Financing LGEs in India

Input Paper

Development Alternatives

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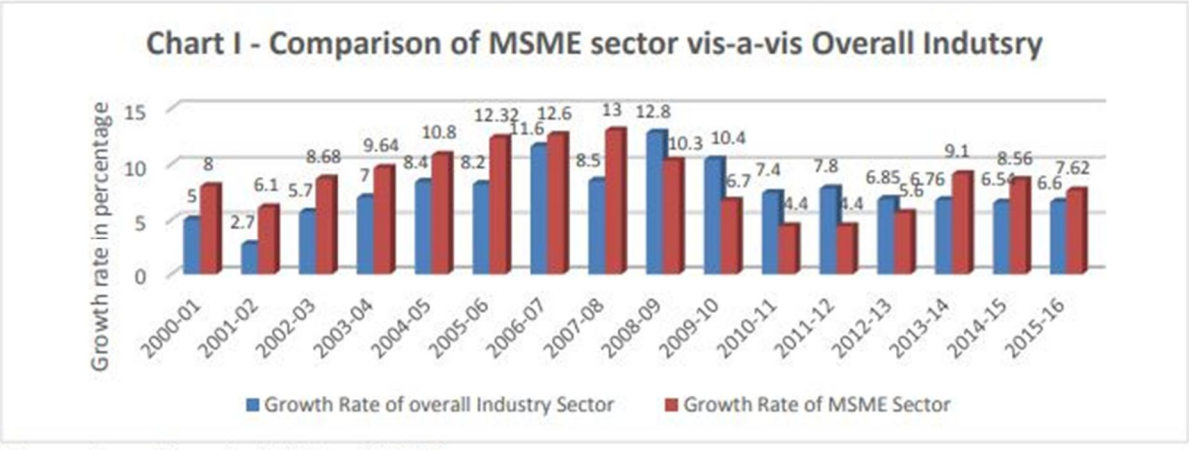
Abstract

With the national scenario of resource extraction and disparate inequalities, it is imperative to focus on alternative pathways towards equitable participation and reduced economic contradictions - in order to meet our goals of sustainable development. This requires India to enable a system that appropriately localises and decentralises its production of goods and services while also integrating economic efficiency, environmental soundness, and social equity into business decisions. Across high, middle, and low-income countries, micro and small-enterprises (MSEs) constitute the largest share of private businesses and account for the bulk of employment. For MSMEs to choose alternate ways of operation access to timely and adequate credit at a reasonable cost is essential. Through this paper, the authors aim to bring about the challenges faced by different stakeholders along with the possible innovations and opportunities for **Financing Local Green Enterprises** in order to bridge the gap between MSMEs seeking and Financial Institutions providing finance in India.

Introduction

Micro, Small and Medium Enterprises contribution to country's economy and employment has been significant. India, with 63 million MSMEs, accounts for about 45% of manufacturing output, more than 40% of exports, over 28% of gross domestic product. This sector employs about 111 million people. MSMEs require low capital to start the business, but create huge employment opportunities. As per the National Sample Survey (NSS) 73rd round conducted during the period 2015-16, MSME sector has been creating 1109 lakh jobs (360.41 lakh in Manufacturing, 387.18 lakh in Trade and 362.22 lakh in Other Services and 0.07 lakh in Non-captive Electricity Generation and Transmission) in the rural and the urban areas across the country.



Source: Annual Reports of Ministry of MSME

With the national scenario of resource extraction and disparate inequalities, it is imperative to focus on alternative pathways towards equitable participation and reduced economic contradictions - in order to meet our goals of sustainable development. This requires India to enable a system that appropriately localises and decentralises its production of goods and services while also integrating economic efficiency, environmental soundness, and social equity into business decisions. Across high, middle, and low-income countries, micro and small-enterprises (MSEs) constitute the largest share of private businesses and account for the bulk of employment. These dynamic entities create local jobs and boost economic resilience leading to strong multiplier effects on the national economy. MSMEs provide employment opportunities at comparatively lower capital cost and act as ancillary units for large enterprises to support the system in growth.

Environmentally conscious Micro, Small and Medium Enterprises – enterprises that build their business models on the principles of resource conservation, resource efficiency, waste management are critical enablers of green and inclusive economy at the grassroots. Anecdotal evidence suggests that for the vast majority of MSMEs, that are green in their nature and design as well as those aiming to uptake greener ways of business operations, there is a lack of data on the share of MSMEs that fall into this category and how that varies across sectors and states.

Key Sectors

MSMEs have been contributing significantly to the expansion of entrepreneurial base through business innovations. MSMEs are widening their domain across sectors of the economy, producing diverse range of products and services to meet demands of domestic as well as global markets. There are over 60004 products ranging from traditional to high-tech items, which are being manufactured by the MSMEs in India.

'Retail trade', 'Manufacturing' and 'Other service activities not elsewhere classified (including membership organization, repair of computers and personnel household goods)' are the three most important activity groups in terms of number of establishments in the non-agricultural sector. Together these three activity groups account for 67% of the total establishments, of which 'retail trade' held a share of over 35%.

Green is not a very well defined attribute in the country. In order to select MSMEs sectors to study from the broad classification a framework was designed to identify those sectors with the most impact on economic, social and environmental systems. The frame has identified some broad outcomes that are important from a green economy perspective and suggested some indicators to measure these.

Economy	Social	Environment
• ***Output:*** Output produced by an economy measure by GDP is considered the primary indicator of a country's macroeconomic health. • ***Trade:*** Contribution to total imports and exports are the indicators used to measure trade. Trade is an important output from a green economy perspective because for most developing countries, the path toward sustainable long-term development needs to strike a better balance between domestic-led and export-led growth.	• ***Employment:*** Given the demography on the country, parameters for understanding the transition is will require details on the number of people employed in the particular sector, with emphasis on the kind of skills required. • ***Equity***: In the context of India, where we see an exodus of people from the rural area to urban area for better job opportunities, it is critical that the rural-urban disparities are addressed. In addition, access to resources i.e. modern electricity, water, food security, education are key factors that need to be assessed for ensuring a transition to a green economy.	• ***Natural Asset Base***: Indicators to measure this can include their total stock, quality, risk related to depletion or threshold limits. • ***Resource Efficiency:*** Efficiency indicators focus on comparisons of economic outcomes with the environmental inputs with production. Producing more with less can go a long way in reducing the gap in the growth v/s environment debate. • ***Pollution and Waste***- Pollution and waste has resulted due to its negative externality natures since it's value is not taken into account by those who generate it, sectors that work on addressing this are considered green.

High Priority Sectors for Green MSMEs

Agriculture

The agricultural sector is the backbone of the Indian economy. Over 50% of the working population in India is directly employed by the agricultural sector. This number significantly goes up if those indirectly dependent on agriculture are included. Agriculture also contributes to use of more than 60% of the fresh water and 20% of the energy use in its total value chain.

Potential of Local Green Enterprises:

Green agriculture involves shifting both commercial and subsistence farming towards ecologically sound farming practices such as efficient use of water, use of organic soil nutrients, optimal tillage etc. Making this sector green will require physical capital assets, financial investments, research and capacity building in 5 key areas which include, soil fertility management; more efficient and sustainable water use; crop and livestock diversification; biological plant and animal health management; and appropriate farm level mechanization.

An important aspect of greening the agriculture sector will involve building business models for better incomes of the small and marginal farmers, especially through ventures like Farmers Producer Organisations and other community cluster based business ventures in the sector.

Construction

The construction sector accounts for 8.82% of the Gross Value Added during 2013–14. The Construction sector is considered to be one of the major contributors to economic growth, and thereby a measure for development of a country. It employs over 40 million people and over 80% of the countries unskilled labour with potential job opportunities for millions of unskilled, semi-skilled and skilled work force. According to the Global Construction 2020 Report, the sector will account for 13.2 percent of the world's GDP by 2020,and is estimated to grow by 67 percent from USD 7.2 trillion in 2010 to USD 12 trillion in 2020 (Global Construction Perspectives and Oxford Economics, 2011). The growth in the sector is fuelled by the rapid transformation of the country from a predominantly rural to an urban society, which houses 377 million people in urban settlements i.e., 31.16 percent of the total population (Census of India, 2011).

Potential of Local Green Enterprises

Greening the construction sector would include local enterprises focused on local materials or waste material based construction systems. Fly ash, pond ash, plastics and other waste based enterprises have a potential of reducing the high carbon footprint of this sector.

Manufacturing

The manufacturing sector accounts for 18.08% of the Gross Value Added during 2013–14. This sector has the potential to elevate much of the Indian population above poverty by shifting the majority of the workforce out of low-wage agriculture. This rise in growth in the resource intensive Manufacturing sector is enabled and facilitated by an ever-increasing rate of material use leading to manifold impacts to the environment. The cost of environmental damage has been estimated at approximately USD 32 billion as per figures identified by the National Productivity Council of India.

Potential for LGEs

The working group of the National Manufacturing Policy has identified 7 recommendations to ensure environmental sustainability in the manufacturing industry. These include green products, green buildings, Sustainable Environment Management in MSMEs, Environmental Regulatory Reforms and Market Based Instruments, Organized Waste Management and Recycling Industry, Green and Clean Technology Fund, Disclosure on Performance.

Transport

It has been universally recognized that improved transport systems are essential for accelerated economic growth. The transport sector accounts for 4.81% of the Gross Value Added (GVA) during 2013–14. One study estimates that about 4% of the population is employed by this sector. The primary externality costs in the transport sector arise from the relationship between transport and emissions through the use of fossil fuels as the primary and overwhelming source of energy. The transport sector is the second largest consumer of energy, the total commercial energy consumption in the transport sector in 2007 is estimated to be 1766.6 PJ.

There are two basic approaches for reducing vehicular emissions: (1) reducing emissions per vehicle-km travelled; and (2) reducing the total number of kilometres travelled. These strategies require active government intervention and aggressive measures. Theoretically, the first and the best solution for reducing vehicular emissions is an emission tax. However, such a tax is difficult to administer and monitor. A more practical strategy would be to use a mixed set of instruments, which are dictated by command and control, and /or market-based principles.

Government of India has classified industries in four categories based on Pollution Index. The parameters of the Index are air, water pollution & hazardous waste generation. It does not include carbon emissions. The classification above is only by Ministry of Environment, Government of India, and therefore indicative and not representing global needs. But the principle of classification is valid for most of the countries and once the industries are classified, the MSEs will be identified as Green if they:

- Lies in the Green and White Band of Industries
- Provide an alternate to the Red and Orange Industries
- An industry that caters to the basic needs fulfillment; contributing to rural development

Table 2: Categorisation of Industries according to their environment impact		
Category	**Definition**	**Sectors/Industries (Some Examples)**
Red	Industrial Sectors having Pollution Index score of 60 and above	• Automobile-manufacturing • Recycling of Hazardous waste • Lead Acid battery manufacturing • Coal Power Generation Plants • Sugar, Fibre Glass • Milk and dairy products • Phosphorous, Pulp-paper • Paints, Varnishes, Dyes • Cements, Mining • Railway locomotive, Ship and Airplane • Iron and Steel; Fertilisers, Pharmaceuticals
Orange	Industrial Sectors having Pollution Index score of 41 - 59	• Food processing, Jute Processing • Synthetic detergents • Cotton spinning and weaving • Almirah and grill manufacturing • Ayurvedic and homeopathic (with boiler) • Construction > 20,000 sq mts built area • Small scale dairy products, Fish processing • Dry coal processing, Hotels • Manufacturing of glass, iodised salt • Printing Press, Vegetable oil manufacturing • Coffee seed, cashew nut processing
Green	Industrial Sectors having Pollution Index score of 21 - 40	• Ayurvedic & homeopathic (without boiler) • Brass, aluminium utensils (dry mechanical) • Carpentary • Cement products (without asbestos) • Small scale cotton spinning and weaving • Dal mills, flour mills • Leather products (excluding tanning and hide) • Polythene and plastic processed products • Poultry, Piggery • Mineralised water, distilled water
White	Industrial Sectors having Pollution Index score of upto 20	• Bio-fertilisers, bio-pesticides • Assembly of coolers, bicycles, electrical items • Handloom, carpet weaving • Solar power generation <25 MW

Source: (Central Pollution Control Board, India, 2016)

Institutional Systems for Financing Green MSMEs

Access to timely and adequate credit by MSMEs at a reasonable cost is essential for growth of the sector. The institutions lending to MSMEs in India regulated by Reserve Bank include Scheduled Commercial Banks (Public Sector Banks, Private Sector Banks including Small Finance Banks, Foreign Banks, Co-operative Banks and Regional Rural Banks) and NonBanking Financial Companies including NBFC- MFIs. In addition to this, Securities and Exchange Board of India (SEBI) regulates the institutions engaged in providing or mediating capital to MSMEs such as SME Exchanges, Angel Investors, Venture Capital and Private Equity. Apex institutions such as SIDBI and MUDRA provide sectoral support and come within the purview of the Central Government.

Credit Gap: In India, the total addressable demand for external credit is estimated to be INR 37 trillion while the overall supply of finance from formal sources is estimated to be INR 14.5 trillion. Therefore, the overall credit gap in the MSME sector is estimated to be INR 20 – 25 trillion.

5% of enterprises have access to formal finance. Access to finance tops the list with 31% of the MSMEs survey, naming it as a challenge, followed by access to markets (28%), zeroing down on the enterprise (23%) and possessing and procuring land (18%). Only 1 out of 15 micro-entrepreneurs is able to access formal credit for setting up a new enterprise.

According to reports by GIZ, almost 94% of enterprises fall under the missing middle segment where credit requirement varies from Rs.50,000 to Rs.10,00,000. While MFIs support loans upto INR 50,000, banks are hesitant to support enterprises below the 10 lakh threshold.

Credit flow to MSMEs Sector is highlighted in the table below. At an aggregate level, the banking sector has credit outstanding to MSMEs of approximately INR 17.4 trillion as on March 31, 2019. SCBs account for 90% of the share of this.

Credit flow of MSMEs Sector (in INR lakh Crores)					
Year End	**Public Sector Banks**	**Private Sector Banks**	**Foreign Banks**	**Scheduled Commercial Banks**	**Non-Banking Finance Companies**
March 2014	7.58	2.47	0.34	10.39	0.08
March 2015	8.52	2.81	0.36	11.71	0.28
March 2016	8.20	3.59	0.36	12.16	0.88
March 2017	8.28	4.30	0.36	12.96	0.11
March 2018	8.64	4.10	0.48	13.24	1.44
March 2019	9.36	5.71	0.69	15.77	1.62

Studying the credit exposure across the segments of MSMEs, one can infer that Micro (credit exposure less than INR 1 crore) and Small (credit exposure between INR 1 crore-25 crore) segments aggregated INR 14.3 lakh crore in 2018. Micro and Small accounted for 24.3% of commercial credit outstanding with Year on year growth (2017 to 2018) of 22.3% and 18.4% respectively.

Overall Credit Exposure *(in INR lakh crore)*					
Year End	**Micro <INR 1 Crore**	**SME INR 1 – 25 Cr**	**MID INR 25 -100 Cro**	**Large >INR 100 Cr**	**Overall**
Sep 2016	3.0	7.5	4.8	34.1	49.4
Dec 2016	2.9	7.5	4.9	34.3	49.6
Mar 2017	3.1	7.8	4.9	34.1	50.0
Jun 2017	3.3	8.1	5.0	34.4	50.8
Sep 2017	3.5	8.5	5.2	34.7	51.8
Dec 2017	3.7	8.9	5.4	36.4	54.5
Mar 2018	4.0	9.6	5.5	37.8	57.0
Jun 2018	4.2	10.0	5.5	38.3	58.1
Sep 2018	4.3	10.0	5.5	38.9	58.7
YoY Growth	**22.3%**	**18.4%**	**7.2%**	**12.0%**	**13.5%**

Some of the key features on financing MSMEs can be highlighted as following:

- **Credit Appraisal:** In order to meet day to day operation and to acquire productive assets, MSMEs require working capital and term loans. While extending such loans, the primary responsibility of the lending institutions is to assess credit risk of the borrower for which banks need sound credit appraisal system. Traditional credit appraisal system results in high Turnaround Time. As per the MSMEs Pulse Report by SIDBI, Turn Around Time for lending to MSMEs is as follows:

Table: Turnaround time for lending to MSMEs *(in days)*			
Lenders	**2016**	**2017**	**2018**
NBFCs	24	19	18
PSBs	41	35	31
Private Sector Banks	32	29	29

Lending to MSMEs under Priority Sector Lending

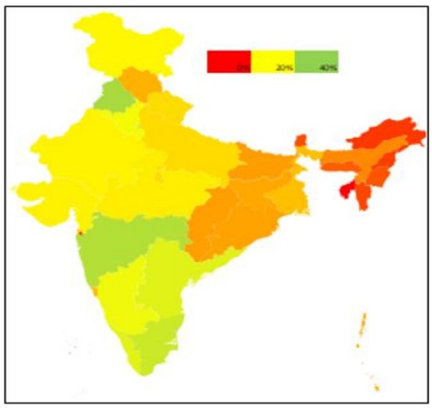
Small Finance Banks will have a target of 75 per cent for priority sector lending of their Adjusted Net Bank Credit (ANBC). While 40 per cent of ANBC should be allocated to different sub-sectors under PSL as mentioned below, the balance 35 per cent can be allocated to any one or more sub-sectors under the PSL, where the banks have competitive advantage.

The categories under priority sector are: Agriculture; Micro, Small and Medium Enterprises; Export Credit, Education, Housing, Social Infrastructure, Renewable Energy and others.

Details of the targets and sub-targets are as follows:

Categories	Target
Total Priority Target	75% of Adjusted Net Bank Credit (ANBC)
Agriculture	18% of ANBC (out of which 8% prescribed for small and marginal farmers)
Micro-Enterprises	7.5% of the ANBC
Advances to Weaker Sections	10% of the ANBC

Banks and NBFCs form the predominant source of formal credit to MSMEs with all such loans by banks qualifying for PSL classification. There appears to be very uniform origination strategies across banks and it appears that none of the banks are pursuing MSME lending as a core business strategy.



One challenge is that current PSL guidelines require all banks to lend to all segments (agriculture, MSME and weaker sections) making it hard to specialise. PSL outreach has been sectorally and geographically skewed Regional disparities in PSL credit become sharper when the PSL Credit to State GDP is considered. These disparities become starker when district level disparities are studied. The existence of such disparities points to considerable gaps in design and delivery that prevent institutional credit from reaching a broader swathe of geographies and may in fact be a factor in holding growth back. PSL is integral to the rural and agricultural economy. It is worth continuously evaluating how best to achieve the goals of PSL while at the same time minimizing market distortions and allowing banks to pursue the most efficient strategies available to them. The true test of whether 'priority' sectors are being served, is to answer the question of whether PSL is indeed reaching those sectors and regions that are the least served, such as the eastern and north-eastern parts of the country, low-income households and MSMEs.

A brief description of eligible categories under PSL, related to MSMEs is following:

Under Agriculture loans, loans to corporate farmers, farmers' producer organizations/companies of individual farmers, partnership firms and co-operatives of farmers directly engaged in Agriculture and Allied Activities, viz. diary, fishery, animal husbandry, poultry, bee-keeping and sericulture up to an aggregate limit of `20 million per borrower.

Manufacturing Sector	
Enterprises	**Investment in plant and machinery**
Micro Enterprises	Does not exceed twenty-five lakh rupees
Small Enterprises	More than twenty-five lakh rupees but does not exceed five crore rupees
Medium Enterprises	More than five crore rupees but does not exceed ten crore rupees
Service Sector	
Enterprises	**Investment in equipment**
Micro Enterprises	Does not exceed ten lakh rupees
Small Enterprises	More than ten lakh rupees but does not exceed two crore rupees
Medium Enterprises	More than two crore rupees but does not exceed five crore rupees

For MSMEs, limits for investment in plant and machinery/ equipment: The limits for investment in plant and machinery/equipment for manufacturing / service enterprise, as notified by Ministry of Micro, Small and Medium Enterprises, are as under:

Some of the additional areas where loans to MSMEs under PSL are focused are loans to entities involved in assisting the decentralized sector in the supply of inputs to and marketing of outputs of artisans, village and cottage industries; Loans to co-operatives of producers in the decentralized sector viz. artisans, village and cottage Industries

Renewable Energy Bank loans up to a limit of INR 150 million to borrowers for purposes like solar based power generators, biomass based power generators, wind mills, micro-hydel plants and for nonconventional energy based public utilities viz street lighting systems, and remote village electrification. For individual households, the loan limit will be INR 1 million per borrower.

Housing Loans to individuals up to INR 3.5 million in metropolitan centres and loans up to INR 2.5 million in other centres for purchase/construction of a dwelling unit per family.The loans sanctioned by banks for housing projects exclusively for the purpose of construction of houses for Economically Weaker Sections (EWS) and Low Income Groups (LIG), the total cost of which does not exceed INR 1 million per dwelling unit.

Financing Rural Enterprises and SHGs

There has been a significant shift in progress in rural livelihoods, from farm-based to off-farm and non-farm based activities. The Rural Non-Farm Sector (RNFS) contributes over 65% to the rural Net Domestic Product (NDP). While the total number of MSMEs are comparable across rural and urban areas, rural India accounts for a significant share of manufacturing MSMEs. Table below highlights its dwindling share in rural employment, even while contributing more than half of manufacturing NDP.

Table: Share of Rural Areas in Total NDP and Workforce across Different Sectors (%)								
Year	Agriculture		Manufacturing		Construction		Services	
	NDP	Emp	NDP	Emp	NDP	Emp	NDP	Emp
1999-2000	93.2	96.6	41.6	51.5	43.3	57.6	27.1	40.7
2011-2012	95.1	95.9	51.3	47.4	48.7	74.6	25.9	39.6
Emp - Employment								

Status Quo Analysis

Despite an ongoing policy focus, growth of MSME credit has been weak. Years of mandated lending have not produced enough progress and new approaches are needed. At an overall level, India's banking system is still small relative to the needs of the real sector. Against this backdrop, MSMEs find it challenging to access adequate credit.

Access to finance remains a further continuing challenge for what could be called 'green' or 'sustainable' MSMEs – companies that seek to improve their environmental performance or are providing innovative sustainability-related products and services.

First, the risk in lending to MSME sectors are high as is evident from the NPA data. The risks in turn can be traced to inability to pay and unwillingness to pay. The former can in turn be traced to business risk factors such as delayed buyer payments embedded in supply chains or supplying to Government entities and also other business risks, including changes in consumer demand or extraneous events that create a slow-down in the market. MSMEs often have little to no equity buffers. Neither risk mitigation mechanisms are available to the MSMEs nor to their lenders, does this inevitably translate into significant credit losses. Even expected losses on these loans are not rationally priced.

The second barrier is cost-to-serve. Assessing the creditworthiness of an MSME can be difficult due to information asymmetry, particularly with respect to financial performance of the business. In the absence of collateral, under-writing the customer often entails a "high-touch" approach which translates into higher operating cost. This can be addressed by bringing greater innovation in how small business loans are evaluated, underwritten, and managed. Electronic KYC, paperless (digital) applications, rapid loan underwriting and a greater emphasis on customer service can redefine the lending to MSME sector.

The third reason is lender coverage. While many urban areas have sufficient lender coverage, there is very poor credit depth in large parts of the country. This remoteness translates into weaker access to formal credit.

It is evident that a long-term strategy to increase debt to MSMEs must take into consideration the cost-to-serve and risk related issues so that it is not at odds with stability of the banking sector. It also needs to leverage upon developments such as the availability of GST data and emergence of new kinds of lenders to evolve newer methods of MSME lending.

Challenges faced by Green MSMEs

- Informational barriers: These include lack of market research on the low-income segment, market creation challenge for products that do not have a perceived need, lack of information on production processes for green products, and low levels of education among BoP to standardize these products.
- MSMEs are unaware of the range of sustainability-related investments as tools to foster competitiveness. Environmental business opportunities may be considered constraints and valued purely in terms of compliance costs, rather than as opportunities to support long-term value generation. SMEs are also often intrinsically less able to access sustainable finance because of capacity barriers, including financial literacy around the range of products provided by promotional institutions as well as challenges in accessing capital market products.

Challenges faced by Banks

- **Unproven business models** and a corresponding **lack of credibility** with bankers, limited purchasing power of BoP, low levels of financial inclusion among BoP.
- Banks and financial institutions **lack robust data** on green and sustainable financing needs of MSMEs. If needs and potential opportunities are not clearly understood, financial institutions may face difficulties in advancing the business case for scaling up green and sustainable finance. Confidentiality concerns among lending institutions can be another barrier to building transparency around stocks and flows of green MSMEs finance.
- **Environmental performance** is not considered in the assessments of MSMEs funding decisions. A lack of familiarity, common approaches or standards for evaluating the credit quality of SMEs engaged in new clean technologies, green products or sustainability services may affect risk pricing, ultimately impacting the cost of capital. Furthermore, incomplete integration of environmental and social factors into the assessment of risks facing SMEs can mean that the credit benefits of improved performance are overlooked. Equally, environmental factors can pose financial risks for SMEs which may not be properly assessed and integrated.
- There is a **lack of green and sustainable financing products for MSMEs**, especially across the enterprise life cycle (e.g. seed funding) and targeted for specific environmental goals (e.g. energy efficiency). Mobilizing Sustainable Finance for Small and Medium Sized

Enterprises Green innovators (such as clean technology SMEs) can face major challenges in accessing early and growth stage financing due to their core business propositions, involving riskier technologies and longer time frames to market. Green performers may face difficulties in financing investments with high capital requirements and long payback time frames, such as resource productivity or energy efficiency. Here, further work is necessary to explore how existing financial products could be adapted for sustainability-related investments and to understand what other constraints may affect SME capacity for such investments.

- **Limited diversity of financial institutions** that offer long term and patient sustainable financing for MSMEs. Institutional barriers may also arise if local financial institutions are unable to effectively unlock public funding instruments or develop partnerships with larger commercial institutions.

Innovations and Opportunities

Over the past decade, a growing number of solutions have been developed to help overcome these barriers:

- Public Financial Institutions (PFIs): PFIs, such as state-owned promotional banks, have often been the first to fill financial gaps in the market for MSMEs. The Montreal Group has profiled a range of debt and equity financing solutions ranging from the establishment of cleantech venture funds through to targeted green lending programmes.
- Banking: Commercial and stakeholder banks have increased their commitment to sustainability across their loan book. New initiatives such as the Principles for Positive Impact could help to close the funding gaps facing MSMEs. However, disclosure on how banks are responding to the specific sustainable finance needs of MSMEs is generally low.
- Debt Markets: Green bonds offer a range of options for MSME financing, including the issuance of green bonds from banks that aggregate MSME loans, the securitization of MSME loans into asset-backed securities and the issuance of mini-bonds by medium-sized enterprises. An added advantage of green bonds is greater market transparency.
- Impact Investing: Assets dedicated to investment products that intentionally seek out enterprises delivering social, environmental and financial returns are growing. These often build on traditional private equity and venture capital financing models for both growth stage companies and traditional MSMEs.
- Fintech: Fintech provides the newest source of green finance solutions for MSMEs. Fintech applications can help to improve the efficiency of capital intermediation, with specific applications including crowdfunding for renewable energy projects. Fintech innovations – such as blockchain, learning algorithms, and smart contracts – could lower risk for financial institutions, reduce transaction burden, and ultimately lower costs of capital for SMEs to deliver sustainability.

There is evidence of certain financial innovations in countries to improve access to green and sustainable finance:

- **Green banks:** The Bangladesh Bank (central bank) uses incentives and moral persuasion to encourage the country's financial sector to increase financing, in particular, to MSMEs and green businesses and industries. It also offered USD 25.5 million in liquidity support to lenders for green financing.
- **Sustainable stock markets**: The Egyptian Stock Market became the first stock market in the MENA region and the second world wide to launch an ESG index, which allows investors to benchmark the environmental, social, and governance impact of their portfolio.
- **Technology enabled innovation**: Through crowdfunding alone, it is estimated that developing countries could attract USD 95 billion (in green investment) by 2025.

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