



MSME in India: The Backbone of Economic Growth and Sustainable Development

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ABSTRACT

Micro, Small, and Medium Enterprises (MSMEs) form the foundation of India's industrial ecosystem, driving inclusive growth, employment generation, and innovation. Accounting for nearly one-third of India's GDP and almost half of its exports, the MSME sector bridges the gap between urban and rural economic activities. This paper explores the conceptual and historical evolution of MSMEs in India, examines their contribution to the economy, and critically analyses policy interventions such as the MSMED Act (2006), Udyam Registration, and the Atmanirbhar Bharat initiatives. It also investigates challenges related to finance, technology, and market access, particularly in the post-pandemic context. Using secondary data from the Ministry of MSME, the Reserve Bank of India, and NITI Aayog reports, this study concludes that while MSMEs remain pivotal for sustainable development, strategic reforms in credit delivery, digital infrastructure, and global value chain integration are vital for their long-term resilience.

Introduction

The Micro, Small, and Medium Enterprises (MSME) sector is often referred to as the "engine of growth" for India. With a contribution of approximately 30% to India's GDP, 48% to total exports, and providing employment to over 110 million people across 63 million enterprises (MSME Annual Report, 2022-23), this sector is essential to achieving inclusive and equitable development. MSMEs play a dual role by supporting large-scale industries through supply chains and stimulating entrepreneurship in semi-urban



and rural areas. In the context of globalization, MSMEs in India act as critical drivers of technological innovation, skill development, and balanced regional development. They not only reduce urban migration by generating local employment but also serve as a backbone for industrialization in backward regions. However, despite their socio-economic significance, MSMEs face persistent structural challenges such as inadequate access to credit, obsolete technology, limited infrastructure, and regulatory complexities.

The Government of India has recognized the strategic importance of this sector and launched multiple initiatives including the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006, Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE), Make in India, Startup India, Atmanirbhar Bharat, and Udyam Registration Portal. Yet, implementation bottlenecks continue to impede the sector's full potential.

The objective of this research is to provide a comprehensive analysis of MSMEs in India by examining their evolution, contributions, challenges, and future prospects, while emphasizing policy reforms required for sustainable development.

Conceptual Framework of MSMEs

The conceptual framework of MSMEs in India is governed primarily by the Micro, Small and Medium Enterprises Development Act (MSMED), 2006, which classifies enterprises based on their investment in plant and machinery or equipment and annual turnover. The revised definitions under the Atmanirbhar Bharat package (2020) aimed to create uniformity across the manufacturing and service sectors. Accordingly, the micro units are enterprises which has an investment of rupees one crore and annual turnover of rupees five crores, the small units are enterprises which has an investment of rupees ten crores and annual turnover of rupees fifty crores and the medium units are enterprises which has an investment of Rupees fifty crores and annual turnover of rupees of two fifty crores

The conceptual relevance of MSMEs lies in their ability to foster entrepreneurship, employment, and regional balance. They are critical components in achieving several Sustainable Development Goals (SDGs), such as SDG 8 (Decent Work and Economic Growth), SDG 9 (Industry, Innovation, and Infrastructure), and SDG 10 (Reduced Inequalities). The sector's diversity spans across manufacturing, trade, and service industries — from traditional handicrafts to modern information technology services — reflecting its adaptability and resilience.

From an economic theory perspective, MSMEs embody the Schumpeterian model of innovation, where small enterprises act as engines of creative destruction through localized innovations and incremental



improvements. They also align with the Lewis model of structural transformation, promoting movement from traditional agriculture to more productive manufacturing and service activities.

Historical Evolution of MSMEs in India

The evolution of Micro, Small, and Medium Enterprises (MSMEs) in India reflects the country's broader economic transformation — from colonial industrial stagnation to a diversified, innovation-driven economy. The sector's development can be divided into five distinct phases: pre-independence, early post-independence, liberalization, globalization, and the digital era.

Pre-Independence Period

During the colonial era, Indian small-scale industries primarily consisted of traditional handicrafts, handlooms, and cottage industries. These enterprises faced severe decline under British industrial policy, which promoted imports from Britain while discouraging local manufacturing. Despite this, indigenous clusters — such as textiles in Bengal and Gujarat, brassware in Moradabad, and leather in Kanpur — continued to serve as vital sources of rural employment and artisanal skill preservation.

Post-Independence and Planning Era (1947–1990)

Post-independence India adopted a mixed economy model, emphasizing state-led industrialization while recognizing the importance of small industries in employment generation. The Industrial Policy Resolution of 1948 and subsequent policies of 1956 and 1977 underscored the need to protect and promote small-scale industries (SSIs). The establishment of institutions such as the Small Industries Development Organization (SIDO) in 1954 and Khadi and Village Industries Commission (KVIC) in 1956 marked the beginning of organized institutional support. These bodies aimed to provide financial assistance, raw materials, marketing, and skill development.

The Fourth Five-Year Plan (1969–74) introduced the concept of “ancillary industries” — small units supplying components to large public sector undertakings (PSUs). The Small Industries Development Bank of India (SIDBI) was later set up in 1990 as the apex financial institution to support small businesses.

Liberalization and Globalization (1991–2010)

The 1991 economic reforms introduced liberalization, privatization, and globalization, leading to structural changes in the MSME landscape. While competition from imports challenged small firms,



liberalization also opened new markets and access to technology. The 1991 Industrial Policy emphasized de-reservation of industries and integration of SSIs into global value chains.

The Small Industries Development Bank of India Act (1990) strengthened credit mechanisms, while the Credit Linked Capital Subsidy Scheme (CLCSS) and Technology Upgradation Fund Scheme (TUFS) encouraged modernization.

The Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 was a watershed reform, introducing a comprehensive definition of MSMEs, promoting cluster development, and mandating state-level facilitation councils for delayed payments.

Post-2010 Digital and Inclusive Growth Era

From 2010 onwards, the MSME sector has undergone rapid digitization and formalization. Initiatives like Digital India (2015), Make in India (2014), Startup India (2016), and Udyam Registration (2020) transformed the business ecosystem.

The Udyam portal simplified registration and classification, enabling digital linkage with the Income Tax and Goods and Services Tax (GST) networks. The government's Public Procurement Policy (2012) mandated 25% of procurement from MSMEs, boosting demand. The Atmanirbhar Bharat Abhiyan (2020) further expanded credit and equity support during the pandemic, while redefining MSME thresholds to encourage scaling.

Contemporary Context (2020–2023)

Between 2020 and 2023, MSMEs emerged as key instruments of economic recovery from COVID-19. The Emergency Credit Line Guarantee Scheme (ECLGS) provided collateral-free loans worth over ₹5 lakh crore. According to the MSME Annual Report (2022-23), India had over 63.4 million registered MSMEs, employing 111 million people and contributing 29.15% of GDP. The government's focus on cluster-based development, export facilitation, and digital credit platforms indicates a strategic shift toward long-term sustainability.

Contribution of MSMEs to the Indian Economy

MSMEs are not just a sector but a strategic pillar of India's economic and social fabric. Their contributions extend beyond GDP to encompass employment, exports, innovation, and social equity. According to the National Statistical Office (NSO) and Ministry of MSME (2022), MSMEs contributed



nearly 30% to India's Gross Domestic Product (GDP) and 45% to manufacturing output. The sector's widespread geographical presence—especially in Tier-II and Tier-III cities—promotes balanced regional development. The MSME sector is the second-largest employer in India after agriculture, providing livelihood to over 110 million people. The NSS 73rd Round (2015–16) revealed that 51% of MSMEs operate in rural areas, highlighting their role in curbing rural-to-urban migration. With relatively low capital requirements, MSMEs create labor-intensive employment, particularly for women and youth. Cluster-based industries such as handlooms in Varanasi, textiles in Tirupur, and brass in Moradabad exemplify how MSMEs promote localized industrial ecosystems. The Coir Board and Khadi institutions further strengthen self-employment and traditional livelihoods. MSMEs contribute 48% to India's total exports, primarily in sectors like textiles, leather, gems and jewelry, handicrafts, and engineering goods (DGFT, 2023). Government initiatives such as the Trade Related Entrepreneurship Assistance and Development (TREAD) and Export Promotion Councils have facilitated export-oriented MSMEs. The adoption of e-commerce platforms like Amazon Karigar, Government e-Marketplace (GeM), and e-NAM has increased global visibility. The integration of MSMEs into global value chains (GVCs) is crucial for India's aspiration to become a \$5 trillion economy. MSMEs foster entrepreneurial dynamism by encouraging new business creation. Programs like Technology Centre Systems Programme (TCSP) and ASPIRE (A Scheme for Promotion of Innovation, Rural Industries and Entrepreneurship) promote incubation, R&D, and skill training.

MSMEs also act as innovation incubators, particularly in technology-based startups. The Startup India Seed Fund and SIDBI Fund of Funds enable financing for early-stage ventures. Moreover, MSMEs play a key role in promoting green innovation, adopting renewable energy solutions and sustainable production methods. Beyond economic metrics, MSMEs promote inclusive growth by empowering marginalized communities, women entrepreneurs, and rural artisans. Government programs such as Prime Minister's Employment Generation Programme (PMEGP) and Stand-Up India aim to create equitable opportunities across regions. In states like Tamil Nadu, Gujarat, Maharashtra, Uttar Pradesh, and West Bengal, MSMEs have become critical contributors to industrial output and employment. The spread of rural industries ensures that development is not confined to metropolitan areas.

Policy Framework and Institutional Support

The development and sustenance of the MSME sector in India rely heavily on a robust policy and institutional ecosystem. Since independence, successive governments have introduced numerous measures to promote growth, competitiveness, and sustainability of MSMEs. These policies are aligned



with India's long-term goals of industrial diversification, employment generation, and equitable regional development. Firstly, the Micro, Small and Medium Enterprises Development (MSMED) Act, 2006 marked a watershed moment in India's industrial policy. It was the first comprehensive legislation that legally defined MSMEs and established a framework for their promotion and development. The Act's key provisions include (i) Classification of enterprises based on investment in plant and machinery (manufacturing) and equipment (services). (ii) Creation of National Board for Micro, Small and Medium Enterprises to coordinate and monitor policy implementation. (iii) Establishment of Micro and Small Enterprises Facilitation Councils (MSEFCs) to address delayed payment disputes. (iv) Promotion of cluster-based development and support for infrastructure and technology upgradation.

The institutional framework for MSME development in India is multi-layered, comprising national, state, and local agencies. Key institutions include (i) Small Industries Development Bank of India (SIDBI) established in 1990. SIDBI serves as the apex financial institution for promoting and financing MSMEs. It provides refinance support, venture capital, and risk capital through initiatives like the SIDBI Venture Capital Fund and Funds of Funds for Startups (FFS).

(ii) Khadi and Village Industries Commission (KVIC) constituted under the KVIC Act, 1956. It promotes rural industrialization through khadi, coir, and village industries, ensuring employment and self-sufficiency. (iii) National Small Industries Corporation (NSIC) that provides marketing support, raw material assistance, and credit facilitation through schemes like Single Point Registration (SPR) and Performance and Credit Rating Scheme. (iv) Coir Board, Handicrafts Board, and MSME-Development Institutes (Dis) which play a crucial role in cluster-based industrial promotion and skill enhancement.

Government Policy Initiatives

Over the years, various flagship programs have strengthened the MSME sector:

- Make in India (2014): Encouraged domestic manufacturing and foreign investment by simplifying procedures and enhancing infrastructure.
- Startup India (2016): Fostered innovation-driven entrepreneurship through tax benefits, patent support, and easier regulatory norms.
- Digital India (2015): Improved MSME access to digital platforms, e-commerce, and online markets.



- **Public Procurement Policy (2012):** Mandates government departments to procure at least 25% of goods and services from MSMEs, with 4% reserved for SC/ST entrepreneurs and 3% for women-led enterprises.
- **Atmanirbhar Bharat Abhiyan (2020):** Launched during COVID-19 to boost liquidity and self-reliance through credit guarantees, fund infusion, and expansion of MSME definitions.
- **Udyam Registration Portal (2020):** Simplified registration using Aadhaar and PAN, linking automatically with GST and Income Tax databases, thereby promoting transparency and ease of doing business.

Policy Synchronization with Sustainable Development Goals (SDGs)

Recent MSME policies align closely with the United Nations Sustainable Development Goals (SDGs). Programs encouraging women entrepreneurship (SDG 5), rural industrialization (SDG 9), and equitable growth (SDG 10) underline India's commitment to inclusive development.

Financial Inclusion and Credit Access Issues

Access to finance remains one of the most persistent challenges for MSMEs in India. Despite multiple reforms and institutional interventions, the sector continues to face a credit gap estimated at ₹25 trillion (IFC, 2018). This financing shortfall restricts investment in technology, working capital, and market expansion.

- **Sources of Finance for MSMEs-**MSMEs typically rely on a mix of formal and informal financial sources. Formal finance includes loans from commercial banks, NBFCs, cooperative banks, and government schemes. Informal finance includes credit from local moneylenders, trade credits, and personal savings — often at higher interest rates and without regulatory protection. The Reserve Bank of India (RBI) mandates that banks allocate 7.5% of Adjusted Net Bank Credit (ANBC) to the MSME sector under priority sector lending. Yet, credit penetration remains low, particularly for micro-enterprises and women entrepreneurs.
- **Institutional Support for Credit Flow** -Several schemes and mechanisms have been established to address the financing gap:
 - a) **Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE):** Launched in 2000 to provide collateral-free loans up to ₹2 crore, covering both manufacturing and service enterprises.



- b) Prime Minister's Employment Generation Programme (PMEGP): Provides subsidies ranging from 15% to 35% for new micro-enterprises, especially in rural areas.
 - c) MUDRA Yojana (2015): Offers micro-loans under three categories — Shishu (up to ₹50,000), Kishor (₹50,000–₹5 lakh), and Tarun (₹5–₹10 lakh) — with over ₹18 lakh crore sanctioned as of 2023.
 - d) Emergency Credit Line Guarantee Scheme (ECLGS): Introduced in 2020 to mitigate the impact of COVID-19, it disbursed over ₹5 lakh crore in guaranteed loans to 11 million MSMEs by 2023.
- Challenges in Credit Access-Despite strong institutional frameworks, MSMEs face several barriers to accessing formal finance:
 - a. Information Asymmetry: Lack of formal credit history and financial records restricts risk assessment by banks.
 - b. Collateral Constraints: Many MSMEs lack tangible assets to offer as security, particularly in rural areas.
 - c. High Transaction Costs: Small ticket sizes make MSME lending less profitable for banks.
 - d. Delayed Payments: Late receivables from large firms and government bodies affect liquidity and working capital.
 - e. Limited Financial Literacy: Many entrepreneurs are unaware of credit schemes or digital lending platforms.
 - Role of Fintech and Digital Credit -The rise of Fintech platforms and digital lending has revolutionized MSME financing. Platforms like TReDS (Trade Receivables Discounting System), Lendingkart, and KredX use technology to assess creditworthiness through cash flow data rather than traditional collateral.The Open Credit Enablement Network (OCEN) and Account Aggregator (AA) framework, introduced by RBI, aim to facilitate secure sharing of financial data and improve credit access. These innovations are bridging the credit gap and formalizing micro-enterprises.
 - Role of SIDBI and Developmental Finance -SIDBI plays a pivotal role in developmental finance by offering refinance to banks and NBFCs. Through its SMILE (SIDBI Make in India Loan for Enterprises) and PRAYAAS (for micro-entrepreneurs) schemes, SIDBI provides concessional finance to promote innovation and technology adoption.It also manages equity support programs such as India Aspiration Fund and SIDBI Fund of Funds, catalyzing startup investments. By 2023, SIDBI had supported over 12 lakh MSMEs, mobilizing investments exceeding ₹1.2 trillion.



Challenges Faced by MSMEs in India

Despite their undeniable importance in India's economic architecture, MSMEs face numerous systemic and structural constraints that impede growth, competitiveness, and sustainability. These challenges can be broadly categorized as financial, infrastructural, technological, regulatory, and market-related.

- **Financial Constraints** -Access to affordable and timely finance remains the most critical bottleneck for MSMEs. While policies such as CGTMSE, MUDRA, and ECLGS have expanded outreach, the credit gap—estimated at nearly ₹25 trillion (IFC, 2018)—remains substantial. Micro enterprises, especially those operating informally, struggle to meet banks' documentation and collateral requirements. Additionally, interest rates for MSME loans are often higher than those for large enterprises due to perceived risks and operational costs. According to the RBI MSME Report (2023), only 16% of MSMEs had access to formal credit, forcing many to rely on informal lenders, thus increasing their cost of capital.
- **Infrastructural Deficiencies**-Poor infrastructure is another persistent challenge. Many MSMEs operate in semi-urban and rural regions where power supply, transport connectivity, and logistics facilities remain inadequate. The absence of industrial clusters and common facility centers further limits production efficiency. Logistics costs in India are estimated at around 13–14% of GDP, compared to 8–10% in developed economies (NITI Aayog, 2022), reducing MSME competitiveness in both domestic and export markets.
- **Technological Obsolescence**-Technology adoption is essential for efficiency, quality improvement, and competitiveness. However, many MSMEs continue to rely on outdated production techniques due to limited resources and lack of awareness.

Although schemes like CLCSS and Lean Manufacturing Competitiveness Scheme support modernization, the overall penetration remains limited. Only about 12% of MSMEs are technologically upgraded as of 2023 (MSME Ministry, 2023). This restricts productivity and global competitiveness.

- **Regulatory and Compliance Burden**-While India has improved its Ease of Doing Business ranking, small enterprises continue to face multiple layers of regulation, taxation, and licensing. Despite the launch of Udyam Registration, many micro-enterprises still operate informally and are not registered under GST or labor laws. Moreover, delayed payments from large buyers and government departments—despite legal provisions under the MSME Act—remain a major



concern. According to the MSME Samadhaan portal, over ₹26,000 crore in delayed payments were reported by 2023, with only a fraction settled.

- **Marketing and Market Access Issues**-Limited market access and brand visibility hinder MSME growth. Small enterprises often lack marketing networks, export knowledge, or e-commerce readiness. The dominance of large corporations and imports from low-cost countries like China further squeezes their market share. Although digital platforms like GeM (Government e-Marketplace) and Amazon Karigar have expanded opportunities, awareness and digital literacy remain low among rural entrepreneurs.
- **Human Resource and Skill Gaps**-Skill shortages and limited managerial capacity are recurring issues. MSME owners often lack formal business training, affecting decision-making and productivity. While Skill India and MSME Tool Rooms have improved technical skills, managerial and digital capabilities require more focus, especially in small and micro units.
- **Environmental and Sustainability Challenges**-Sustainability and environmental compliance are emerging challenges. MSMEs in polluting industries like leather, dyeing, and metal finishing face stringent environmental norms but lack the capital to install eco-friendly technologies. Government initiatives such as ZED (Zero Defect, Zero Effect) and Sustainable Finance Programs aim to promote green MSMEs, but adoption is still at an early stage.

Impact of COVID-19 on MSMEs

The COVID-19 pandemic (2020–2022) was the most disruptive event in recent decades for India's MSME sector. The crisis exposed structural weaknesses while accelerating digital transformation and policy innovation.

- **Immediate Impact: Demand and Supply Shock**-The nationwide lockdown in March 2020 led to the closure of nearly 75% of MSMEs temporarily (CII Survey, 2020). Disruptions in supply chains, raw material shortages, and labor migration crippled production and sales. According to a SIDBI-CMIE study (2021), nearly 35% of MSMEs reported revenue declines exceeding 50%, and about 10% permanently shut down due to insolvency.
- **Employment and Income Loss**-Millions of workers—especially in the unorganized micro sector—lost jobs. The International Labour Organization (ILO, 2021) estimated that 70% of informal MSME workers faced income reduction during the lockdown period. Women-led enterprises were disproportionately affected, particularly in the handicraft and retail sectors.



- Financial Stress -Cash flow disruptions led to widespread defaults on loans and credit obligations. Many MSMEs struggled to service working capital loans, pushing up non-performing assets (NPAs) in the MSME portfolio.To address this, the government introduced the Emergency Credit Line Guarantee Scheme (ECLGS) under the Atmanirbhar Bharat package, offering collateral-free loans with 100% government guarantee. The scheme saved an estimated 1.5 crore jobs and supported 11 million MSMEs (RBI, 2022).
- Government Relief and Recovery Measures-Several relief measures were introduced to stabilize the MSME sector:
 - a. ECLGS: ₹5 lakh crore collateral-free loans with government guarantee.
 - b. Fund of Funds for MSMEs: ₹10,000 crore equity infusion to help stressed units scale up.
 - c. Subordinate Debt Scheme: Support for promoters of stressed MSMEs to infuse equity.Revised MSME Definition (2020): Expanded thresholds for investment and turnover to include more enterprises.
 - d. Atmanirbhar Bharat initiatives: Tax relief, e-market linkage, and local procurement drives.These measures provided a financial safety net and encouraged digital adoption. The Udyam Registration portal, launched during this period, became a crucial step in formalizing enterprises and ensuring access to support schemes.
- Digital Transformation-One of the silver linings of the pandemic was the acceleration of digital transformation among MSMEs. E-commerce participation, online payment adoption, and digital marketing became survival strategies.According to a Google-KPMG Report (2022), digitally enabled MSMEs experienced 2.3 times higher revenue growth and 1.5 times higher employment growth than non-digital counterparts. Digital payment platforms like UPI and Bharat Pe increased accessibility and traceability of financial transactions, enhancing formalization.
- Structural Shifts Post-COVID-19 -The pandemic catalyzed structural changes in business models:
 - a. Shift to local supply chains: Reduced dependency on imports, promoting indigenous production.
 - b. Rise of home-based and gig enterprises: Boosting micro-entrepreneurship.
 - c. Greater policy focus on self-reliance: Reinforced through Atmanirbhar Bharat.
 - d. Increased adoption of automation and digital tools: For efficiency and cost reduction.
- Long-term Implications-While recovery has been gradual, MSMEs have demonstrated remarkable resilience. By 2023, industrial output and employment in the sector had largely



rebounded to pre-pandemic levels (Economic Survey, 2022–23). The experience underscored the need for a more shock-resistant ecosystem with diversified financing, digital integration, and global competitiveness

Opportunities and Future Prospects

The MSME sector in India stands at a critical juncture. With rising digitization, favorable policy frameworks, and growing global demand for diverse products, MSMEs are poised to play a transformative role in India's economic future. This section explores emerging opportunities that could redefine the sector's trajectory.

- **Digital Transformation and Industry 4.0**-The advent of Industry 4.0 technologies—including Artificial Intelligence (AI), Internet of Things (IoT), robotics, and 3D printing—presents a vast opportunity for MSMEs. Adopting these technologies can enhance productivity, reduce costs, and improve product quality. Initiatives like Digital MSME Scheme and Smart Manufacturing Platforms have already begun integrating small firms into digital ecosystems. The increasing use of cloud-based enterprise resource planning (ERP) and blockchain-enabled supply chains can streamline operations and enhance transparency, especially for export-oriented units.
- **Integration with Global Value Chains (GVCs)** -India's participation in global value chains remains limited compared to East Asian economies. Strengthening MSME linkages with multinational corporations (MNCs) through supplier development programs and standards compliance can elevate India's export competitiveness. The Production Linked Incentive (PLI) Scheme, launched across multiple sectors, offers new opportunities for MSMEs to become ancillary suppliers to large manufacturers, especially in electronics, pharmaceuticals, and automotive components.
- **Green and Sustainable Manufacturing** -Sustainability is emerging as both a challenge and an opportunity. With increasing global demand for eco-friendly products, MSMEs can gain market advantage by adopting clean technologies, waste recycling, and renewable energy. The Zero Defect Zero Effect (ZED) certification program promotes quality production with minimal environmental impact. Similarly, green financing instruments and ESG (Environmental, Social, and Governance) reporting are opening new funding channels for responsible MSMEs.
- **Rural Industrialization and Cluster-Based Growth** - India's demographic and spatial diversity make rural industrialization a strategic opportunity. The expansion of One District One Product (ODOP) and SFURTI (Scheme of Fund for Regeneration of Traditional Industries) enhances



local entrepreneurship and preserves traditional crafts. Cluster-based approaches facilitate shared infrastructure, economies of scale, and access to common facilities. Successful clusters like Tirupur knitwear (Tamil Nadu) and Morbi ceramics (Gujarat) serve as replicable models for other regions.

- **Fintech and Digital Credit Ecosystems**-The rise of Fintech innovation is redefining MSME financing. The Open Credit Enablement Network (OCEN) and Account Aggregator (AA) frameworks introduced by RBI are improving credit flow through data-driven lending models. By leveraging digital footprints, banks and NBFCs can assess creditworthiness more accurately, benefiting first-time borrowers. Integration of TReDS, GST data, and UPI transactions provides greater financial inclusion and transparency.
- **Export Diversification and Global Branding** -With the government's focus on export-led growth, MSMEs have an opportunity to penetrate new markets in Africa, Latin America, and Southeast Asia. The District as Export Hub (DEH) initiative under the Ministry of Commerce seeks to identify and promote local export champions. Branding and international certification will be crucial for enhancing the global reputation of Indian MSME products, especially in textiles, handicrafts, organic food, and engineering goods.
- **Women and Youth Entrepreneurship** -Women and youth-led MSMEs represent untapped potential. As of 2023, women account for only 20% of MSME ownership (MSME Annual Report, 2022–23). Expanding access to finance, mentorship, and digital skills can substantially increase this share. Schemes like Stand-Up India and Mahila Coir Yojana are steps in this direction, but greater institutional support and social awareness are essential to bridge gender gaps.

Policy Recommendations

To unlock the full potential of MSMEs and ensure sustainable development, targeted policy interventions are needed. Based on the analysis above, the following recommendations are proposed:

- **Strengthening Financial Ecosystems** -Simplify loan procedures under CGTMSE, PMEGP, and MUDRA by integrating them into a single digital portal. Encourage alternative finance mechanisms, including venture capital, peer-to-peer (P2P) lending, and crowd-funding for small enterprises. Expand the TReDS platform to include more NBFCs and regional banks for invoice discounting. Promote credit guarantee expansion for green and women-owned MSMEs.



- Enhancing Technology and Innovation Capacity-Establish Technology Innovation Hubs and MSME Centres of Excellence at universities and IITs to promote R&D linkages. Provide fiscal incentives for Industry 4.0 adoption, such as tax credits for automation and digitalization. Promote collaboration between MSMEs and large corporations for technology transfer through Public-Private Partnerships (PPPs).
- Improving Infrastructure and Logistics -Develop MSME Industrial Parks with common facilities like testing labs, warehousing, and digital connectivity. Invest in last-mile logistics and reduce freight costs through multimodal transport systems. Encourage renewable energy adoption within industrial clusters.
- Simplifying Regulatory Compliance -Integrate all MSME-related compliances (GST, Udyam, Labour, and Environmental) into a single-window digital system. Ensure strict enforcement of payment timelines under the MSMED Act to prevent liquidity stress. Provide tax incentives for enterprises registered under Udyam to encourage formalization.
- Promoting Skills, Entrepreneurship, and Inclusion-Strengthen linkages between Skill India, MSME Tool Rooms, and vocational training centers to align with industry needs. Launch specialized programs for women entrepreneurs, offering mentorship, incubation, and digital marketing training. Encourage youth participation through entrepreneurship boot camps, innovation challenges, and school-level awareness.
- Fostering Sustainable and Green MSMEs-Expand the ZED certification program and offer fiscal rebates for certified green enterprises. Introduce low-interest green credit lines for MSMEs adopting renewable energy or waste management practices. Facilitate partnerships with international agencies for technology transfer and carbon-neutral production models.
- Strengthening Institutional Coordination -Enhance coordination among MSME Ministry, RBI, NITI Aayog, and state-level agencies to prevent overlap. Encourage data-driven policymaking through periodic enterprise surveys and digital monitoring dashboards. Promote international cooperation through bilateral trade agreements and MSME export councils.

Conclusion

The MSME sector is not merely an economic segment—it is the heartbeat of India's development journey. It bridges the gap between urban and rural economies, stimulates innovation, and generates large-scale employment with relatively low capital investment. The post-2006 period has witnessed remarkable institutional evolution, technological advancement, and policy innovation. However,



persistent challenges—particularly those related to finance, infrastructure, and digital literacy—must be addressed to sustain growth. The experience of the COVID-19 pandemic underscored the sector’s vulnerability but also its resilience and adaptability. Moving forward, the fusion of digitalization, green manufacturing, and skill development will determine the trajectory of MSMEs in a rapidly changing global economy. To realize the vision of a \$5 trillion Indian economy, MSMEs must be placed at the center of industrial and developmental strategy. A coordinated approach involving government, industry, and academia can transform MSMEs into globally competitive, sustainable enterprises—fulfilling their role as the backbone of India’s economic growth and sustainable development.

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