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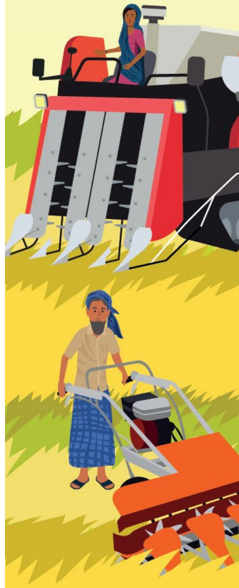
Assessing Current and Alternative Financing Products and Delivery Channels in the Agricultural Machinery Market



Agricultural Mechanization in Bangladesh- The Future

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Methodology

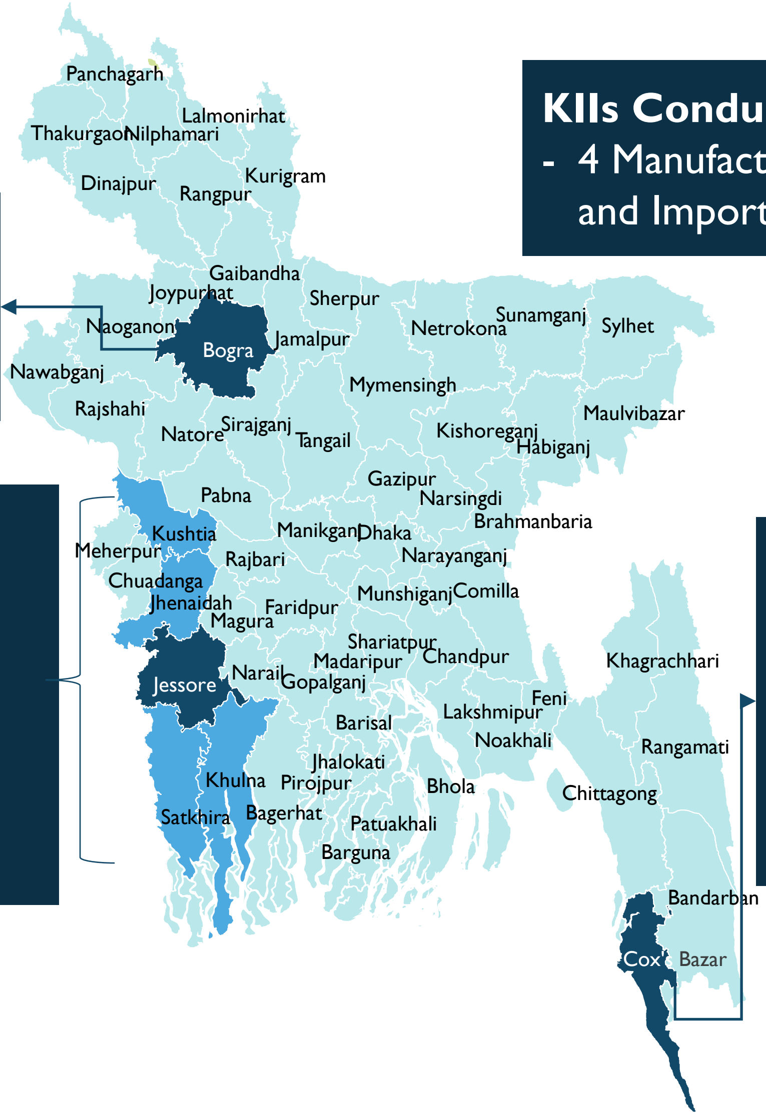
The objective of the study is to unearth the current financing options of value chain actors and identify their financing needs, along with providing innovative financial solutions for both agri-machinery value chain actors and formal financial institutions

Financial System Actors
- 4 PCBs
- 2 SOBs
- 1 NBFI
- 1 DFS
- 1 Agent Banks
- 3 MFIs

Ecosystem Builders
- 1 Bangladesh Bank
- 1 MRA
- 1 BEIOA
- 1 Development Agencies

Surveys Conducted
- 11 SMEs
- 15 MSMEs

Surveys Conducted
- 14 SMEs
- 14 MSMEs
- 12 Dealers
- 54 MSPs
- 1 FGD of MSPs



KIIs Conducted
- 4 Manufacturers and Importers

Surveys Conducted
- 5 SMEs
- 4 Dealers
- 36 MSPs
- 1 FGD of MSPs

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Baseline Findings: Business Profile

Workshop: Manufacturer and Engineering Workshops that fix or modify machinery

- Jashore and Bogura's highest sold => **liner, piston; fodder chopper**
- Cox's Bazar's highest sold => **liner, piston; centrifugal pump**

Foundry: Manufacturer, Foundry, and Engineering Workshops that sell spare parts and machinery

- Bogura's highest sold => **thresher and centrifugal pump**
- Jashore's highest sold => **maize sheller and fodder chopper**

Dealer: Machinery and spare parts seller with the provision of after-sales service

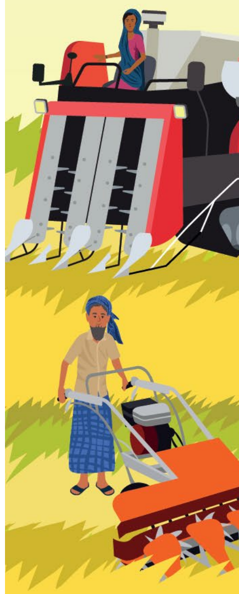
- Cox's Bazar's highest sold => **combine harvester and tractor**
- Jashore's highest sold => **combine harvester, tractor, and rice transplanter**

MSP: Micro-entrepreneurs who sell machinery services to farmers.

- Cox's Bazar highest sold => **tractor, combine harvester and power tiller**
- Jashore's highest sold => **tractor and combine harvester**

Manufacturers and Importers: They are spare parts and components producer, machinery assembler, and CBU importer

- Machinery Portfolio => **tractor, combine harvester, rice transplanter, and reaper**



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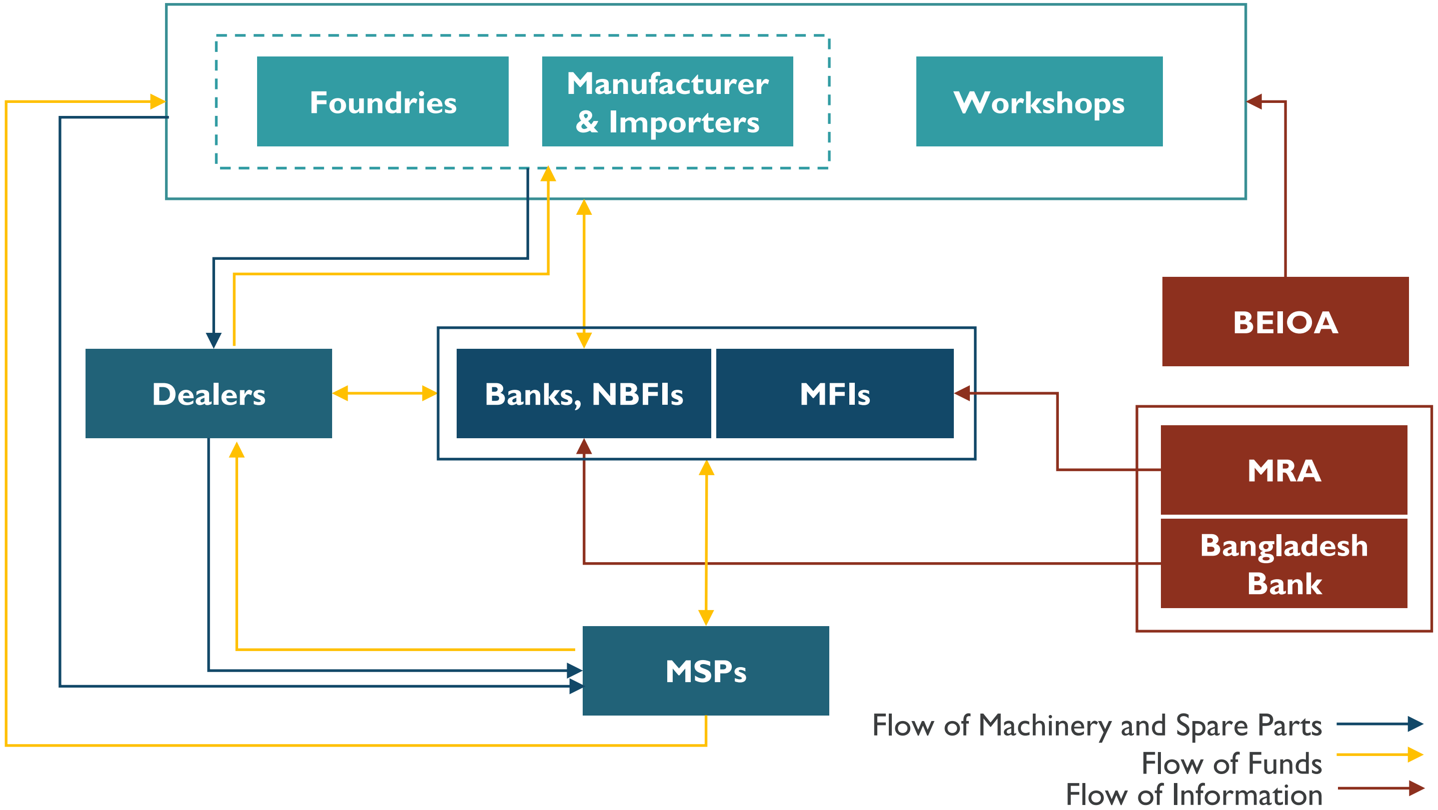
Broad Overview

Current Market System

- *Importers* source whole machinery using credit lines
- *Foundries/workshops* manufacture whole machines or their parts
- *Manufacturers/importers* distribute on their own or through dealers to end users (MSPs)
- Credit sales across the value chain

Broad Themes

- Small players (Workshops and MSPs) are getting crowded out in accessing finance
- Large importers/foundries face credit recovery challenges from small players
- Credit flow dried up across the value chain
- Low involvement of FIs due to low recovery guarantee



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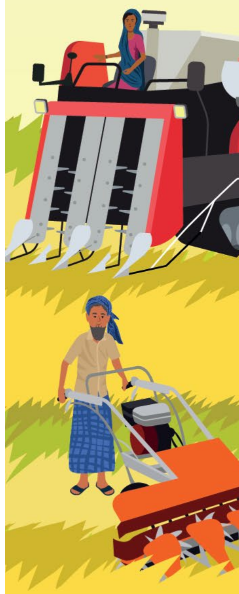
Demand Side Analysis: Framework

Lending stages	Pre-lending (Application)	Lending (Loan Processing)	Post-Lending (Repayment)	Decision Point for Actors
Demand side factors to access formal financing	**Establishing business model viability of stakeholders** • Income generating activities and proof • Unit economics of business • Market prospects of mechanization	**Risk appetite for finance** • Seasonal product availability • Loan ticket size • Security/collateral **Costs of service access** • Channel of delivery • Processing costs (time, fees)	**Repayment capacity** • Down payment for machines • Timely EMI repayment for hire-purchase and/or loans • Changes in income level throughout the loan tenor	Accessing the required finance from formal institutions



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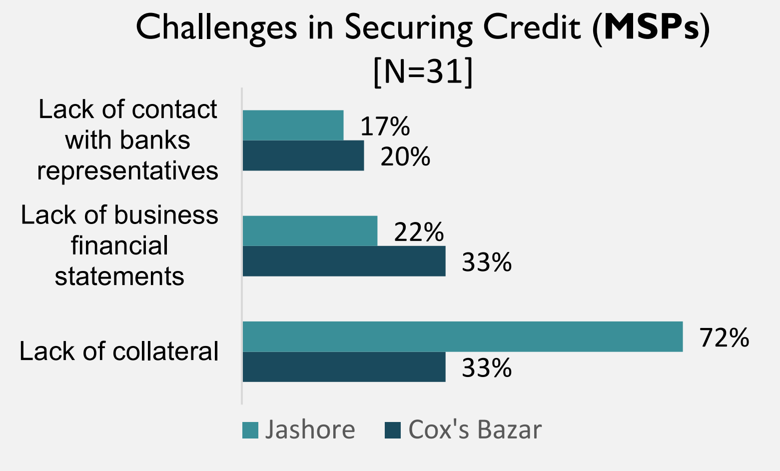
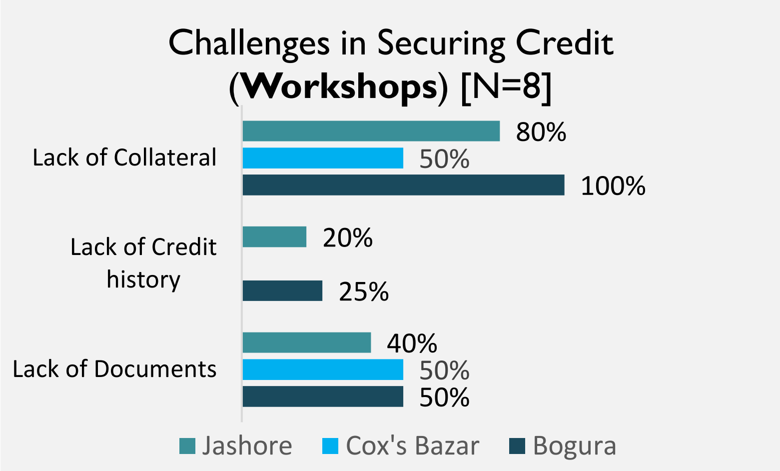
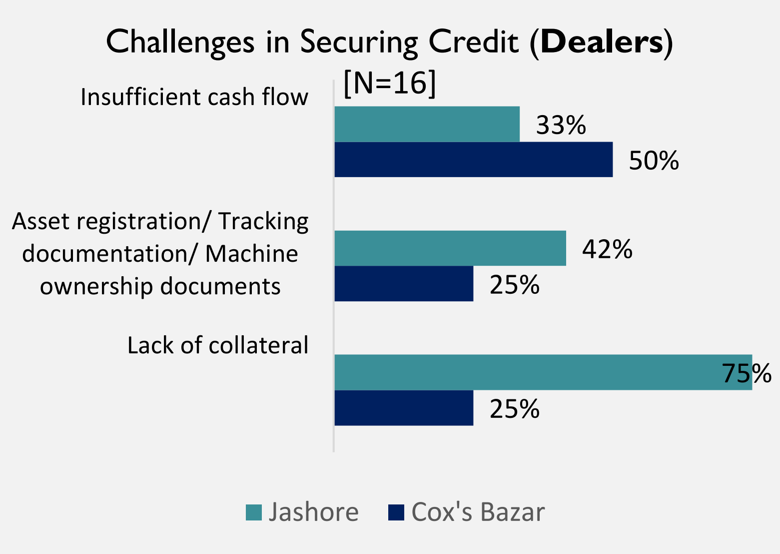
Demand Side Analysis: (Pre-lending)







Foundries

- Only one respondent faced collateral issues while the rest did not face any challenges

- Importers/marketeers generally do not face any challenges in acquiring credit due strong business financials, but do face cash crunch during low recovery period.
- Due to higher default rates, FIs demand collateral and business financials that small-scale businesses often fail to provide. Hence, they opt for MFIs where less documents are required.
- MSPs usually take credit from MFIs as they do not generally have enough collateral for the loan required and they do not keep track of business financials.

Demand Side Analysis (Loan Processing)

Documents and Collateral Required

Dealers

- 33% and 50% required business financials in Jashore and Cox's Bazar
- 58% and 50% required post-dated cheque in Jashore and Cox's Bazar

MSPs

- 50% and 27% required collateral in Jashore and Cox's Bazar
- 35% and 36% required personal guarantee in Jashore and Cox's Bazar

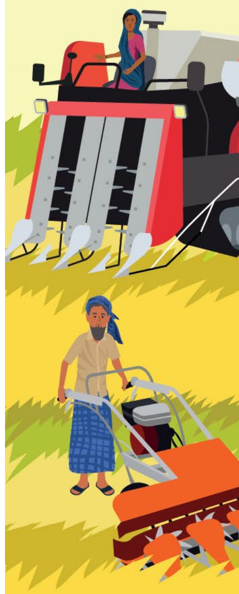
Workshops

- 55%, 60%, and 57% required business financials in Bogura, Cox's Bazar and Jashore
- 73%, 60%, and 86% required collateral in Bogura, Cox's Bazar and Jashore

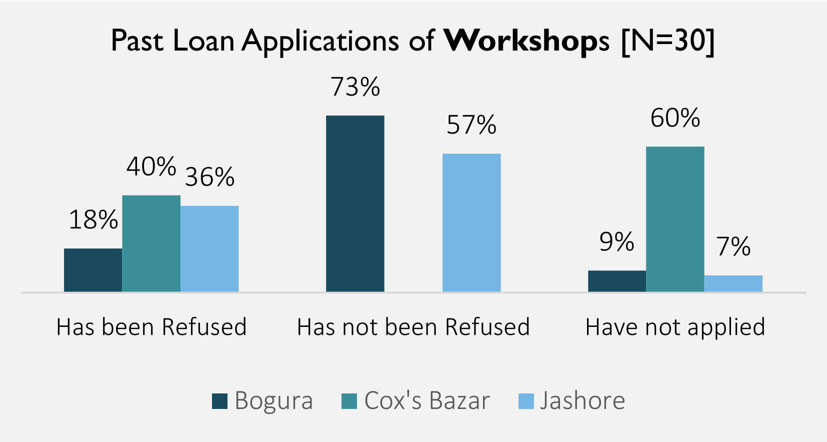
Foundries

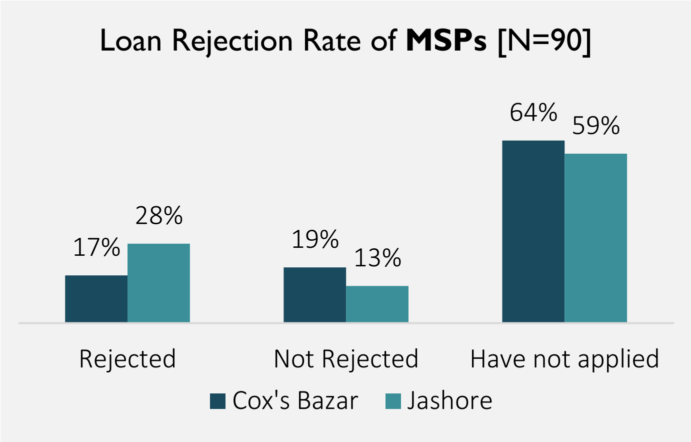
- 100% and 57% required business financials in Bogura and Jashore
- 87% and 71% required collateral in Bogura and Jashore

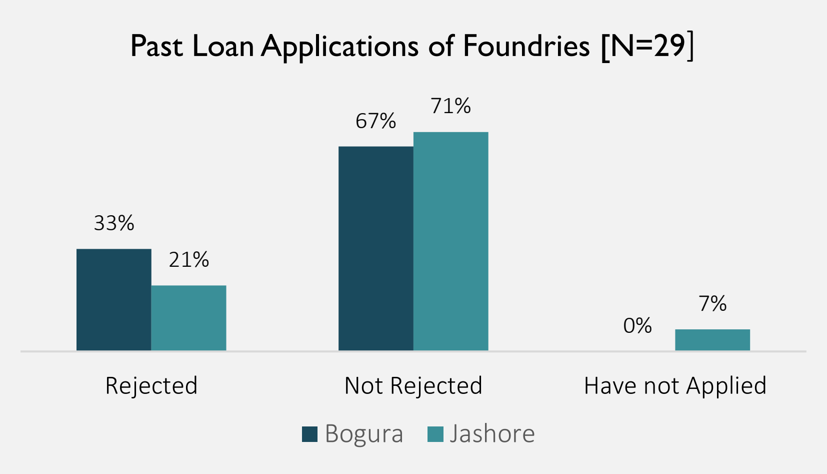
- Lack of insufficient collateral and fees incurred to prepare documents due to lack of awareness leads to ineligibility of acquiring credit and high processing time.
- Foundries having higher diversification in their product line that mitigates the risk of default compared to workshops and Dealers.
- MSPs generally require credit to pay the down payment of expensive machinery. Since they do not get it because of lack of collateral, they at times take crop-based loans to purchase machinery.



Demand Side Analysis (Loan Processing)



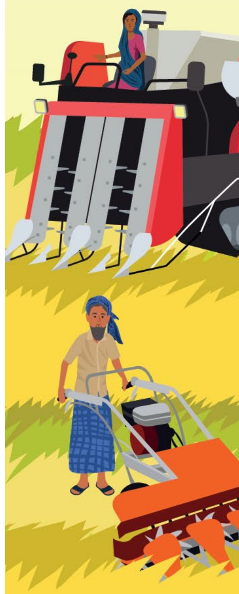




Foundries

- 29% in Bogura took CC loan and term loan
- 53% and 33% in Jashore took CC loan and term loan

- Workshops and foundries have not been refused on an average 60% of the times in all the regions while over 60% MSPs have not applied due to lack of documentation and knowledge.
- Foundries in Jashore mostly take CC (cash-credit) loans with quarterly payment followed by term loan. In Bogura, demand for both the CC and term loans are same.
- MSPs prefer MFIs to take credit as loan processing time takes 7 days while banks take over a month. Even though MFIs charge 24% while banks charge 9%, the ease of access to credit from MFIs is preferred.



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Demand Side Analysis (Post-lending)

- Workshops and Dealers rely on seasonality to pay their loans, but this is not an issue for Foundries as they have a bigger portfolio of machinery.
- Small scale businesses prefer taking credit from MFIs due to flexible payment procedure as they fail to adhere to the EMI structure of banks.
- MSPs depend on the income earned from services provided, hence, they prefer cash-based transactions. Due to seasonality impact they often fail to repay loans.
- Poor after sales service of machinery also hampers their service provision which reduces their income capacity.

Seasonality Impact of Enterprise Level Players

Workshops

- Over 60% claimed highest sales on Feb and Dec in Bogura
- Similar claims were in made in Cox's Bazar for Jan to Feb
- Over 75% in Jashore claimed sales peaked in Nov to Jan

Foundries

- Over 70% claimed highest sales from Feb to Apr in Bogura
- Similar claims were in made in Jashore for Feb to May
- In general, sales peaked from Dec to Jun in both the regions

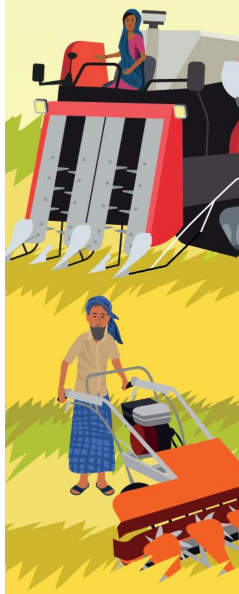
Dealer

- Over 55% claimed highest sales from Nov and Mar in Cox's Bazar
- In Jashore, highest sales were recorded from Nov to Apr
- In general, sales were low on Jul and Aug in both the regions

Service Provision Mechanism of Individual Level Players

MSPs

- 47% and 45% of the respondents in Cox's Bazar and Jashore preferred cash transactions, respectively. On the other hand, 16% and 26% of the respondents offer credit services in Cox's Bazar and Jashore.



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Demand Side Analysis (Actionable Insights)

Workshops

- Introducing risk mitigation models other than collaterals will bring down refusal rates for loan application
- Financial training and skill development of workers, better access to machinery financing for the owners to widen SMEs' product portfolio and reach consumers from different levels of the value chain.

Foundries

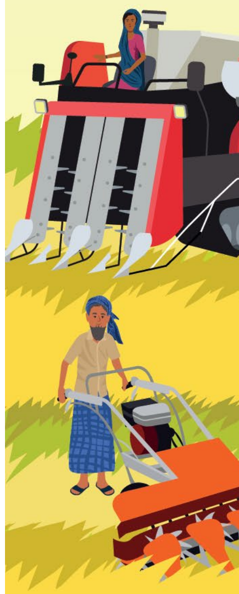
- Lack of pre-existing relationship with supplier leave foundries with debt financing or self-financing as options. Collateral requirement is also a major barrier and to address it, there must be some form of cushion for recovery for banks.
- Maintenance of proper business makes suppliers' credit assessment easier, increase the number of potential suppliers making the supplier market more competitive

Dealers

- Financial products designed based on the business financials of the dealers and not on the collaterals they have might address the issue of high rejection rates persisting due to lack of collateral

MSPs

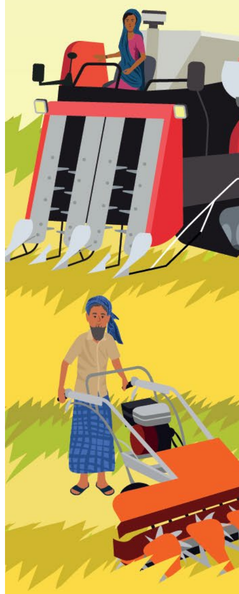
- Improved financial literacy among MSPs will help them maintain proper financial documentation and establish their business viability to banks.
- A mechanism to either provide collateral free loans or an alternate recourse for banks/NBFIs needs to exist to cater the needs of MSPs as MFIs are providing collateral free loans



Supply Side

Banks	Financial institutions licensed to receive deposits and give out loans. Banks typically have lower interest rates and lower risk appetite.	**61 Scheduled & 5 Non- Scheduled**
NBFIs	Financial institutions that do not have a license to accept deposits from the public. They offer alternative financial services like mutual fund investments, brokering, financial consulting, lease/loan products	**34 NBFIs; 3 GoB Owned, 12 Joint Ventures**
MFIs	Organizations that provide loans to who traditionally cannot access mainstream sources of finance from Banking institutions, e.g., low-income clients, small and micro enterprises and the self-employed	**1000+ MFIs; 87% of the market captured by top 10**

- Assess the borrower considering these stages before actually lending
- Analyzed the supply side by dividing players into enterprise level (Importers, SMEs, MSMEs, Dealers) and individual level (MSPs)
- Identified the challenges faced by the supply side actors in each of the 3 stages through a service delivery framework



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Supply Side Analysis: Framework

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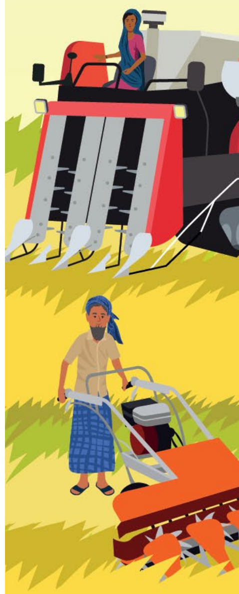
Supply side factors to finance value chain actors	**Evaluating business model viability of stakeholders** • Repayment capacity analysis • Income generating activities • Unit economics of business • Market prospects	**Risk appetite to finance** • Product availability • Loan ticket size • Security/collateral **Costs of service delivery** • Channel of delivery • Costs vs interest rate	**Recovery mechanism and costs** • Default experience • Guarantee for recovery	Satisfactory fulfillment of the factors leads to positive decision



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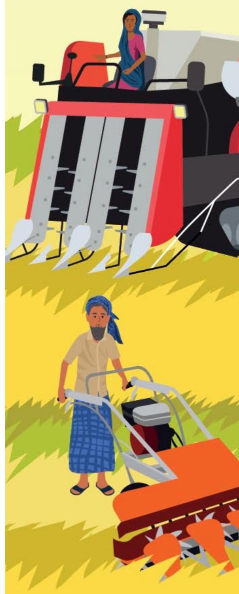
Supply Side Analysis

Thematic Areas

1.FIs opt for less expensive channel for disbursement and collection from remote areas	2. Need to develop a market for used machinery and lack of awareness about the agri-machinery market's attractiveness	3. Guarantee of recovery in terms of buying back the machines, providing any guarantee scheme to complement the risk profile of stakeholders	4. Create digital traceability of machines and the credit history of stakeholders
• The costs of setting up new branches and maintaining human resources are huge for banks/NBFIs • MSPs located in remote parts of the country fail to access loans from these relatively low cost sources	• FIs lack awareness of agri-machinery's potential in terms of income generation, and market potential • Absence of a secondary market and low resale value increases the risk exposure of loan providers in case of default	• Absence of proper collateral, good financial record and business documents, makes lending highly risky for banks and NBFIs • For MFIs, poor recovery hampers their credit rating and creates fund shortage for reinvestment	• Developing CIB for MFI based borrowers to help banks/NBFIs cross-check their credit history and thus, lower the FI's risk exposure • Installing trackers in moveable machines to generate unique IDs
MSPs	MSPs, Workshops, Foundries, Dealers	MSPs, Workshops, Foundries, Dealers, Importers	



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Demand and Supply Side Analysis (Broad findings)

Workshops, Foundries, Dealers, MSPs

Importers

1 Establishing business viability vs Evaluating business viability

- Absence of record keeping is a barrier for small players to prove business viability/income generating activities to FIs
- MFIs tend to finance MSPs more than FIs do but most borrowers take machinery loan as a secondary loan (e.g. agri loan)

2 Costs of service access vs Costs of service delivery

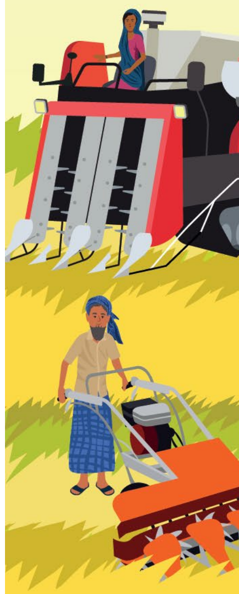
- High cost of service and the interest rate cap (9%) do not justify the risk profile of small players for FIs
- For MFIs, the 24%rate compensates the service cost
- Small players prefer credit sources with minimal documentation related charges and quick processing time.

3 Repayment capacity vs Recovery mechanisms

- FIs have experience of poor repayment history from small players
- FIs cannot use extensive human resource for recovery unlike MFIs
- Small players fail to provide adequate collateral (land) and the machines cannot serve as collateral either
- Value chain actors struggle to make timely payments due to seasonality impacts

4 Risk appetite for finance vs Risk appetite to finance

- FIs not involved in hire purchase scheme/partnership models with importers due to poor recovery
- Light engineering but mostly MSPs not seen as credit worthy
- Small players lose touch with FIs even if seasonal financial products are offered



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Ecosystem Builders

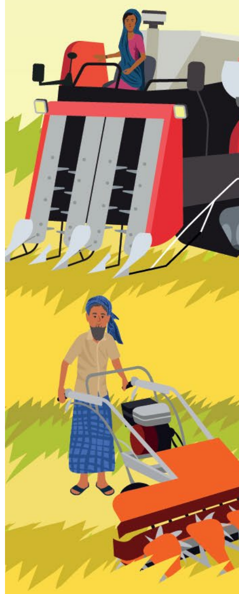
Solutions identified by Ecosystem Builders (Regulators, Association, Development Agencies)

Systemic Changes

- Agri-machinery market development
    - A database should be established to track mechanization adoption that will help banks evaluate the market dynamics of agri-machinery.
    - Establishment of a secondary market and improved spare parts production technology will enhance adoption
- Innovative financing model ideas
    - Partnership between banks and manufacturing companies will allow banks to use their sources to recover the loans
    - Grant loans from donors can be explored as well
- Increasing technical and financial literacy of agri-machinery value chain actors
    - Capacity building training on skills to operate, fix and manufacture machinery along with financial literacy to understand record keeping

Policy Level Changes

- "Industrial loans" with longer payment terms and lower interest rate should be developed for the agri industry
- Allow registration of machinery like Tractors and allow ownership transfer of subsidized products before the 3 year repayment period
- Develop CIB for MFIs to track credit history of their members



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Recommendations: Strategic Pillars

Guarantee of recovery

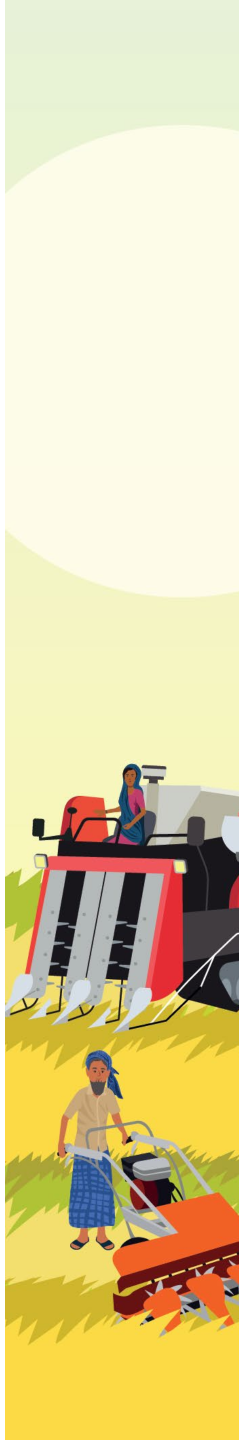
- A mechanism that allows lenders assurance for recovery against value chain actors with insufficient collateral

Advocating policy level changes

- Ownership transfer for subsidy-based products
- Simple interest rate instead of compound
- Import incentives

Technical and financial literacy training

- Financial literacy to understand documentation process and record keeping
- Technical literacy for machine maintenance and operation



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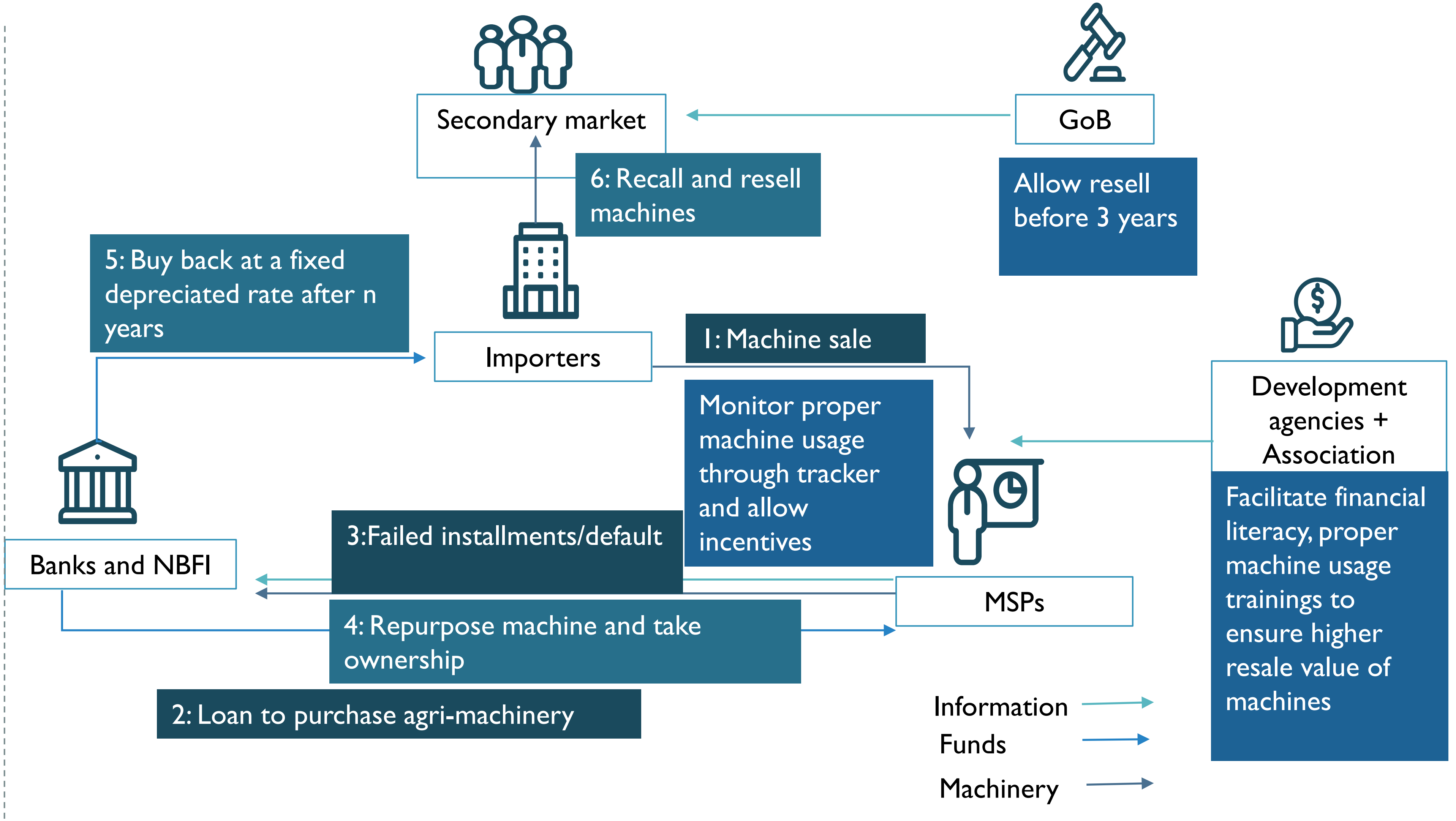
Alternative Financing: Model 1

Challenges addressed

- Difficulty in establishing business model viability by MSPs
- Low risk appetite for financing MSPs
- High costs of service delivery and difficulty in loan recovery
- Low resale value of machines
- Replacement of collateral



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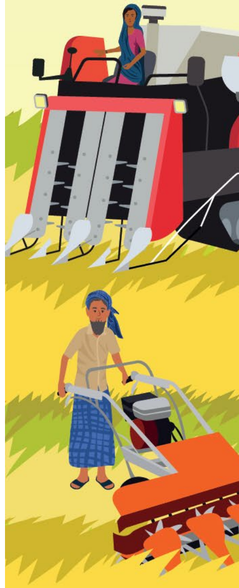
Model 1: Continued

Stakeholder Actions

- GoB: Allow reselling of subsidy-based machines before 3 years
- Importers: Agree to buy-back at depreciated rate and install trackers in machines
- Banks/NBFI: Lend for machinery purchase and repossess machines in case of default. Disseminate financial content through e-learning platforms and web based platforms.
- MSPs: Attend trainings on machine maintenance and financial literacy and implement the learnings
- Development agencies and associations: Partner up with FIs to provide financial literacy training, while associations can give machine related training, and documentation support

Stakeholder Incentives

- GoB: Allowing resell will help popularize the machines
- Importers: Help increase the banks' appetite to finance
- Banks/NBFI: Guarantee for default
- MSPs: Enhanced financial literacy and record keeping can increase access to finance



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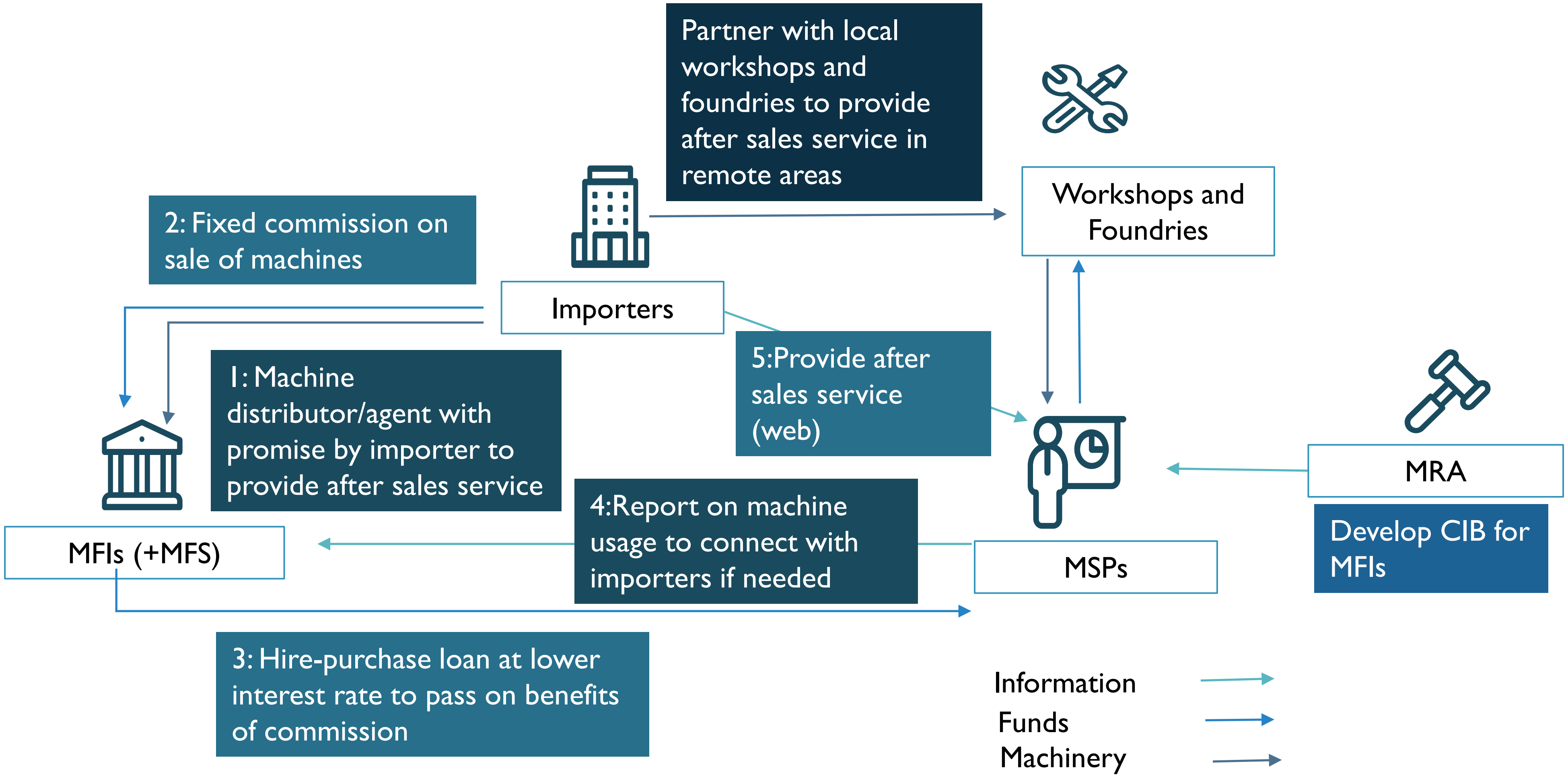
Alternative Financing: Model 2

Challenges addressed

- High costs of service delivery to MSPs and SMEs (operational costs
- Difficulty in availing after-sales services
- High interest rate from MFIs
- Low resale value of machines
- Lack of credit history for MFI-based borrowers



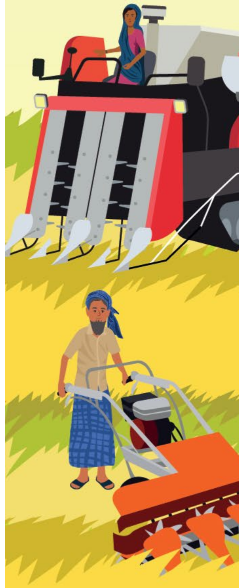
Model 2: Continued

Stakeholder Actions

- MFIs: Act as financier and distributor by giving collateral free loans
- MFS: Facilitate the MFI collection process
- Importers: Pays the MFIs a fixed commission and provides after sales service
- Foundries and workshops: Develop capabilities to provide after sales service
- MSPs: Accountable for proper machine maintenance

Stakeholder Incentives

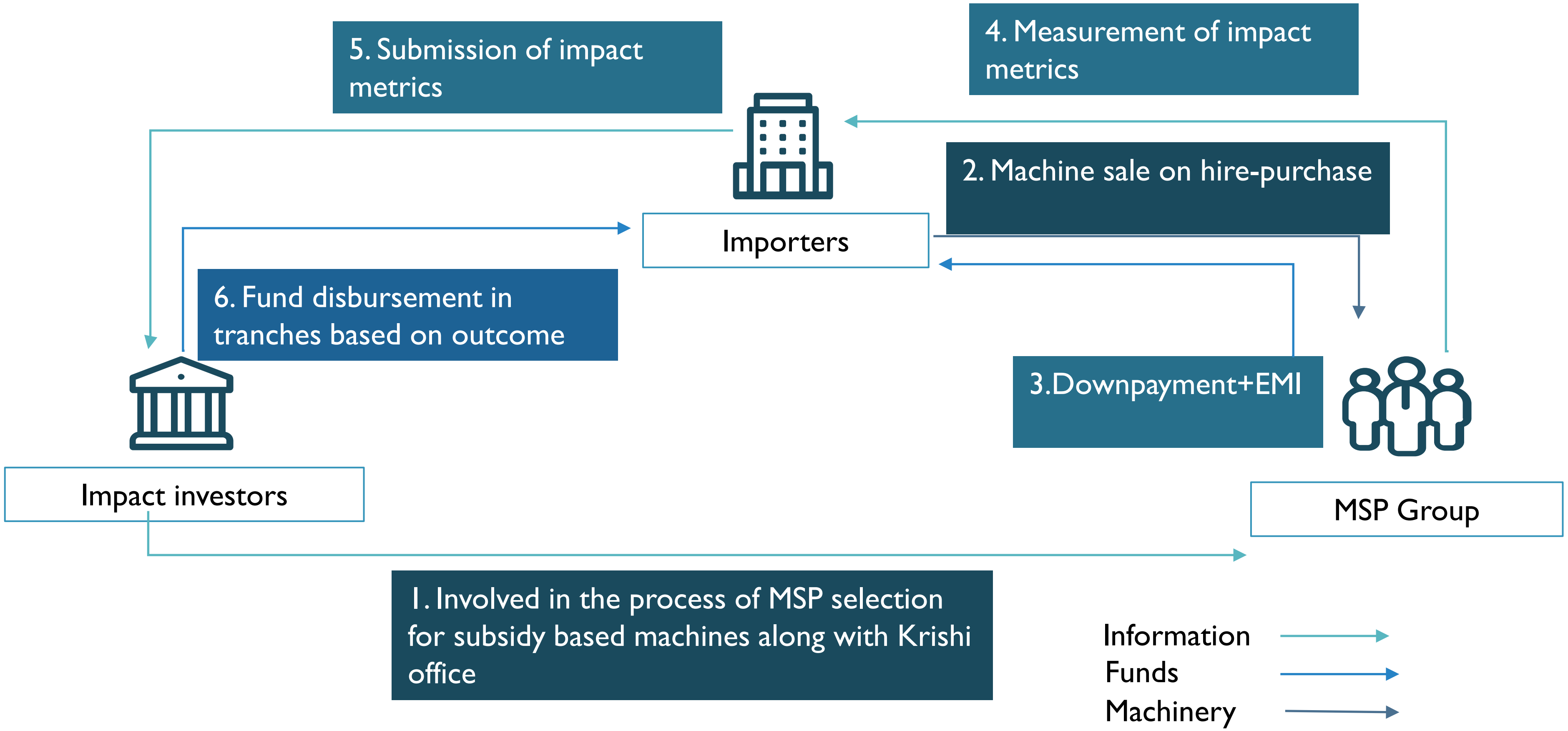
- MFIs: Earn commission and also not be burdened with after sales service
- MFS: Can also act as disbursement channel
- Importers: Greater sales of products and support from local industry to ensure repeat sales
- Foundries and Workshops: Greater sales in terms of components for machines that are being subsidized by the GoB and expand to new machines. Increased propensity of FIs to finance
- MSPs: Receiving loan at a lower interest rate than before with greater network of after sales service



Alternative Financing: Model 3

Challenges addressed

- Low risk appetite of FIs for financing MSPs
- High costs of service delivery to MSPs
- Replacement of collateral with impact metrics from investors



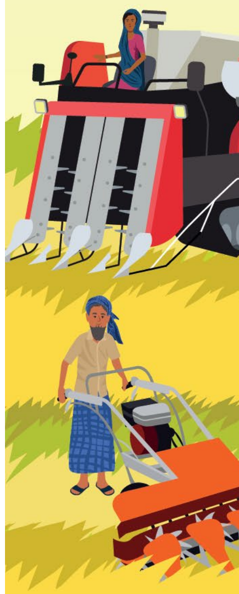
Model 3: Continued

Stakeholder Actions

- Impact Investors: Impact investors will provide funding in several tranches on successful achievement of the predetermined targets.
- Importer: Importers will have to provide a social commitment by coming up with impact metrics such as Beneficiaries (farmer groups) show improved revenue generating capacity etc.
- Foundries and Workshops: Provide revenue based metrics for securing funding
- MSP groups: Ensure record keeping of financials

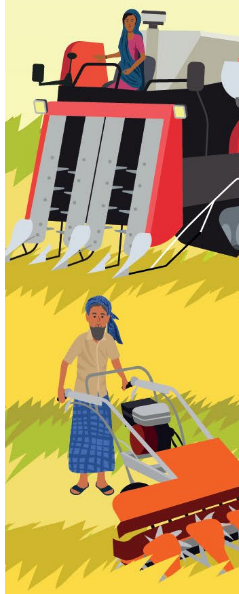
Stakeholder Incentives

- Impact Investors: According to LightCastle study of 100 impact investors, the most important parameters for impact investors are as follows: 22% Project Outcome (Social and Environmental), 15% Sustainability of impact. Future priority sectors for the impact investors include consumer food (17%)
- Importer: Since the hire purchase will be availed by a group of MSPs, they can act as verbal guarantor for each other



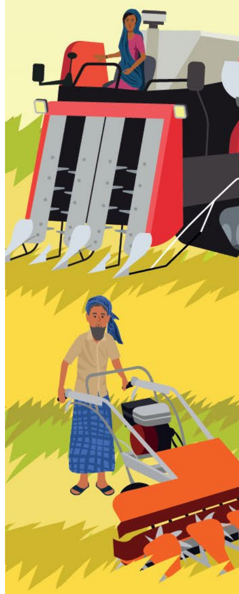
Way Forward

- A policy advocacy for persuading the government to allow reselling of equipment
- Organize accelerator programs for ABLE SMEs to enhance capacity and network.
- An ERP system for better managing accounts and finances of ABLE SMEs.
- An event connecting MFIs with importers and manufacturers where MFIs can become distributors and financiers
- An e-learning platform in partnership with banks, that will incorporate basic courses in financial management
- A toll-free number to handle queries of value chain actors
- Training for equipment maintenance for MFI employees and mechanics



Conclusion

- Collaborative approach from all stakeholders including regulators to help improve the financing status of the value chain actors
- A multi-pronged approach considering the incentives and risks of each of the involved players must be considered
- All financing products have risks, but the risks must be shared among the stakeholders to improve the financial status of the agri-machinery value chain actors to promote greater mechanization in the agriculture sector of the country



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