workers.

### **Section 3: Potential benefits of digital payments for Female Tea Workers**

There are several potential benefits if female tea workers are paid digitally rather than through cash.

First and foremost, digital wages can help draw in female tea workers into the financial system. Those who are paid in cash are usually excluded from the financial system. In Assam, even tea workers who have bank accounts use them minimally, often only to receive government benefits. If wages are paid digitally, it makes it easier for tea workers to save money, which can potentially

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<sup>10</sup> <https://pmjdy.gov.in/scheme>

increase their formal participation in the economy. Use of savings accounts can also lead to access to other financial services, such as insurance and microfinance. Access to microfinance can help tea workers supplement their income from plantations by starting another income generating activity such as keeping livestock or growing vegetables around their houses. Tea plucking being a low paid activity, this is an important objective, especially for temporary workers who do not earn during the winter months when no harvesting takes place. The Ethical Tea Partnership (ETP), an organisation of tea buyers, is conducting a pilot project to help tea workers and their communities access Government schemes which they may be eligible for and can benefit from. This pilot is in collaboration with the International Institute of Information Technology in Hyderabad, India, and involves developing and testing a web application which can be used to access information on application procedures for Government schemes. There is also information on how tea workers can file appeals in case they face challenges while applying for the schemes. As part of the pilot, ETP plans to train local youths on this application so that they can help tea workers in their area enroll for the schemes digitally. Moreover, the youths will be connected with officials in the relevant government departments so that they can advocate for the workers if required. There is potential for the pilot to be scaled up over time to assist workers in developing the skills required to use digital payments and access digital finance. In addition, there are initiatives for training tea workers to diversify their income sources. For example, a Sunday School run by a local Government official teaches workers skills such as tailoring. Having access to credit would enable tea workers to start micro enterprises.

The second important benefit is that digital payments can empower female tea workers by giving them greater control over their earnings. This is because carrying cash entails risks of loss and theft. Moreover, cash can also sometimes be taken away by members of their own household. A project supported by BSR (Business for Social Responsibility) to digitise garment workers' wages in Bangladesh found that after having their wages digitised, the percentage of women in Bangladesh who reported that they were handing their salaries over to their spouses on a monthly basis dropped from 43 percent to 25 percent<sup>11</sup>. When women have autonomy over their finances, it gives them the ability to take decisions on financial matters leading to greater independence and

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<sup>11</sup> <https://www.bsr.org/en/blog/the-digital-payments-opportunity-a-conversation>

higher bargaining power within the household. However, it is important that women have safe, secure and direct access to the digital payments for such benefits to materialise.

Third, digital payments can help plantations reduce their administration costs because collecting currency notes of different denominations from bank branches in semi-urban areas, transporting them securely to the remote locations where plantations are located, sorting, counting and preparing packets of cash wages for each employee and distributing them safely is a highly time consuming and expensive process. The BSR project to digitise garment workers' wages in Bangladesh (mentioned in the above paragraph) found that there was a 53 percent reduction in administration time and effort spent on payroll when a factory switched from cash to digital payments. Additionally, it was found that a factory can save about 25 minutes of production time per worker by switching to digital wages because workers do not need to take time off to collect cash. With tea plantations in Assam facing uncertainties in yield because of climate change<sup>12</sup>, reducing costs where possible is an important objective.

Fourth, digital payments provide greater transparency to tea buyers regarding the wages paid to tea workers. This is especially important for international buyers, particularly in the E.U. and U.S.A., who may need to comply with regulations relating to human rights and labor practices within their supply chain. For example, the Corporate Sustainability Due Diligence Directive (CSDDD), adopted by the European Parliament in April 2024 requires large companies with significant activities in the EU to conduct human rights and environmental due diligence on their own operations across their supply chains<sup>13</sup>. To adhere to such regulations, there is a need to embed and make transparent shared responsibility within businesses. Responsible contracting clauses, such as those developed by the Responsible Contracting Project<sup>14</sup>, help formalise an intention of a business to have 'shared responsibility' for human rights and sustainable practices within their supply chain and support accountability within the supply chain. Such clauses may require transparency with regard to payment of minimum living wages to tea workers by plantations. Digital payments will

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<sup>12</sup> <https://economictimes.indiatimes.com/news/economy/agriculture/assam-tea-planters-flag-effects-of-climate-change-global-warming/articleshow/97650388.cms?from=mdr>

<sup>13</sup> <https://www.erm.com/insights/corporate-sustainability-due-diligence-directive-csddd/>

<sup>14</sup> <https://www.responsiblecontracting.org/>

make it easier for plantations to provide such transparency and to consequently build stronger relationships with international buyers.

#### **Section 4: Challenges in introducing digital payments for Female Tea Workers**

The most important challenge in introducing digital payments is helping female tea workers develop the digital and financial literacy skills required to safely access and use digital payments. As more than half of the tea workers in Assam are illiterate, imparting the required skills to them is especially challenging. Some plantations have used movie clips and cartoons to help workers understand more about the advantages of bank accounts. The same avenues could be used to also help spread digital and financial literacy. In addition, there are instances of local social workers teaching female workers the importance of savings by forming groups of women into “self-help groups”.

The second major challenge is to set up a conducive eco-system so that there are user friendly and affordable avenues for workers to easily use their wages to purchase the items they need. This can be achieved either by providing them easy access to cash withdrawal systems or by enabling them to spend digitally in the nearby markets conveniently and without additional expenses.

As plantations are in remote areas, there are very few ATMs for workers to use to withdraw cash. The few that exist run out of currency at times. Banks are hesitant to set up more ATMs as servicing them may be unviable for them. Some banks have individual agents who act as customer service points (CSPs). These agents have biometric enabled machines which can be used to check bank account balances and to make deposits and withdraw cash up to a certain limit. However, there are instances of CSPs getting robbed in remote locations. There are also instances of CSPs demanding a commission on the amounts withdrawn, even though they are not supposed to charge any commissions. In addition, some tea workers also face problems in accessing the biometric devices used by CSPs on account of the corroded nature of their thumbs because of tea plucking for long hours over a number of years.



Using digital money directly in remote locations is a challenge as not all local vendors accept digital payments. Even though there are increasing instances of use of QR codes by shops in rural Assam as a means to accept money digitally, these are not universally available avenues.

The third major challenge is to convince and if possible, incentivise stakeholders to switch from cash to digital payments. Changing an established system requires stakeholders to invest time and money upfront to reap the benefits later. For stakeholders to be motivated to make this investment, they need to be able to visualise the benefits that will accrue to them in the near term.

### **Section 5: Case studies of tea plantations seeking to introduce digital payments.**

To address the multiple challenges involved in switching to digital payments for tea workers, plantations need to consider the options available at their locations and conduct pilot tests. Digital payments need to be introduced in a phased manner, constantly incorporating changes required based on feedback from workers and employees in charge of wage distribution. Below are some examples of successful strategies that have been used by plantation owners to introduce digital payments to low-income workers in cash intensive ecosystems. While one case study is from Assam, the other examples are drawn from East Africa.

#### **I. Dikom Estates, Assam, India**

Dikom Estates, a 1500-hectare tea estate in Assam with 8,000 residents has successfully switched to the digital mode for the annual bonus payment for tea workers<sup>15</sup>. Some of the important features of the transition were:

- a. Before introducing digital payments, the estate management spread awareness among tea workers by screening movie clips and cartoons on the importance of having bank accounts and the advantages of digital payments.
- b. The management encouraged workers to acquire national identity cards (Aadhar cards) by organising a camp in the plantation where workers could complete the formalities required to obtain the cards. They also helped all the workers open bank accounts.

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<sup>15</sup> <https://unicefassam.wordpress.com/2017/09/18/dikom-tea-estate-disburses-bonus-digitally/>

- c. The management offered workers the option to voluntarily switch to digital payments, which was accepted by the workers' union.
- d. The estate management worked closely with the local branches of two public sector banks to set up digital transfers to the individual bank accounts of all the workers.
- e. Prior to the online bonus payment, workers submit their bank passbooks to the administrative staff. After the digital payment is made, the staff get the passbooks updated by the bank staff and return them to the workers.
- f. The management incentivises workers to save by giving a monetary prize to those who save more than a certain amount in their bank accounts.

Another example from Assam is the McLeod Russel plantation which has digitised payment of retirement benefits to workers to ensure that the lumpsum amount is received in a secure and safe manner.

## **II. McLeod Russel, Uganda**

McLeod Russel is one of the world's largest tea production companies with tea estates in India, Rwanda, Uganda, and Vietnam. McLeod Russel Uganda Limited (MRUL) cut costs and increased financial inclusion for workers after transitioning to a secure mobile payment system in Uganda<sup>16</sup>.

Some important features of the transition were:

- a. The company recognised that there were many challenges with cash payments for workers as they needed to drop cash by plane on their tea estates every fifteen days. This was an expensive and labor-intensive affair with risks of theft.
- b. MRUL partnered with local mobile network operators (MNOs) Airtel and MTN, as well as UNCDF<sup>17</sup> Mobile Money for the Poor Program (MM4P), to move its worker payroll from cash to mobile payments at two of its tea estates in Uganda.

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<sup>16</sup> <https://www.betterthancash.org/explore-resources/improving-profitability-through-digital-payments>

<sup>17</sup> United Nations Capital Development Fund

- c. MRUL and MM4P conducted surveys among workers to understand their pain points and identified what other financial services they need beyond digital payments. They found that remittances to family members was another financial service which workers needed.
- d. MRUL and MM4P conducted informational sessions to help workers with the enrolment process.
- e. The company estimates that if implemented across all estates, mobile payments could result in savings of 6.5 percent of employee salary costs.

Yet another successful transition to digital payments in the tea sector in Africa took place in Rwanda where the United Nations actively supported the transition as it contributed to several sustainable development goals<sup>18</sup>. The initiative is part of the Rwanda Economy Digitalisation Programme, a Rwanda government initiative to achieve a sustained shift to an inclusive, digitalised economy.

## **Section 6: Conclusions and Recommendations**

Moving from cash to digital payments for female tea workers offers significant social benefits by contributing to gender equality and financial inclusion goals. However, the transition can also benefit tea plantations by reducing their administrative costs and helping them build stronger relationships with international tea buyers. Tea buyers could gain from the additional transparency in their supply chains, helping them meet regulatory requirements in their own markets.

There are various types of challenges in moving to digital payments in a cash dependent ecosystem such as rural Assam in India. The paucity of bank branches and ATMs and the inadequate access to bank CSPs are important obstacles for workers to withdraw and use their digital wages. Using digital wages directly to buy goods from local vendors is also not easy due to the insufficient number of mobile phones and lack of acceptance of digital payments by local vendors.

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<sup>18</sup> <https://rwanda.un.org/en/266731-promoting-digital-payment-accelerate-sdgs>

The case studies of organisations that have successfully managed a transition in such scenarios highlight the following important factors:

1. Building awareness and educating workers about the benefits of digital payments as a first step.
2. Actively helping workers fulfill the formalities to open bank or mobile money accounts.
3. Ensuring that workers have an avenue to access their earnings conveniently, without incurring additional expenses.
4. Developing partnerships with appropriate agencies such local banks, mobile companies and non-profit organisations.

Crafting a strategy to move from cash to digital payments needs to be carefully tailored by each plantation keeping in mind the availability of local infrastructure and constraints. Workers should have access to adequate information in a transparent manner throughout the process of wage digitisation. Moreover, there should be channels available to hand-hold and support workers and for them to seek guidance in case of need. There should also be a mechanism for registering and resolving complaints. In addition, adequate safeguards to ensure data privacy and security should be an integral part of any transition. The U.N. principles on responsible payments<sup>19</sup> can serve as useful guidelines for the transition.

In the case of rural Assam, plantations need to transition to digital payments in a phased manner with infrequent and lumpsum payments such as annual bonuses and retirement benefits being digitised first. Once these payments work satisfactorily, partial wage payment digitisation can be considered. For example, plantations can work with nonprofits to provide workers financial literacy training and make them aware of the benefits of saving. They can then propose to them the idea of setting aside a percentage of their wages in their bank accounts. If they voluntarily agree, a part of their wages (say 10%) can be deposited in their bank account while the rest can continue to be given out in cash. Gradually the amount set aside can be increased though prior to moving to a fully digital system, adequate and well-functioning cash withdrawal mechanisms need to be available at the plantations. Plantations can partner with banks to set up more customer service points at central places in the garden with adequate security and scrutiny. Helping local

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<sup>19</sup> <https://responsiblepayments.org/pdfs/UN-ResponsiblePayments.pdf>

vendors transition to digital payments could be one way to reduce the need for cash withdrawal mechanisms at least for tea workers who have access to mobile phones.

Once digital payments are implemented, local banks and plantations can collaborate to help workers access other financial services such as remittances, insurance and microfinance loans.