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Enhancing the Competitiveness of MSME's in India

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Introduction

Within the realm of global economics, micro-, small- and medium-sized enterprises (MSMEs) emerge as the cornerstone of prosperity, embodying the largest and most influential segment across all economies (Storey, Pinch, & Mason, 1991). They constitute a vast majority of businesses worldwide and play a pivotal role in job creation and global economic growth. They make up about 90% of businesses globally and are responsible for over 50% of the total global employment. Despite being the largest business segment globally in terms of numbers, SMEs have been found to participate less in Global Value chains (GVC) than the large enterprises. (Chaisse & Rodríguez-Chiffelle, 2019)

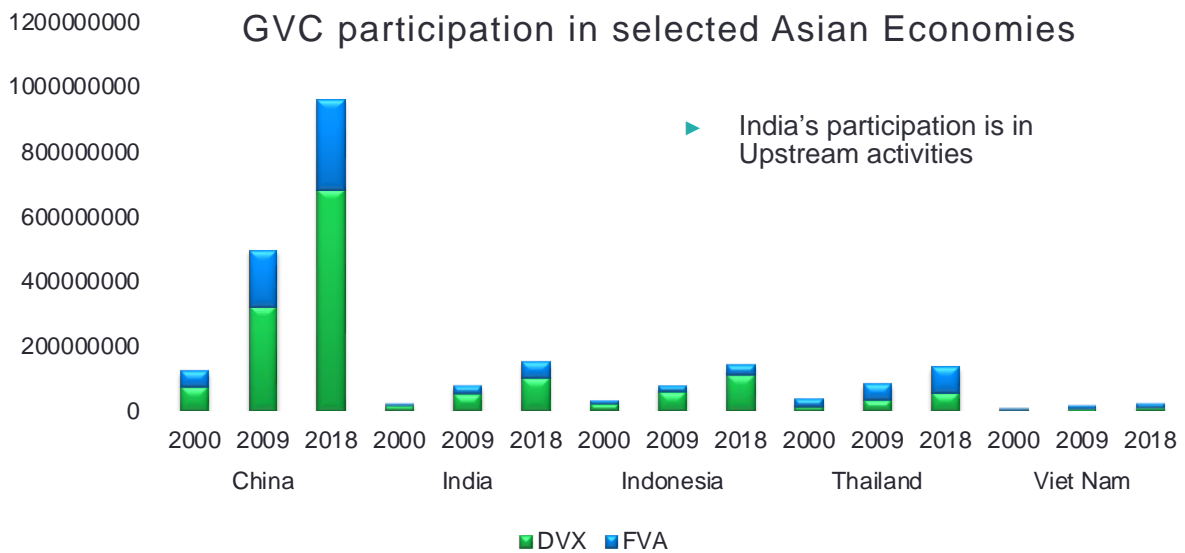
Participation in Global Value Chains (GVC) refers to the extent to which a nation's exports are embedded within multi-stage international trade processes. This concept refers to the integration of domestic value added into the exports of other nations, as well as the incorporation of foreign value added into a nation's exports. The proportion of a nation's total exports that is comprised of GVC participation provides a quantitative assessment of the extent to which its export sector relies on GVCs. GVC metrics also play a crucial role in assessing the extent to which sectors depend on international manufacturing networks.(UNCTAD, 2013).

GVCs are crucial for engaging with the global market, by concentrating on the development of specialised products and specialising in particular segments of the production chain. Furthermore, GVCs serve as critical facilitators of the international exchange of investment, knowledge, and managerial practices that are in line with global standards, thereby significantly bolstering domestic businesses. Gaining access to these globally recognised best practices offers emerging economies unparalleled prospects for growth and the augmentation of their export capabilities. (Mitra, Gupta, & Sanganeria, 2020)

India's role in the global economy has more than doubled, from a 1.4% contribution to world output in 1990 to 3.2% in 2017. However, India remains a fringe player in GVC. India's impact remains modest, representing only 1.5% of global GVC exports or \$241 billion as of 2017, with the largest share, about 10%, heading to the United States. Other key destinations include Singapore (6.7%) , the People's Republic of China(4.6%), and several European countries. Exports to the US are largely in chemicals and metals, while exports to China are predominantly raw materials. In contrast, services such as equipment rental and transportation are the main GVC exports to Singapore. Additionally, India's exports to the European Union are diverse, ranging from metals to machinery rental services, as well as textiles and electronics being significant GVC exports. (Mitra, Gupta, & Sanganeria, 2020).

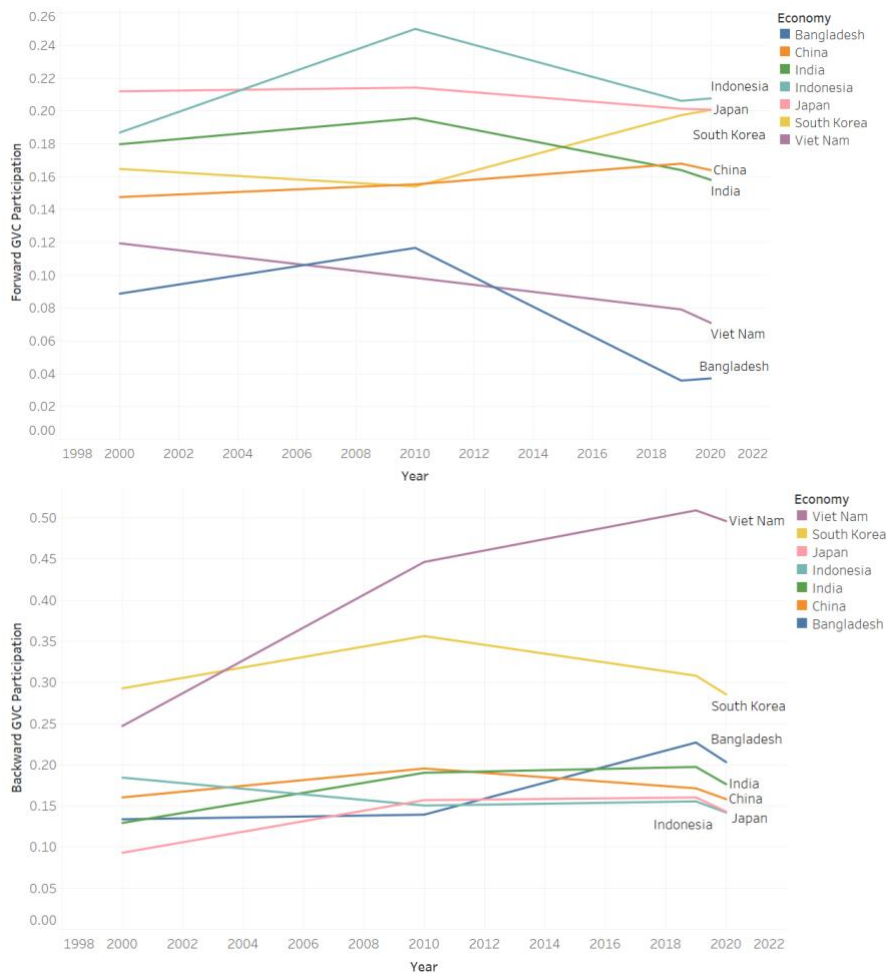
With approximately 63 million Micro, Small, and Medium Enterprises (MSMEs) operating in India, predominantly within sectors at the forefront of Global Value Chain (GVC) exports, their integration into these chains is very importance. However, they encounter a multitude of challenges that hinder their ability to enter or advance within a value chain. MSMEs in developing countries frequently find themselves constrained to lower value-added stages of production due to the prohibitive investment and expertise required for more sophisticated operations, risking functional downgrading or being perpetually confined to less profitable niches. Additionally, while ascending a value chain presents more favorable opportunities for learning and growth, it simultaneously imposes steeper entry barriers. These include stringent quality standards, and the need for speed and adaptability, making it crucial for smaller firms in these nations to align swiftly with the escalating demands. To successfully address these barriers, it's essential to focus beyond cost reduction techniques. Enhancing efficiency, improving the

quality of products and services, and speeding up production and delivery are key. This improvement relies on better use of resources and labor, fostering a culture of learning and innovation, upgrading processes, and broadening sales avenues. Adopting such a comprehensive approach is vital for MSMEs aiming to integrate themselves in the global value chain. (Caspari, 2003)



Source : UNCTAD-Eora Global Value Chain Database

A low FVA-to-DVX ratio, where a lower (or higher) ratio implies a more active involvement in upstream (or downstream) tasks within global value chains (GVCs). A lower ratio indicates a heightened concentration on supplying primary products or engaging in natural resource-intensive and low-value-added activities. This characteristic positions India among developing countries, offering insights into its distinct role in GVCs and its focus on specific segments of the production chain.



Source : OECD TIVA Data base

From the above graphs, it is clear that India's performance relative to peer Asian countries has remained stagnant in backward global value chain (GVC) participation, while witnessing a decline in forward GVC participation reveals important insights into the country's positioning within the global economic landscape. This insight suggests both challenges and opportunities for India, particularly in the context of its economic development and the role of micro, small, and medium enterprises (MSMEs). India has been successful in integrating into upstream stages but is facing challenges in downstream activities as the dynamics shift. In that case, the country's strength lies in supplying essential components, raw materials, and intermediate goods to global value chains. The declining trend in forward GVC participation implies a need to address challenges in distribution, marketing, and sales of finished goods. In this context, the emphasis shifts to enhancing India's capabilities in marketing, branding, and accessing international markets for the final products. Indian MSMEs, recognising this strength in upstream integration, can focus on building stronger connections with global manufacturers and optimising their role as suppliers of critical components.

Role of MSMEs in India’s GVC participation rate

In India, the Micro, Small, and Medium Enterprises (MSME) sector is of significant importance due to its substantial contribution to employment, production, and exports. Based on the latest data from the Ministry of Statistics & Programme Implementation, in the fiscal year 2021-22, the MSME Gross Value Added (GVA) accounted for 29.2% of India's Gross Domestic Product (GDP). Likewise, the share of MSME manufacturing output in India's total manufacturing output for the same period stood at 36.2%, and MSME-specified products represented 45% of India's total exports (PIB, 2023). MSMEs have also created a total of 120 million jobs generated across various industries in India. They are an important link in the supply chain in various sectors like food processing, agriculture, chemicals, electronics, textiles, and so on. The Indian government's strategic efforts in areas like competitiveness, quality improvement, finance, and technology have led to a significant shift in the sector, moving from basic consumer goods production to the manufacturing of advanced products (Ghouse, 2014). Indian MSMEs, despite their impressive metrics, remain a step behind global MSMEs. They hold a strategic advantage with supportive domestic demand and a thriving manufacturing sector. Yet, they are predominantly engaged in midstream activities that yield low value addition and a lack of trade efficiency. Strategic improvements in these areas could elevate Indian MSMEs to meet international benchmarks and norms, consequently fortifying their roles in supply chains and facilitating their integration into global value chains.

According to World Bank data on Micro, Small, and Medium Enterprises (MSMEs) 2022, there are significant differences in the performance of MSMEs businesses ((World Bank, 2022), (PIB, 2022)).

Table 1- Performance Comparison of India's MSMEs with other Countries.

MSME obstacles/challenges	India	South Asia	All countries
Biggest Obstacle	Access to Financial Sources (21.5%)	Political Instability (17.9%)	Access to Financial Sources (15.3%)
Gender Representation (enterprises having female ownership participation) (%)	3.9%	13.8%	32.9%
Annual Labour Productivity Growth (%)	-4.3%	-3.1%	-2.8%
Real annual sales growth (%)	-1.5%	0.8	0.7
Innovation and Technology (firms globally introduce new products or services) (%)	5.8%	24.9%	36%
Customs (number of days to clear direct exports and imports from customs)	Exports - 17.3 days Imports - 31.5 days	Exports – 12 days Imports – 7.4 days	Exports – 14.1 days Imports – 12.3 days

Source- (World Bank, 2022)

However, the comparison of MSMEs across the different economies is difficult and can be misleading as the criteria for categorizing MSMEs vary globally. They are defined by a number of factors and criteria, such as location, size, age, structure, organization, number of employees, sales volume, worth of assets, and ownership through innovation and technology (OECD,

2018), (Sobir, 2020). In many countries, SMEs are defined primarily by the number of employees, while India, under the MSMED Act of 2006, defines MSMEs based on investment in plant and machinery (Khatri, 2019)

In response to evolving economic dynamics, India underwent a significant overhaul of its MSME definition in 2020. Recognising the limitations of the earlier framework, particularly with distinct thresholds for manufacturing and service units featuring relatively low financial limits, a reformed definition was introduced. Implemented on July 1, 2020, this new definition incorporates a composite set of criteria, considering both investment in plant and machinery/equipment and annual turnover. The revisions sought to achieve several overarching goals. Firstly, they aimed to expand the MSME sector by increasing the investment and turnover thresholds, providing a more comprehensive evaluation of business size across sectors. By removing limitations on growth for existing MSMEs, the government incentivized their expansion without compromising access to crucial support programmes.

Additionally, the adjustments targeted the simplification of classification and the reduction of regulatory burdens for MSMEs. A single set of criteria applicable to both the manufacturing and service sectors streamlined the classification process, contributing to a more business-friendly environment. Furthermore, the government's vision extends to promoting a more competitive MSME sector. By allowing MSMEs to grow within the MSME classification, the reforms incentivize these enterprises to enhance competitiveness and efficiency. This strategic approach positions them to effectively compete with larger companies and facilitates better integration into the broader economy. Revisions in the MSME definition also influence the extent to which MSMEs are influenced by tariff liberalisation. Higher benefits of liberalisation can be accrued by introducing more flexible limits on investment for MSMEs (Mukherjee & Chanda, 2021). This adjustment aims to align with contemporary economic realities, establish a more objective classification system, and facilitate a conducive environment for business operations. (Ministry of MSME, 2023).

Prioritizing the government's capacity to flexibly adapt and adopt a forward-thinking policy approach is crucial for effectively addressing the growing complexities within and around the MSME sector. This takes precedence over mere alterations in definitions and is essential for ensuring true inclusivity. This adaptability is crucial in creating an enabling ecosystem that supports the growth and resilience of businesses in an ever-changing world. The first step towards this is understanding the challenges faced by MSMEs, and what drives competitiveness of MSMEs across regions and industries is a prerequisite. This paper aims to provide a comprehensive analysis of India-centric policies affecting MSMEs, evaluates their competitiveness, examines their integration into Global Value Chains (GVCs), and attempts to offer strategic policy recommendations to navigate future challenges.

Outline of the Paper

This paper is structured into four key chapters, each meticulously designed to contribute to the comprehensive understanding of Small and Medium Enterprises (SMEs) competitiveness.

Chapter 1: Understanding MSMEs Challenges for Enhancing Competitiveness

In this initial chapter, we embark on an exploration of the challenges faced by Micro, Small, and Medium Enterprises (MSMEs). By scrutinizing these challenges, we aim to lay the groundwork for a profound comprehension of the intricate dynamics influencing their competitiveness.

Chapter 2: Competitiveness Framework: MSMEs and the Path to Prosperity

Building upon the insights garnered from the challenges delineated in the first chapter, the second chapter explores competitiveness framework and cluster approach's concept. This framework serves as a guiding compass, charting the trajectory for MSMEs on the path to prosperity.

Chapter 3: Understanding MSMEs Competitiveness in India Using Clusters Approach

In the third chapter, we adopt a nuanced approach by leveraging the Clusters methodology to comprehend the competitiveness of MSMEs in 5 sectors in Indian context. By exploring the synergies and dynamics within clusters, we seek to uncover unique insights that contribute to a more tailored understanding of competitiveness.

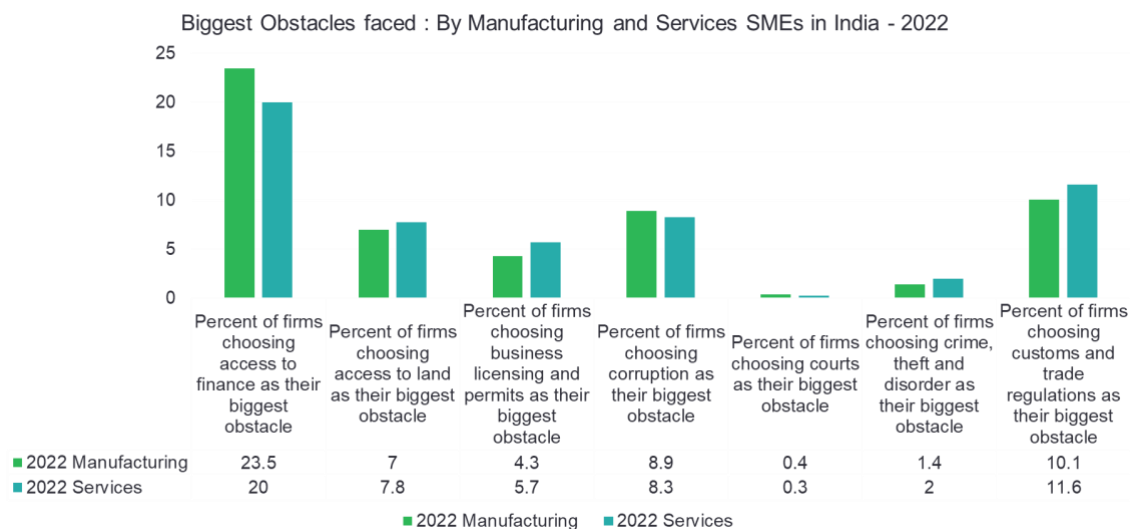
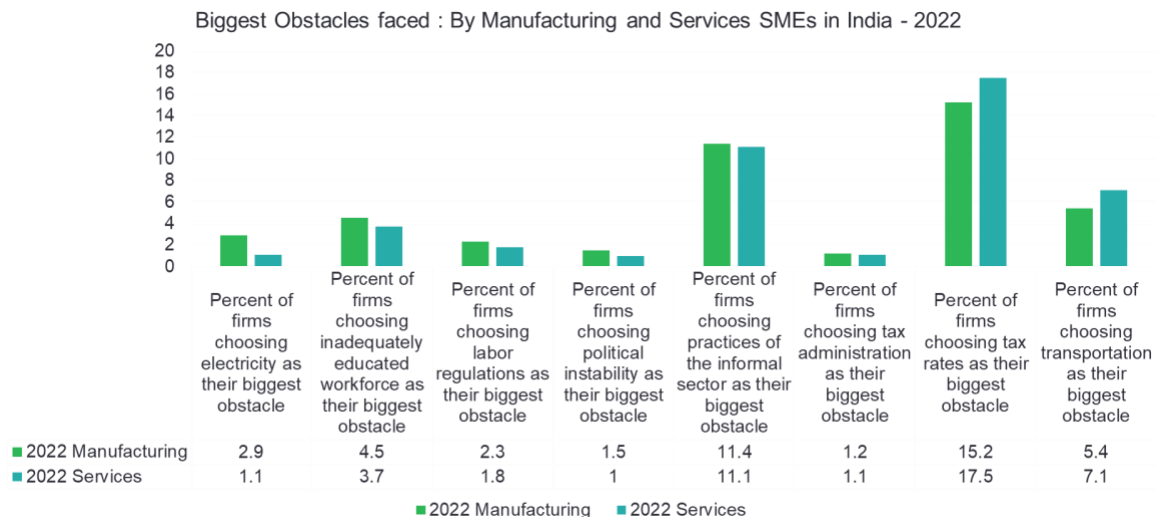
Chapter 4: Policies for MSMEs in India

The final chapter of this paper delves into the policy landscape governing MSMEs in India. By scrutinizing existing policies, we aim to unravel their efficacy in enhancing competitiveness. This evaluation serves as a crucial step towards proposing recommendations for a more robust and adaptive policy framework.

Throughout this exploration, our overarching objective is not only to identify challenges but also to provide a forward-thinking perspective on understanding MSME competitiveness. We emphasize the importance of adaptability in policy formulation and strategic approaches, essential for addressing the evolving intricacies within and surrounding the MSME sector. Through this paper we have strived to contribute meaningfully to the ongoing discourse on SME competitiveness.

Chapter 1: Understanding MSMEs Challenges for enhancing competitiveness

Indian MSMEs grapple with a myriad of challenges, ranging from difficulties in timely access to information, irregular and inappropriate financial resources, shortage of quality human capital, access to credit and low-cost technology, and the prevalence of large-scale informality that impedes their growth trajectory (Kapoor, 2023). According to enterprise survey by World bank reveals following as biggest obstacles faces by SMEs in India.³



Source : Enterprise Survey , World Bank 2022

³ <https://datacatalog.worldbank.org/search/dataset/0037947/Enterprise-Surveys>

The existing research highlights key obstacles that hinder the growth and competitiveness of Micro, Small, and Medium Enterprises (MSMEs) in India. A thorough examination and comprehension of these concerns are crucial for developing successful strategies and interventions to overcome the challenges encountered by MSMEs, thereby enhancing their resilience and competitiveness in the Indian economy.

1. Formalization

Informal firms rarely undergo formalization. Only 9% of the registered firms start out as unregistered. (Porta & Shleifer, 2014). The informal sector is dominated by MSMEs, ILO estimates about 90% of the informal sector are MSMEs⁴ (ILO, 2023). These unregistered, informal firms tend to be constrained to an ecosystem associated with low income and low entry barriers; disjoint from the formal space (Ishengoma & Kappe, 2006) (Mehrotra & Giri, 2019)). This informality within firms significantly hampers their integration into Global Value Chains (GVCs). Enhanced integration into GVCs is predominantly influenced by two critical factors: competitiveness and connectivity (ADB, 2015). For firms to bolster their competitiveness and connectivity, there must be an enabling environment that allows them to leverage policy frameworks and market mechanisms effectively.

The contribution of MSMEs compared to their proportion in the total firms is abysmal due to multiple internal, external, and firm-level factors. Internal factors such as quality of human capital, utilization of technology and working capital; external factors such as access to financial services, access to social and business security services, infrastructure and so on. Other firm-level factors such as linkages with other firms hinder their growth (Ishengoma & Kappe, 2006).

Against this background, formalization can come in as a solution. The advantage of formalization is access to a range of government subsidies and rewards, legally binding business agreements, tax advantages, access to established financial channels, and additional motivators. With improved access to these resources, enhancing productivity becomes more feasible through technological advancements in production and digitalization, and is the primary step toward establishing MSMEs in the Global Value Chain. (Kapoor & Kowadkar, Gradual shift from informal to formal for MSMEs, 2022). However, there are disadvantages to formalization as well in the current business and regulatory environment, especially in developing economies. Research points out that small and medium enterprises (SMEs) with a higher degree of formality still face the same obstacles as those with a higher level of informality, along with high cost of operation and reduction in government exemptions (Weder, 2003).

Various countries have been addressing the need for formalizing small businesses. Kenya introduced the Micro and Small Enterprise Act in 2012, creating an authority to support these enterprises. China has established Employment Service Organizations, like the SCESO in Shanghai, to help informal businesses with various aspects of establishment and operation. South Africa's 1994 national small business strategy aims to assist SMEs in becoming more competitive and connected to formal markets, with the National Productivity Institute providing training and

⁴ [https://www.ilo.org/employment/units/emp-invest/informal-economy/lang-en/index.htm#:~:text=The%20informal%20economy%20comprises%20more,Small%20Enterprises%20\(MSEs\)%20worldwide](https://www.ilo.org/employment/units/emp-invest/informal-economy/lang-en/index.htm#:~:text=The%20informal%20economy%20comprises%20more,Small%20Enterprises%20(MSEs)%20worldwide)

support. These efforts highlight a global commitment to empowering small and informal businesses.

In India, there have been a few initiatives that are changing the formalization landscape of MSMEs. The Aadhaar Memorandum (UAM), the previous platform for registering MSMEs in India, had 1.02 crore registrations from September 2015 to June 30, 2020. To simplify registration, the Udyam portal replaced UAM on July 1, 2020. In just two years, Udyam has garnered over 90 lakh registrations, nearing the 1 crore mark⁵ (MSME Desk, 2022). The Udyam database is merging with NCS, e-Shram, and ASEEM portals to formalize micro-enterprises. Currently, Udyam has around 95 lakh MSMEs registered. The MSME Ministry is addressing the delayed payments issue by collaborating with state governments. The Udyam Registration Portal (URP) by the Ministry of MSME, Govt. of India, facilitates online MSME registration and provides Unique Registration Numbers (URN) and Udyam Assist Certificates (UAC). URN is crucial for MSMEs to access priority sector lending. However, several of the estimated 6.34 crore MSMEs, mainly Informal Micro Enterprises (IMEs), remain unregistered due to various barriers. To help IMEs formalize, an 'Assist Methodology' is proposed. Designated Agencies (DAs) like banks, NBFCs, and MFIs will assist IMEs in registration. The central URN will play a key role in MSME formalization, making Udyam-registered IMEs eligible for priority sector loans and facilitating digitalization⁶ (MSME Formalisation project, 2023). Along with this, GST has eased tax compliance and influenced formalization. However, stringent labor laws, tax burden, complex regulations and extensive costs as a result of formalization, acts as deterrents for formalization of MSMEs

Adoption of an all-of-economy approach that addresses a multitude of challenges faced by enterprises at all levels- from reasons to stay unregistered, and issues after formalization to assessing the degree of formalization necessary in an economy is vital.

2. Access to Finance

According to the International Finance Corporation (2012) (Intellectual Capital Advisory Services Private Lim, 2012), the total requirement of finance for the MSME sector in India is estimated to be 32.5 trillion Indian rupees. This includes contributions from informal finance, formal finance, and self-finance. Informal sources and self-finance account for 78%, (Rs25.5 trillion), with informal finance alone contributing Rs24.4 trillion of the finance utilised by MSMEs. The remaining 22% (Rs6.9 trillion) is provided by banks and non-banking financial companies (NBFCs), with banks being the primary source, accounting for 91.8% of the formal finance. The perception of SMEs as high-risk and commercially unviable entities has resulted in limited SMEs receiving formal financial assistance (Ambrose, 2012). Indian banks, in particular, are hesitant to finance small enterprises due to reasons such as the inability to provide collateral, high levels of nonperforming assets, high transaction costs, and difficulties in verifying the creditworthiness of applicants (Prasad, 2006). Along with this, the financial services that are offered by banks are often insufficient to meet the needs of early-stage SMEs in India (Banerjee, 2006)

Accessing external finance from sources other than banks is costly, limited, and poses a challenge to SMEs, despite being essential for long-term growth and goals (Biswas, 2014). Due to

⁵ <https://www.financialexpress.com/business/sme-msme-eodb-formalisation-of-msmes-is-our-primary-target-and-biggest-ambition-msme-secretary-bb-swain-2586650/>

⁶ <https://udyamassist.gov.in/msme-faq>

constraints in accessing bank credit force MSMEs are forced to employ alternative sources of finance. While accessing finance from formal institutions MSMEs face several barriers, including the need for collateral or guarantees, inflexible policies, high lending rates, lengthy procedures, entrepreneurs' limited financial knowledge of available schemes, high service fees and complex regulatory frameworks (Singh & Wasdani, 2016) , (Ambrose, 2012)). This restricted access to financial resources hampers the growth and survival prospects of Indian MSMEs.

Barriers have also been examined in the context of gender (Irwin & Scott, 2010), firm size, the length of lending relationships, and the use of overdraft credit (Bebczuk, 2004). The Reserve Bank of India (2005) has identified several issues in financing SMEs, including inadequate access to finance for small firms due to a lack of financial information and non-formal business practices, limited access to private equity, venture capital, and secondary market instruments, fragmented markets for inputs and vulnerability of products to market fluctuations, limited access to technology and product innovations, lack of awareness of global best practices, and significant delays in settlement of dues and payment of bills by large-scale buyers. A reduction in the cost of credit, time barriers and documentation is necessary to ease the procurement of finance (Grant Thornton, FICCI, 2011)

Some of the reasons for the low financial inclusion of SMEs are no effective management tool in place, lack of knowledge of banking guidelines, and ineffective mechanisms to weigh the creditworthiness of the company (Subramanian & Nehru, 2012). To increase access to finance, confidence in the abilities of MSMEs and remedial measures for investors is necessary.

3. Skill Gap

Between 2014 and 2022, the number of skilled employees in medium, small, and large enterprises witnessed significant growth, with increases of 19.94%, 20%, and 12.72%, respectively, as reported in the World Bank Enterprise Survey data. Nonetheless, the increase in skilled labour is relatively modest when compared to the pace of development seen in the past decade. There is a significant mismatch between the quantity and calibre of available skills and the skills needed. This discrepancy is highlighted by the Global Innovation Index ranking (WIPO, 2023), revealing a 3.9 percentage point decline in knowledge-intensive hiring from the already modest 12.96% recorded in 2022. This continues to hinder the development of MSMEs.

A 2009 study by NCAER on India's Textile and Clothing sector found that there is a massive gap between the availability of skilled labour and the needs of the industry. It recommends industry-specific skill development and revisions in labour law to overcome these barriers. They point out that a highly skilled labour pool is required to move towards value products, which is required for the development of the industry through innovation and R&D. MSMEs are also unable to hire skilled labourers on the managerial level due to the informal nature of the industry and better employment opportunities available for such skilled workers due to the informal nature of the industry and better employment opportunities available for such skilled workers (Khatri, 2019). The scarcity of skilled labour is a significant obstacle for MSMEs, hindering their capacity to innovate, enhance production standards, and scale their operations, which are essential steps for establishing a strong foothold in Global Value Chains.

The diversity and scattered structure of MSMEs call for focused skill development programs. Cluster-based targeting of skills training, developing sector-specific occupational standards, exploring cost-sharing models for skills training of existing employees, and having a clear

understanding of the needs of unregistered MSMEs will help bridge the skill gap and enhance the competitiveness of SMEs. (Sinha & Pental, 2017)

4. Technology and Innovation

Given the significance of the MSME sector, it is crucial to ensure the competitive position of Indian SMEs, both on the national and international stages, with technology and innovation serving as pivotal factors. Research has highlighted the importance of investing in Research and Development (R&D) activities, improving quality control processes, and fostering innovation ecosystems to enhance MSME competitiveness (C, 2013); (Kanerva, Arundel, & Rene). Moreover, the ability to adapt and incorporate emerging technologies, such as digitalization and automation, is increasingly vital for competitiveness (OECD, 2019). On the Innovation front, India holds the 40th position among 132 economies in the 2023 Global Innovation Index by WIPO (PIB Delhi, 2023), assessing innovation through 80 indicators. Indian manufacturing relies heavily on labour intensive activities, hindering their potential in GVCs. Despite improvements since 2015, India's innovation performance needs enhancement, especially within MSMEs, to boost competitiveness.

Research highlights the challenges faced by small and medium-sized enterprises (SMEs) in India regarding technology and innovation. Patchouri & Sharma (2016) found that smaller firms often rely on domestic sources for technology, with only a small fraction sourcing from abroad or collaborators. Singh (2019) identified several issues impeding technology innovation implementation in Northern India's small firms, such as inadequate human resource management, difficulty in acquiring affordable raw materials, and unreliable power supply. These factors limit SMEs' access to international technology and innovation, unlike their counterparts in developed economies. In the Philippines, Ceuto et al. (2022) explored the drivers and barriers to digital innovation among MSMEs, citing a lack of digital skills, digital market challenges, and insufficient internet infrastructure as significant hurdles. Despite government efforts to boost small-scale industries, technological stagnation persists, hindering the sector's progress (Bhavani, 2002).

In many developing nations, a substantial proportion of small and micro businesses are established out of necessity for mere survival. In such cases, entrepreneurial spirit is one of the key factors in the survival of enterprises, as it enables businesses to adapt to evolving economic circumstances (Ligthelm, 2010) . In order to adapt to market dynamics, maintain competitiveness, and enable the enterprise to navigate market complexities, entrepreneurial behaviour and organizational innovation have a significant impact on overall performance and enable enterprises to adapt to market dynamics, maintain competitiveness, and navigate market complexities (Oyong, 2019).

Understanding the associations between technology and innovation and engaging in coordinated actions between technology and innovation will fortify the competitiveness of SMEs.

5. Product Diversification

Lack of diversification and innovation in product design is a key deterrent to MSME growth in India. Indian MSMEs with diversified products and services witnessed a growth in customer base by 18%, as compared to players with limited diversification. Despite this, a lack of awareness of market trends, lack of technical knowledge for product diversification, and the high investment cost required in machinery, skilling, and marketing discourage MSMEs from diversifying (Mitra, Nikore, & Gupta, 2021)

India's SMEs have been unable to establish a distinct brand value, internationalise their products and establish themselves as important players in the value chain. Excessive costs of product development, lack of effective selling techniques, unsophisticated marketing, lack of market research, and lack of funds for implementing expensive software, projects themselves as major barriers to SME competitiveness. (March-Chorda, 2002), (Xiong, 20016)). These barriers lead SMEs to remain local and distanced from GVCs, as they produce low-technology products (Pradhan & Das, 2013) that have low profitability and are misaligned with market needs.

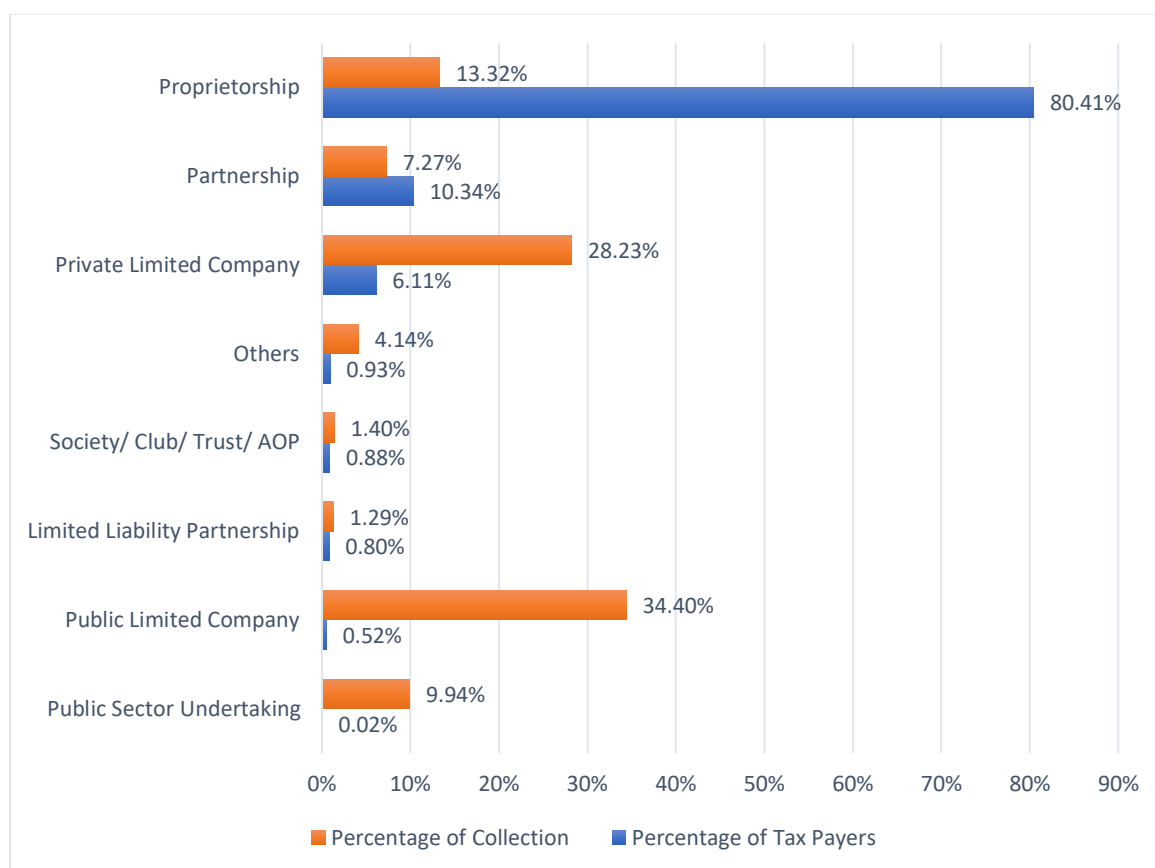
Strategies that address the issues relating to complex regulations, accessibility to finance, infrastructure, and export promotion which can be employed at both individual and national levels are necessary. A simplified regulatory framework, good governance, accessible finance, proper infrastructure, and availability of foreign market information will help SMEs in the promotion of their products (Bonga, 2017) . It is imperative to gain a thorough understanding of the competitive landscape, market analysis, and regulatory aspects in both domestic and global markets. This knowledge will enable MSMEs to diversify their products and establish a presence in both national and international markets.

6. Tax compliance

Taxes and the economy are closely interconnected, and whenever there is a significant change in the tax system, it becomes crucial to assess its impact on the relevant industry and the associated businesses (Bhalla, Sharma, & Kaur, 2023).

A recent Enterprise Survey Study (World Bank, 2022) revealed that tax rates and compliance was one of the top three business environment constraints for small, medium and large enterprises, with its prominence as a constraint having risen from 2014 to 2022. This barrier is clearly reflected in the imbalance in GST tax revenue. As of June 2023, Proprietorships that form a maximum of 80.41% taxpayer base contribute only roughly 13.32% of the total revenue from GST (GSTN, 2023).

Figure- Contribution to GST Revenue from Different Constitutions of Business



Source- GSTN, 2024

It is evident that tax systems for MSMEs should be designed to align tax compliance requirements with the capacity of SMEs. The tax system for SMEs should minimise compliance costs and enhance accessibility on the MSME end and should be easy to administer and implement on the authorities' side ((Ponorica & Al- Saedi), (Awasthi, 2011)). Tax compliance brings more enterprises into the formal sectors, providing better access to finance, and opportunities for collaboration. (World Bank, 2011).

This restructuring is especially important in India as most SMEs perceive the tax system to be unfair and inequitable, and tend to stay out of the formal economy. The simplification of income tax procedures for SMEs, informed by past experiences, perceived fairness, taxpayers' ability, taxpayer feedback, and lessons from other tax systems, is recommended to form a solid foundation for sound tax policy decisions ((Gabriela and Juhi (2015), (Awasthi, 2011), (Ponorica & Al- Saedi), (Musimenta , Muhwezi, & Akankunda, 2017)).

Good and Service Tax (GST) has been one of the most impactful tax reforms in India. In the context of GST's impact on MSME (Bhalla, Sharma, & Kaur, 2023) highlight the positive impact of the GST system on business performance, citing enhanced operational efficiency and transparency in the indirect tax structure. It also highlights the benefits of input tax credits and the prevention of stock leakages, which have contributed to improved MSME performance by reducing working capital blockages. While GST has these advantages and has increased tax neutrality, it also introduces challenges such as the need to reduce the basic exemption limit, differentiate tax rates for luxury goods and services, manage business costs, and decrease GST compliance expenses

A brief overview of the research on other developing economies and tax compliance reveals a similar picture. Tax compliance of Indonesian SMEs is influenced by the probability of audit, tax knowledge, and the perception of equity and fairness (Inasius, 2018). Turnover growth of SMEs in Cameroon is affected by tax regulations and the time required to comply with tax (Akinboade, 2015). In China, a positive relationship between tax compliance and digital finance was observed (Ouyang, Liu, & Li, 2023). In Vietnam, corruption has a significant and negative effect on Tax compliance, as is the case in many developing nations (le et al, 2020, (Awasthi, 2011)

Tax compliance proves to be a vital determinant in the growth of SMEs and has a major multiplier effect. Not only from the point of view of competitiveness of MSMEs but tax compliance is an important factor contributing to the country's tax revenue (Sihombing, 2021). Hence, as stated, revamping tax systems to account for the tax-to-turnover ratio of small enterprises, tax-paying abilities, industry structure, and administrative inefficiencies is necessary.

7. Infrastructure

A deficiency in infrastructure support in developing nations poses a challenge to the growth prospects of SMEs (Olawale & Garwe, 2010). In India, inadequate infrastructure support is one of the major non-financial barriers faced by MSMEs (Singh & Paliwal, 2017). A major concern for the growth and development of MSMEs, as reported by the Small Industries Development Bank of India (SIDBI) in 2010, is the lack of infrastructure support. According to a survey by PHDCCI, the Indian MSME sector has identified several obstacles to business growth, including inadequate infrastructure, outdated labour laws, multiple taxes, and the uncooperative attitude of government officials (PHD Chamber of Commerce and Industry, 2022). Furthermore, many MSMEs in rural and semi-urban areas still face a lack of essential infrastructure such as power, roads, and communication services, which hinders their efficiency and overall development.

Inadequate infrastructure is one of the key reasons why MSMEs in India, despite being competitive have failed to establish themselves in the global market. They continue to face bottlenecks due to a lack of adequate transportation facilities like railways, waterways, roadways and airways, high cost of transportation, poor public transport, low/no access to a reliable power supply, poor drainage systems, lack of proper communication channels, lack of appropriate storage facilities, inadequate marketing facilities, lack of funds, and so on. (Prakash, Kumar, & Verma, 2021) (Singh & Paliwal, 2017)

The Ministry of Micro and Small Enterprises has taken active participation in this regard and there have been various attempts by the government to create infrastructure-focused schemes (such as the Infrastructure Development Programme, Scheme of Fund for Regeneration of Traditional Industries and so on). In 1998, it established 'The Integrated Technology Upgradation and Management Programme' (UPTECH). This policy was revised twice and later renamed "Micro and Small Enterprises – Cluster Development Programme (MSE – CDP)" in 2010. The scheme has a cluster-based approach to highlight the needs and requirements of a sector. This scheme aimed to develop market-linked infrastructure development where development facilities and centralised distribution are in collaboration with state governments, setting up exhibition centres, and establishing testing centres to tap the international markets. This initiative which spans across various clusters throughout India, ensures the maintenance of product quality for both domestic production and international export.

Even though such forward-looking initiatives have been undertaken, the implementation of these policies has been inefficient. A need for revising policy objectives according to the

changing dynamics, accountability and convergence in all tiers of government with respect to the administration and implementation of these policies is crucial. A collaboration between private and public stakeholders for expansion and diversification of resources will make policies holistic in their approach as well as increase their impact on the economy.

8. Government policies

Government policies have a significant impact on entrepreneurship, and the right approach depends on factors like attitudes of the population on starting businesses, the workforce, government size and role, the current state of entrepreneurship, and the situation of small and medium-sized businesses (SMEs) (Asghar, Paghaleh, & Khaksar, 2011).

Over the years various policies, schemes and initiatives such as ECLGS, Startup India, SAMRIDH, Startup India Seed Fund scheme (to SMEs, MSMEs), and Atmanirbhar Bharat along with tax reforms have created a favourable environment and given room for SMEs to scale (Kadaba, Aithal, & Sharma, 2023). While these efforts are contributing to the development of MSMEs, there is limited awareness about the support systems and resources created to assist this sector. Furthermore, enterprises face challenges comprehending and accessing these initiatives. A need for thorough surveys to identify the technical and financial requirements of MSMEs for a better understanding of the ground reality and engagement of larger enterprises with advanced expertise will bolster the growth of MSMEs (Khatri, A Study of the Challenges of the Indian MSME Sector, 2019) .

Despite the implementation of several government initiatives, there exist visible deficiencies within this sector that require attention. A crucial measure in bridging these gaps involves conducting impact evaluations of pivotal government programs and formulating policies that target the key variables impacting the growth of MSMEs (Gautam, 2022) . However, a thorough examination reveals a notable deficiency in current research. There is a need for an investigation into the alignment between government policies and the needs and challenges encountered by the MSME sector, along with an evaluation of the effectiveness of these initiatives. This will aid in addressing the intricacies and implementing tailored strategies necessary for resolving the complexities in this sector.

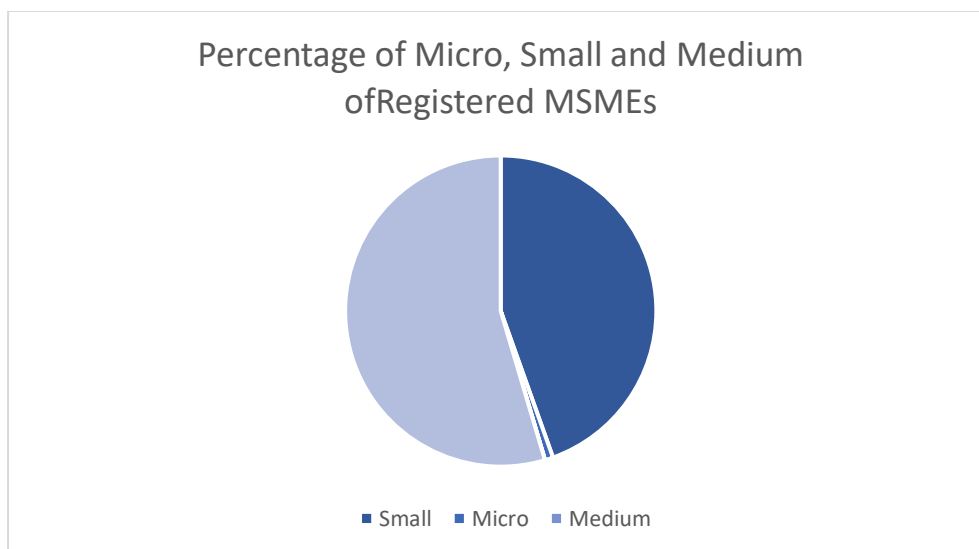
9. The “Missing Middle” Problem

The "Missing Middle" phenomenon, a term denoting the underrepresentation of medium-sized enterprises in the manufacturing sector, particularly within developing nations, has prompted significant research. Initially highlighted by Dhar and Lydall (1961), this phenomenon was identified through the conspicuous absence of firms employing between 50 to 499 workers within Indian manufacturing employment data. Building upon this foundation, Tybout (2000) observed that not only are small and mid-sized enterprises absent in impoverished nations, but that this absence might be attributed to stringent business regulations. These regulations seemingly favor larger entities, leaving smaller firms to grapple with compliance challenges disproportionate to their limited resources.

Through an empirical analysis Krueger (2009) reveals a U-shaped curve characterizing the size distribution of manufacturing employment in India, where the smallest firms (6-9 workers) were most prevalent, and those employing 50-99 workers were least represented. She argued that excessive regulations intended to protect workers within the organized sector inadvertently stifled small firm growth, as expansion led to prohibitive cost increments.

Nagaraj (2018) posits the industrial labor market in India is characterized by a stark dualism, highlighted by highly efficient, urban-based manufacturing as opposed to traditional, subsistence-oriented informal employment. Abreha, Cirera, Davies, and Fattal-Jaef (2022) empirically demonstrate in sub-Saharan Africa that medium-sized firms contribute modestly to employment, a situation exacerbated by informal firms and regulatory distortions rather than the size of new entrants. Echoing this, Little (1987) identified a historical bimodal employment distribution, resulting from state-led heavy industrialization favoring large factories and small cottage industries, creating a gap in the middle. This missing middle is more pronounced in India than in other Asian economies, suggesting a unique set of organizational and technological challenges within its manufacturing sector (Hasan & Jandoc, 2010).

According to the Udyam Registration portal, as of November 2023, out of 3,06,24,320 MSMEs registered, 3,05,60,814 are classified, among which, there are about 97.92% micro, 1.89% small and 0.01 % medium enterprises.



Source: UDYAM Registration Portal (<https://udyamregistration.gov.in/Government-India/Ministry-MSME-registration.htm>)

Mehrotra and Giri (2019) use integrated data from formal and informal firms in India, to analyse enterprise size distribution, particularly in the manufacturing sector and to identify factors contributing to micro and small firm concentrations. Their findings reveal that over 90% of Indian MSMEs are micro-enterprises, employing 40% of the workforce, with a missing presence of small enterprises. The concentration of micro-firms is attributed to factors like low productivity, limited access to finance, and regulatory barriers. Notably, there's a dearth of small and medium-sized MSMEs, with a significant proportion falling into the Own Account Enterprises (OAEs) category. **These small units have been largely overlooked by policymakers, as have the enterprises in the unorganized sector. Their research implies that there is not only a missing middle, but a missing small as well.** They argue for a new policy framework that addresses specific constraints, advocating for policies that foster growth while creating an enabling environment for MSME development. (Mehrotra & Giri, 2019)

Globally, the extent of labour regulations tends to rise in correlation with the size of factories and businesses. Due to the substantial costs associated with compliance, these regulations pose a compliance burden and prevent enterprises from organically expanding in size and harnessing economies of scale in production. This gives rise to the “missing middle”.

The missing middle phenomenon in India is a complex challenge, but it is one that must be addressed through a comprehensive policy framework that takes into account the unique needs of small and medium-sized enterprises. This framework should foster growth, take into account labour and industrial structure, and prioritise bringing these enterprises into the policymaker's frame of reference.

Chapter 2: Competitiveness Framework: MSMEs and the Path to Prosperity

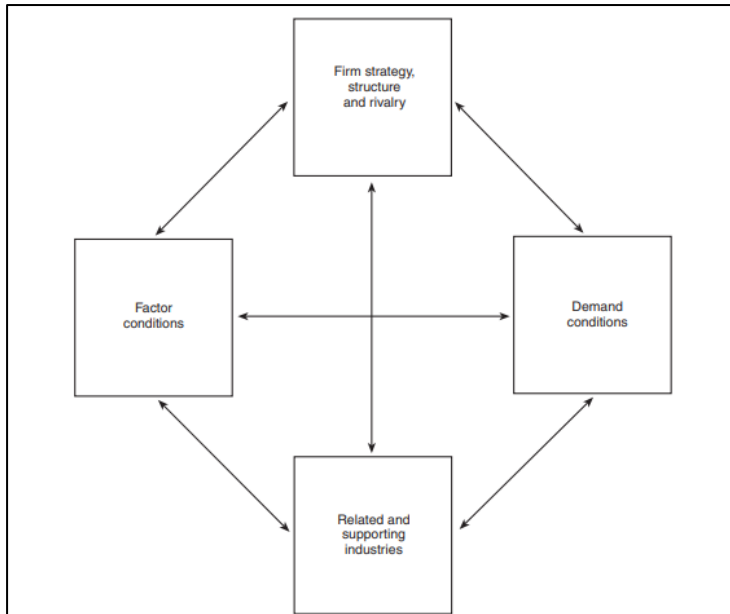
While the crucial role played by MSMEs in fostering shared prosperity is widely recognised, both government and business leaders continue to grapple with the question of how to effectively address the challenges hampering SME development and competitiveness. This acknowledgement is coupled with the acceptance of various challenges MSMEs face that impede their growth and competitiveness. The urgency of addressing longstanding challenges such as limited access to credit markets, inadequate market linkages, and outdated technology has become even more pronounced (Daño-Luna, Maribel, & Francisco, 2018). This heightened urgency is driven by the evolving structure of the marketplace, the constraints posed by limited resources, the management capabilities (Deniz, 2013), (Hautz, 2014), and the ongoing need for continuous capacity building. In this context, improving competitiveness emerges as the sole pathway to survival (Chobanyan & Laurence, 2006).

Emerging in the 1980s, the concept of competitiveness was studied by Buckley, Pass, and Prescott (1988) by examining extant literature which reveals the difficulty in measuring competitiveness at the levels of country, industry, firm, and product (Buckley, 1988). Michael Porter (1990), in his book 'The Competitive Advantage of Nations', outlined a new approach to competitiveness. A concept that was approached mainly through a macroeconomic lens or a focus on resources inherent to a location, took on a productivity-based framework in this seminal work. This break-away from other conceptions of competitiveness emphasized that it is not about what a location possesses, but how productively the firm or the nation uses available resources.

Porter highlights the importance of building microeconomic capabilities in the national business environment where firms compete, without which the broader macro-framework would not bear fruit. This understanding is especially significant in the Indian business scenario which harbours a majority of small enterprises. The expectations and actions of firms, customers, suppliers, and associated institutions must be taken into consideration. The competitiveness framework thrust on assessing microeconomic foundations of economic activity will help in capturing this aspect. The Microeconomic pillar is composed of two essential components: The quality of the business environment in the nation and the presence of related and supporting industries. This approach transcends the mere geographic proximity of producers or industries. It considers the interconnections between diverse firms and institutions within a given location.

Porter's Diamond Model

Using the diamond model as a tool to measure national competitiveness, Porter has proposed a competitiveness gauge to assess the business environment of a nation or a firm. The diamond model is, thus, an integral aspect of the microeconomic pillar of the competitiveness framework (Ketels, 2017). This model comprehensively considers factor conditions, demand conditions, related and supporting industries, the structure of strategy, and rivalry. These factors make up the national environment where companies are born and learn how to compete.

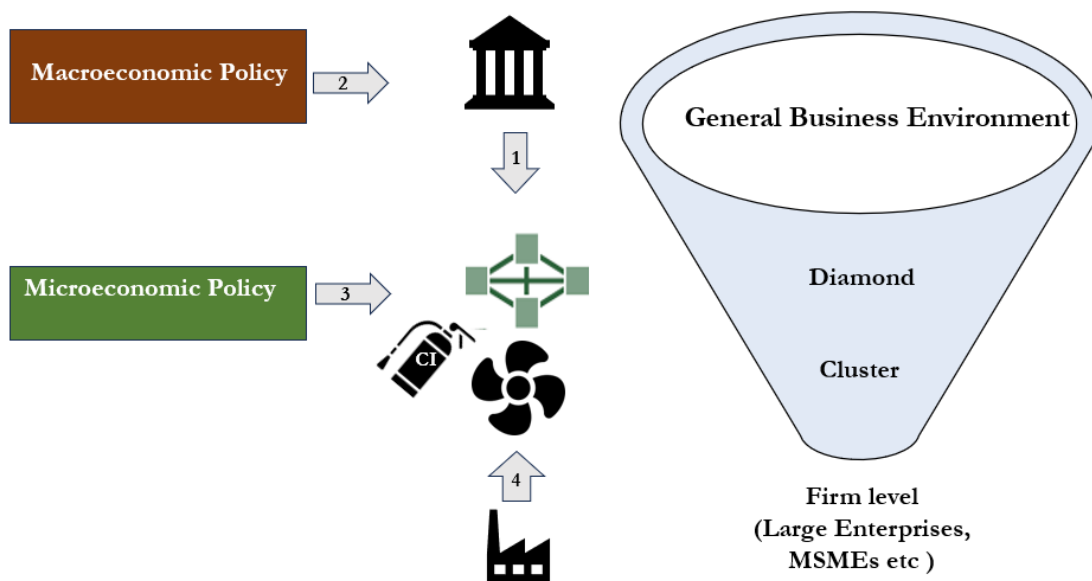


Source: Michael Porter, On Competition, 1990

Factor Conditions encompass a nation's intrinsic resources and capabilities, spanning skilled labor, infrastructure, and natural resources. The quality and quantity of these factors intricately shape the overall competitiveness of a country. Demand Conditions, another facet of the model, pivot on the nature and extent of demand within the domestic market, acting as catalysts for innovation and product development. A sophisticated and demanding local market serves as a driving force, compelling firms to enhance their offerings through continuous improvement and innovation. The aspect of Related and Supporting Industries underscores the significance of robust, interconnected industries and supportive infrastructure, collectively contributing to the competitiveness of a particular industry. The synergy among these industries within clusters creates a mutually reinforcing environment, fostering overall competitiveness. Lastly, Firm Strategy, Structure, and Rivalry delineate the conditions governing the creation, organization, and management of companies, coupled with the intensity of domestic competition. The presence of vigorous domestic competition is highlighted for its potential to spur innovation and operational efficiency among firms. Each factor in this model and the interplay of the four together affect essential ingredients for achieving international competitive success. Some economies have an interplay of these four factors that harbours an environment conducive to growth for certain companies.

The diamond model provides nuanced insights into the dynamics of competitiveness. Transitioning from this microeconomic perspective, the overarching business environment illustrated in the figure below, exerts deterministic forces originating from historical, geographical, and culturally-bound institutions (1). In contrast, policy choices provide opportunities for citizens to actively sculpt the future of their society. On the economic front, macroeconomic policies (2) wield influence over the general business environment, while microeconomic policies (3), inclusive of cluster initiatives designed to optimize the functioning of the microeconomic "engine," directly impact the diamond and clusters. Furthermore, strategies formulated within firms and entrepreneurial activities (4) serve as proactive forces that significantly contribute to shaping both clusters and society at large (Sölvell, Lindqvist, & Ketels, 2003). This interconnected framework underscores the symbiotic relationship between

macroeconomic forces, microeconomic dynamics, and entrepreneurial endeavors in driving national competitiveness.



Source: The Cluster Initiative Greenbook (modified version)

We move forth to understand the other essential component of the microeconomic aspect of competitiveness – i.e., Related and Supporting Industries or the presence of clusters in the next section.

Clusters Concept Evolution

The role of clusters in enhancing the competitiveness at firm level (including MSMEs) is exceedingly important particularly in the current era of globalization. It was first mentioned by Alfred Marshall, who laid the foundation for understanding the externalities within clusters (Marshall, 1920). Post this various models, such as the Collective Efficiency Model (Schmitz, 1995), Flexible Specialization Model, and Diamond Model (Porter M. E., Clusters and the New Economies of Competition, 1998) were employed for the analysis of clusters (Neven & Dröge, 2001).

There are differences in each model: Piore and Sabel's Flexible Specialization Model views a cluster as an industrial district comprised of small enterprises engaged in a complex network of competition and cooperation, emphasizing value creation, holistic approaches, and the dynamic aspects of the cluster. Each model contributes unique insights, collectively enriching the understanding of clusters in diverse contexts. In contrast, Schmitz's Collective Efficiency Model conceptualizes a cluster as a group of producers engaged in similar activities in close proximity, focusing on factor conditions, demand conditions, externalities, joint action, flexibility, economies of scope, innovation, and product differentiation. Whereas Porter's Diamond Model defines a cluster as a network of interconnected firms and institutions in a specific field located within a particular geographical area, emphasizing firm strategy, structure, rivalry, factor conditions, demand conditions, and related and supporting industries.

Out of all models, Porter's definition of cluster has found extensive application in advanced economies but has been notably overlooked in research on developing nations.⁷

Cluster Approach: Unravelling Divergences in Adoption in India

While acknowledging the advantages, the Government of India has initiated cluster-forming endeavours and devised strategies to amplify this ecosystem's scale for MSMEs. The Ministry of Micro, Small and Medium Enterprises (MSME), Government of India (GoI) has adopted the Cluster Development approach as a key strategy for enhancing the productivity and competitiveness as well as capacity building of Micro and Small Enterprises (MSEs) and their collectives in the country.

The Ministry of Micro, Small and Medium Enterprises (MSME) defines clusters as following

“A cluster is a group of enterprises located within an identifiable and as far as practicable, contiguous area or a value chain that goes beyond a geographical area and producing same/similar products/complementary products/services, which can be linked together by common physical infrastructure facilities that help address their common challenges. The essential characteristics of enterprises in a cluster are (a) Similarity or complementarity in the methods of production, quality control & testing, energy consumption, pollution control, etc., (b) Similar level of technology & marketing strategies/practices, (c) Similar channels for communication among the members of the cluster, (d) Common market & skill needs and/or (e) Common challenges & opportunities that the cluster faces.”⁸

The Indian definition outlined above, emphasizes clusters as groups of enterprises facing similar challenges, which could include common issues in production methods, quality control, marketing, and infrastructure. It involves significant government intervention through the establishment of SPVs and the allocation of grants to support the development of Common Facility Centers (CFCs). The government is actively involved in planning and funding. The Indian definition of clusters exhibits a closer alignment with the concepts of Collective Efficiency as proposed by Schmitz and certain elements of Flexible Specialization articulated by Piore and Sabel, rather than adhering to Porter's Diamond Model. The emphasis on enterprises situated within a discernible geographic area engaged in the production of similar or complementary products/services, coupled with the establishment of common physical infrastructure to address shared challenges, closely corresponds to the principles of Collective Efficiency. This model underscores the importance of collaboration and collective actions among firms within a cluster to enhance their overall competitiveness. Furthermore, the reference to Common Facility Centers (CFC) offering diverse facilities such as processing, training, marketing, and raw material depots suggests a level of flexibility and specialization within the cluster. The concept of shared infrastructure capable of addressing various needs of enterprises aligns with the fundamental tenets of Flexible Specialization

⁷ As part of its long-running Cluster Mapping Project, the Institute is building a registry of U.S. cluster initiatives. A similar effort is housed at the European Cluster Observatory. But less application of it has been found in case of developing economies

⁸ [MINISTRY OF MICRO, SMALL & MEDIUM ENTERPRISES | Government of India \(dcmsme.gov.in\)](https://dcmsme.gov.in)

Porter's approach on Clusters

Clusters are geographic concentrations of interconnected companies and institutions in a particular field. Clusters encompass an array of linked industries and other entities important to competition. Clusters also often extend downstream to channels and customers and laterally to manufacturers of complementary products and companies in industries related by skills, technologies, or common inputs (Porter M. E., *Clusters and the New Economies of Competition*, 1998). Porter asserts that “a cluster is the manifestation of the diamond at work”. (Porter M. E., *Clusters and the New Economies of Competition*, 1998) Clusters exert a positive influence on competition in three primary ways. Firstly, they enhance the productivity of firms situated within the geographic confines of the cluster. Secondly, they serve as catalysts for innovation, driving its direction and pace, which underpins future growth in productivity. Lastly, they stimulate the formation of new enterprises, contributing to the cluster's expansion and reinforcement. Clusters make opportunities for innovation more visible and make innovations possible by aiding connections between stakeholders. (Porter M. E., *Clusters and the New Economies of Competition*, 1998).

It is a dynamic framework that places a strong emphasis on value creation and the enhancement of competitiveness (Neven & Dröge, 2001) . Moreover, a significant advantage of the Porter model is that it does not assume an initial starting point nor an ideal to be strived for (Neven & Dröge, 2001) ; instead, it proposes processes that make a cluster move from one stage to another. These attributes of the diamond model have made it an effective and widely adopted tool for the study of clusters nationally and internationally, especially SME competitiveness.

The current interpretation of Indian definition diverges from Porter's framework and the globally accepted definition of clusters by developed economies like U.S and European Union.

Reasserting Porter's definition of clusters:

Clusters are not merely an agglomeration of firms, but rather a proximate group of interconnected firms by commodities and complementarities (Porter M. E., *Clusters and the New Economies of Competition*, 1998).

Clusters are not just sectors – they capture the geographic footprint of economic activities, not because they belong to the same statistical classification but because industries are systematically related through local spillovers and linkages. Clusters that emerge around specific factors and compete primarily on factor endowments tend to be shallow (Ketels, 2017). Porter also highlights the role of natural clusters that arise without significant government intervention. While government policies can influence clusters, the emphasis is on the organic development of clusters driven by market forces. While the Indian definition does touch upon factors like common challenges, it doesn't explicitly emphasize the determinants outlined in Porter's Diamond Model.

The Indian definition of clusters aligns more closely with the concepts of Collective Efficiency (as proposed by Schmitz) and certain elements of Flexible Specialization (according to Piore and Sabel), rather than adhering strictly to Porter's Diamond Model. However, users of these models, whether directly or indirectly, often appear disjointed in their application, seeking answers beyond the confines of the chosen framework and underscoring the need for a more comprehensive approach. In this context, Porter's Diamond Model emerges as inherently superior, with its foundational principles grounded in extensive research that spans various

countries and industries, providing a more robust and versatile framework for analysis. The consequence of a narrow definition of clusters results in a myopic outlook, which undermines the growth potential of these clusters and directly impacts their scalability and competitiveness.

In India, the Porter framework has not been tested to a great extent, but there are case studies that have used it have affirmed its validity and called for more extensive applications of the model in this setting. An examination of the Textile Cluster in Tirupur, also known as Textile hub of India (Trivikram, Bhalla, Fraser, & Nicholson, 2011) indicates a prevalence of small enterprises and a deficiency in brand equity. However, there has been an improvement in competitiveness observed in Tirupur, as well as in other international knitwear clusters, after the termination of the Multi-Fiber Agreement. Constraint-free access to primary materials (cotton) and robust Institutions for Collaboration (IFCs) bolster the Tirupur cluster. The cluster is renowned for its capacity to fulfil orders with short lead periods of two to four weeks and for the entrepreneurial spirit of its SME members. Poor infrastructure support (in terms of electricity, ports, and roads), inadequate R&D, pollution, and relatively high logistics costs plague the cluster. A Study of Andhra Pradesh Clusters (Joshi, 2020) shows that the labour-intensive manufacturing sectors, like Food Processing and textile and apparel, that currently build their competitiveness based on Government facilitation need labour management and a change of orientation to cater towards global markets. Capital as well as labour-intensive manufacturing sectors such as Minerals and Metals and Heavy Engineering, which are already embedded into the national value chain, should undertake a series of steps to elevate their competitiveness and integrate themselves into the global value chain. A study (Jhamb, 2016) which utilised Porter's model to analyse the different determinants of competitive advantage of the Sports Goods Cluster at Jalandhar concludes that the cluster mainly depends on factor conditions, i.e., raw material availability and skilled labour. Along with this, sophisticated customers, machinery suppliers and competitors enhance the cluster's growth. The study suggests that the cluster should focus on developing specialised and advanced factors and timely implementation of government policies to upgrade competitive advantage from fundamental factors of production. These national and international studies reveal that specific issues hindering growth within various industries can be discerned and effectively addressed through cluster analysis using the diamond model.

Chapter 3: Understanding MSMEs competitiveness in India using Clusters

Clusters play a vital role in enhancing the competitiveness of MSMEs, particularly in the current era of globalization. Various theoretical frameworks, such as flexible specialization and collective efficiency, have been crafted to examine the dynamics of clusters. Notably, one widely recognized paradigm, Porter's diamond model, has found extensive application in advanced economies but has been notably overlooked in research on developing nations, especially in the context of India. This section of the paper would critically evaluate the relevance and applicability of Porter's cluster approach for 5 sectors in India: Automotive, Textile Manufacturing, Chemical, Pharmaceutical and Food Processing and Manufacturing Clusters. This is based on data sourced from the Periodic Labour Force Survey (PLFS), the panorama benefits from extensive coverage of the Indian labour force, offering detailed information on wages and employment within 5-digit National Industrial Classification (NIC) industries at the district level. The data is aggregated into cluster categories, formulated by aligning the 5-digit NIC codes with Benchmark Cluster Definitions initially developed in the U.S. and subsequently applied in various other economies. This Indian cluster database affords a comprehensive view of the overall configuration of the Indian economy, the spatial distribution of specific cluster

categories across the country, and the cluster portfolios of each Indian district and state. The information derived from this database is instrumental in identifying India's prominent clusters, as well as evaluating the robustness of cluster portfolios in different districts and states. This methodology is based on India cluster panorama report. (Kapoor, Ketels, Debroy, & Negi, 2023). The objective of this section of paper is to bridge the gap between these two realms of literature, bringing attention to the untapped potential of Porter's model in unravelling the intricacies of clusters in countries like India.

Understanding Cluster approach using PLFS & Prowess data

The cluster approach is employed to gain a comprehensive understanding of the performance and dynamics of Small and Medium Enterprises (SMEs) within the Indian economy. The UDYAM portal data reveals that a significant proportion, specifically 81 percent, of MSMEs operate as proprietorships, with 80 percent falling into the Micro enterprise category. Recognizing the prevalence of such ownership structures, it becomes crucial to analyse and assess the performance of these enterprises collectively, which the cluster approach facilitates.

Organisation Type	Percentage		
	Micro	Small	Medium
Proprietary	80.17	1.65	0.07
Hindu Undivided Family	0.48	0.02	0.00
Partnership	3.71	0.62	0.06
Co-Operative	0.10	0.00	0.00
Private Limited Company	2.30	0.43	0.11
Public Limited Company	0.12	0.02	0.01
Self Help Group	0.73	0.00	0.00
Others	8.67	0.02	0.00
Limited Liability Partnership	0.30	0.03	0.01
Society	0.20	0.01	0.00
Trust	0.14	0.01	0.00

Source: UDYAM (2020- 2023)

PLFS data contributes valuable insights by classifying proprietary and partnership enterprises as part of the informal sector. PLFS is a household-level survey conducted by the National Statistical Office (NSO) to assess India's labour market. It gathers data on employment, demographics, industry, education, and wages. For our analysis we use data from survey between 2017-18 to 2020-21 which covers annually both formal and informal economic activities at state and district level. and is a longitudinal exercise. This categorization is pivotal in understanding the landscape within which a substantial portion of SMEs operates. Specifically, the data indicates that 74.3 percent of workers engaged in proprietary and partnership enterprises are involved in the non-agriculture sector. This information is instrumental in comprehending the nature of employment within these enterprises and highlights the significance of activities in informal sector.

Understanding SMEs' performance from PLFS data allows for a more nuanced analysis of their contribution, employment patterns, and overall impact on the informal sector. This in addition with UDYAM data can contribute to filling the gaps in understanding the MSMEs. Understanding SME performance using PLFS data offers a holistic perspective on the economic

activity, aiding in the formulation of cluster programmes, targeted strategies and policies to foster the growth and sustainability of these enterprises.

When we look at formalization of MSMEs in these sectors we find that :

NIC Code	Description	Share
10	Manufacture of food products	1.22
13	Manufacture of textiles	0.60
14	Manufacture of wearing apparel	0.49
20	Manufacture of chemicals and chemical products	0.18
27	Manufacture of electrical equipment	0.16
21	Manufacture of pharmaceuticals, medicinal chemical and botanical products	0.07
29	Manufacture of motor vehicles, trailers and semi-trailers	0.06
11	Manufacture of beverages	0.06
30	Manufacture of other transport equipment	0.04

The firm-level data utilized in this study is sourced from the Prowess database, which is administered by the Centre for Monitoring the Indian Economy. Prowess aggregates information predominantly derived from the income statements and balance sheets of publicly listed companies. The database encompasses companies that collectively contribute to over 70 percent of the economic activity within the organized industrial sector of India. (Topalova, 2004)

To further gauge the value added by Micro, Small, and Medium Enterprises (MSMEs) across various industries—food processing, manufacture of transport equipment, textile, chemical, and pharmaceuticals—we leveraged firm-level data from the Centre for Monitoring Indian Economy’s (CMIE) Prowess database. This database encompasses crucial information extracted from profit and loss accounts and balance sheets of Indian enterprises to offer insights into sales, investments, assets, and ownership type of firms.

CMIE Prowess data base – Methodology

Step 1: Definition of Segments and Value-Added Calculation

In the initial step of this analysis, segments for the computation of value added were identified using the National Industrial Classification Codes. The chosen segments for this calculation are outlined as follows:

NIC Division/Group Code	NIC Name
101	Processing and preserving of meat
102	Processing and preserving of fish, crustaceans and molluses
103	Processing and preserving of fruit and vegetables
104	Manufacture of vegetable and animal oils and fats
105	Manufacture of dairy products
106	Manufacture of grain mill products, starches and starch products

NIC Division/Group Code	NIC Name
107	Manufacture of other food products
108	Manufacture of prepared animal feeds
110	Manufacture of Beverages
13	Manufacture of textiles
14	Manufacture or wearable apparel
201	Manufacture of basic chemicals, fertilizer and nitrogen compounds, plastics and synthetic rubber in primary forms
202	Manufacture of other chemical products
203	Manufacture of man-made fibres
29	Manufacture of motor vehicles, trailers and semi-trailers
30	Manufacture of other transport equipment

Step 2: Data Extraction

For the fiscal years 2014-2022, data extraction was performed, covering indicators such as changes in stock, compensation to employees, insurance premiums, miscellaneous expenditures, packaging costs, power/fuel/water charges, purchase of finished goods, raw materials, rent/lease, repairs/maintenance, sales, and total income.

Step 3 : Identification of Enterprises

In the process of 'Filtering and Identification Based on Sales Thresholds,' a meticulous approach was adopted to specifically delineate Micro, Small, and Medium Enterprises (MSMEs). This involved the application of a discerning sales-based filter, isolating companies with sales figures falling within the 0 – 2500 Rs. Million range. The primary objective of this filter is to precisely identify and distinguish MSMEs from larger corporations. By implementing a defined sales threshold, the analysis is strategically tailored to concentrate on enterprises within the delineated MSME category. This deliberate refinement enhances the precision of the examination of MSMEs, allowing for a more nuanced understanding which distinguish MSMEs from larger corporations.

Step 4: Data Cleaning

To ensure data accuracy, firms with missing values on the aforementioned indicators were systematically filtered out during the cleaning process.

Step 4: Value Added Calculation and Analysis

The cost of intermediate consumption was computed by aggregating relevant expenses, enabling the determination of value added (total income minus cost of intermediate consumption) for each fiscal year. Subsequently, the year-on-year percentage increase in value added was calculated and visually presented, providing a comprehensive overview of industry dynamics.

Limitations:

1. **Limited Sample Size:** The dataset's relatively small sample size may limit its representativeness of the broader MSME landscape in India, as it predominantly includes firms adhering to standardized bookkeeping practices. This exclusion may introduce potential inaccuracies in assessing the true value added by diverse enterprises, especially micro-enterprises that may not follow such practices.
2. **Missing Values:** A significant number of missing values in the dataset poses a challenge to the reliability and comprehensiveness of the analysis. The absence of data points may result in gaps in crucial indicators, affecting the accuracy of value-added calculations. This limitation underscores the need for cautious interpretation of findings.
3. **Methodological Variations:** The proprietary nature of the data collection methodology employed by the Centre for Monitoring the Indian Economy (CMIE) may deviate from national and international standards. This distinction should be considered in interpreting the findings of the analysis.

Cluster Level Analysis

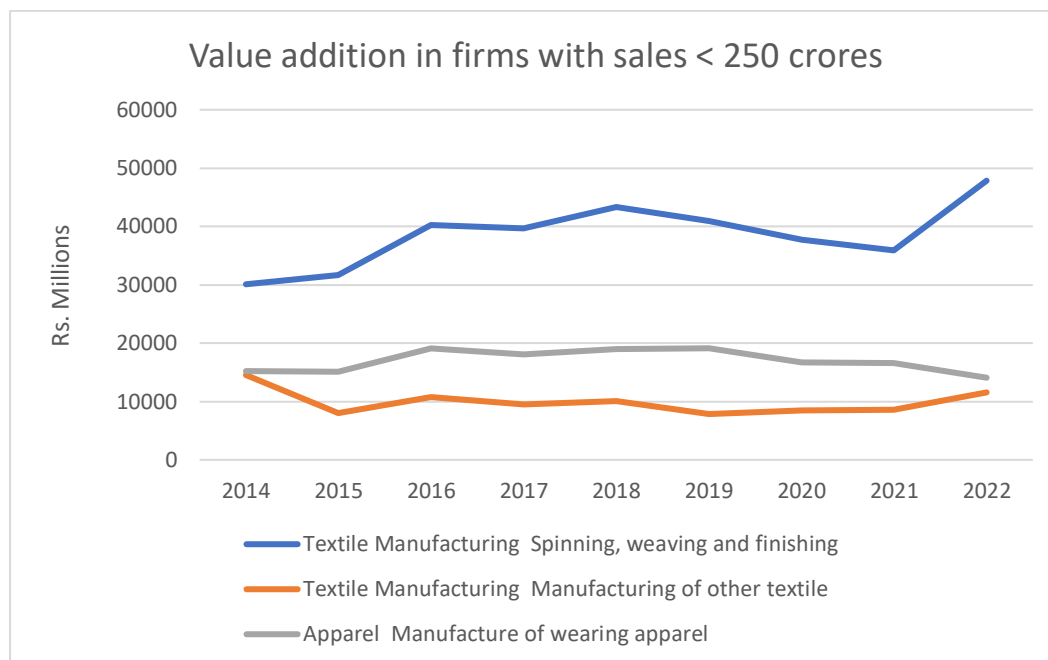
1. Textile Manufacturing and Apparel

The examination of both textile manufacturing and apparel clusters is indispensable for obtaining a thorough comprehension of the textile sector's multifaceted dynamics. Delving into the textile manufacturing cluster offers insights into the initial stages of the supply chain, encompassing processes like spinning, weaving, and fabric production. This understanding is crucial for assessing the economic activity and trade dynamics associated with raw material processing.

Conversely, examining the apparel cluster provides a holistic perspective on downstream activities, from design to finished product, shedding light on value addition, employment trends, and export earnings. Together, these analyses contribute to a nuanced understanding of the sector's global competitiveness, supply chain integration, and aid in the formulation of targeted policies to foster sustainable growth and innovation throughout the entire textile industry.

Value addition in Textiles Manufacturing and Apparel sector

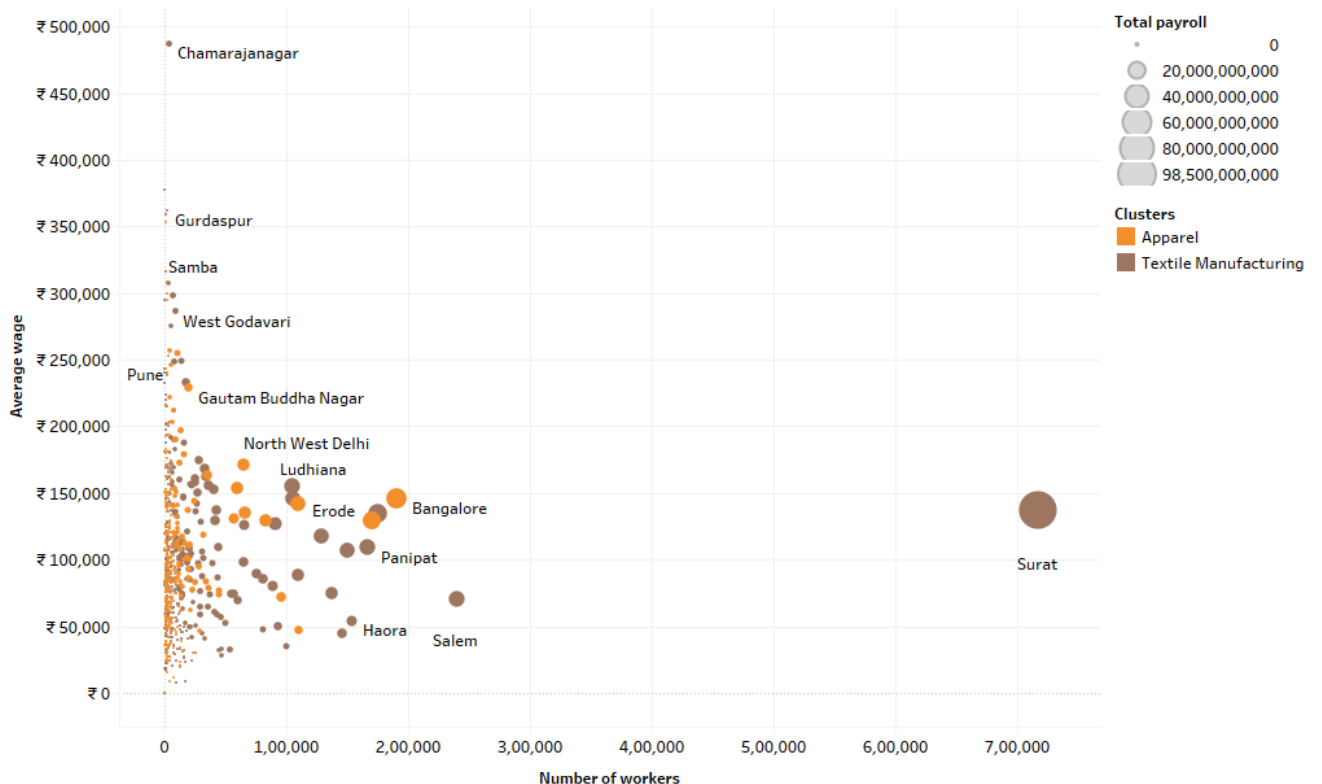
The analysis of SMEs assessed showcases value addition within the textile manufacturing sector, focusing on activities such as spinning, weaving, and finishing, the manufacturing of other textiles, and the production of apparel. This reveals critical insights into the sector's global dynamics spanning from 2014 to 2022.



- The **"Spinning, weaving, and finishing"** sub-cluster appears dominant in terms of value addition. A significant increase, particularly in 2022, shows that the 339 enterprises under this NIC consistently exhibit higher value addition than other sub-clusters. However, the dominance of "spinning, weaving, and finishing" is often considered an upstream activity in the textile production process, potentially raising concerns due to lower value addition compared to downstream activities.

- Conversely, the **"Manufacturing of other textile"** sub-cluster experienced fluctuations, responsive to global economic conditions and market demand, with a notable increase in 2022 signifying potential resurgence amid changing market dynamics.
- In the context of the textile industry, downstream activities, such as the **"Manufacture of wearing apparel,"** involve creating final consumer goods with higher potential for value addition. Concerns arise as the SMEs related to final manufacturing stages exhibits lower value addition, indicating potential challenges for sector competitiveness in global value chains.

Workforce Trends



Textile Manufacturing

In 2020-21, the textile manufacturing cluster in India encompassed a workforce of 51 lakh, reflecting a notable 17% reduction from the 63 lakh workers recorded in 2017-18. The overall productivity of this cluster demonstrated only marginal increase of 1.16% over the four-year period. A state-level analysis reveals that Tamil Nadu holds the highest share in the national textile workforce at 23.58% in 2020-21, exhibiting a workforce growth of 6.24% since 2017-18. Contrastingly, Gujarat and Uttar Pradesh experienced a decline in their workforce shares by 5.34% and 4.75%, respectively, during the same period.

Examination of the district-level distribution indicates that Surat in Gujarat and Tirupur in Tamil Nadu have the highest average wages and workforce participation within the cluster, capturing 9.04% and 6.35% of the total workforce, respectively. On examining Gujarat, Surat demonstrates a stark contrast with Ahmedabad in terms of workforce share and average wages,

with the former accounting for 76.90% of the workforce but displaying lower productivity than Ahmedabad.

A similar trend is observed in Uttar Pradesh, where Ghaziabad productivity is high but constitutes only 1.50% of the total workforce, while Bareilly, with a 15.41% workforce share, contributes merely 1.24% to the state's average wage.

Whereas, Maharashtra, ranking second in average wages in 2020-21, exhibits a concentration of 44.76% of workers in Nashik, signalling a substantial disparity in workforce distribution and productivity across regions. ***This uneven trend suggests specialized expertise in certain areas and lower output in others within these states' textile manufacturing clusters.***

Apparel

In the fiscal year 2020-21, the apparel cluster in India engaged a workforce of approximately 19 lakh individuals, reflecting a decline of 13.42% in employment and a 9.07% decrease in wages since 2017-18.

Tamil Nadu emerged as the leading state with the highest share in the workforce at 19.02%, followed by West Bengal, Karnataka, Maharashtra, and Punjab, contributing 16.24%, 13.76%, 11.21%, and 7.759%, respectively.

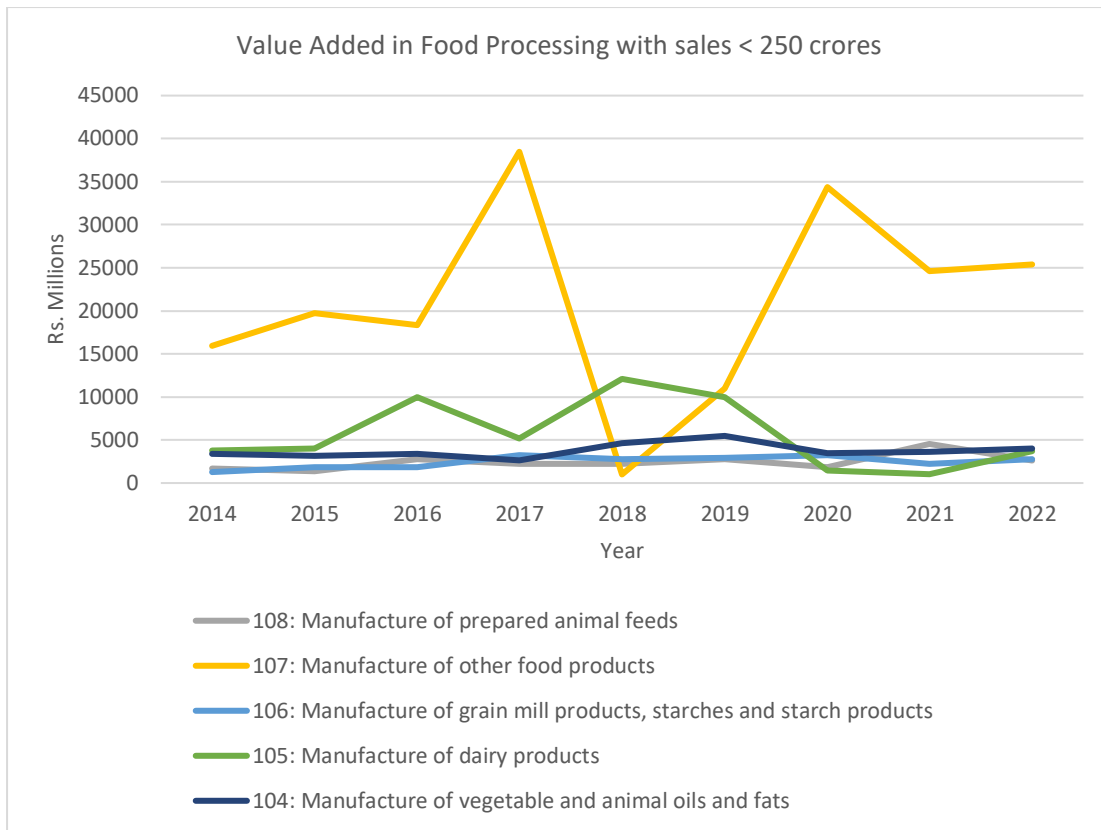
Among these states, only West Bengal experienced an increase in the number of workers by 3.39%, followed by Gujarat with a 2.13% growth. Tamil Nadu also secured the highest share in average wages at 12.80% in 2020-21, succeeded by Delhi and Karnataka with shares of 9.66% and 8.32%, respectively. Notably, West Bengal, ranking second in workforce share among states, exhibited a nominal 2.93% share in total wages.

Conversely, Haryana, with a 0.39% workforce share, held a substantial 8.31% share in average wages. In Tamil Nadu, Tirupur dominated with a remarkable 49.81% share in workforce, experiencing an increase from 43.45% in 2017-18. However, subsequent districts, such as Erode, Tiruvallur, and Coimbatore, displayed significantly lower workforce shares. The top five positions in share of wages mirrored the workforce distribution, with Tirupur commanding 46.68%, followed by Coimbatore, Erode, and Tiruvallur. In Karnataka, Bangalore emerged with the highest workforce share at 70.09%, yet its share in average wages was a modest 7.78%. Conversely, Kolar and Hassan, with workforce shares of 0.57% and 0.73%, respectively, led the state in average wages, emphasizing regional disparities in productivity within the apparel cluster.

2. Food Processing

Value addition in Food Processing cluster

The analysis of value added in 433 enterprises across various NIC codes of 101-108 from 2014 to 2022 provides insights into the performance and trends within different activities. The presence of both upstream and downstream activities highlights the interconnectedness of the local and traded cluster, indicating that a disruption in one may affect the others.



Upstream Activities

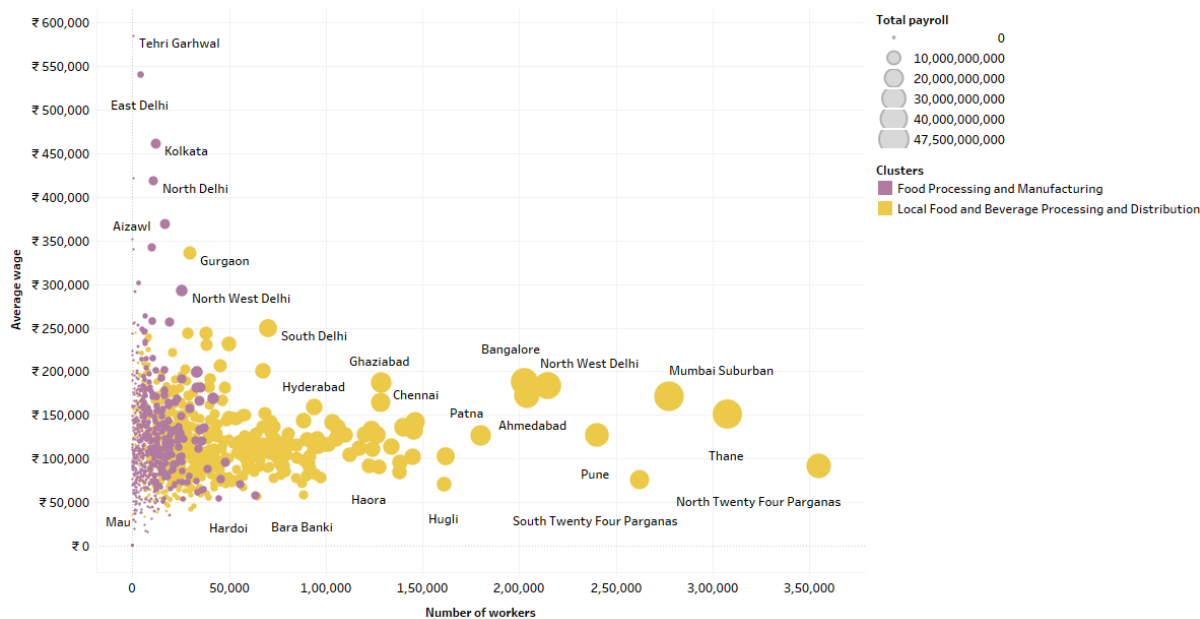
- The NIC code 107, involving the **manufacture of other food products**, stands out with a significant increase in value added over the years, especially in 2016 and 2020, showcasing a robust growth trajectory.
- Conversely, Enterprises related to NIC code 108, i.e **manufacture of prepared animal feeds**, experienced fluctuations, with a substantial decrease in 2020. The % increase in value added indicates varying degrees of value addition across different enterprises.
- Enterprises associated with the NIC codes of upstream activities, **such as the manufacture of grain mill products, starches, and starch products (106)** and the manufacture of **vegetable and animal oils and fats (104)**, show moderate and consistent growth. This suggests a stable foundation for these industries, contributing significantly to the overall value added.
- On the other hand, NIC code 105, enterprises encompassing **the manufacture of dairy products**, displays a mixed performance, indicating potential challenges or changing market dynamics.

Downstream Activities

- Enterprises in NIC codes 107 and 108 seem to be dominant, emphasizing the importance of processed food products. However, the fluctuations in value addition in enterprises under NIC 108 since 2020 raise concerns about its resilience. This could be attributed to external factors impacting the supply chain or market demand.

Workforce Trends

In the examination of the food processing sector, two distinct segments are under scrutiny: Food Processing and Local Food and Beverages Distributions.



The food processing and manufacturing cluster in India engaged approximately 43 lakh workers in 2020-21, experiencing a notable 16% increase in average wages since 2017-18.

- Uttar Pradesh emerged as the leading state, boasting the highest share in both workforce and wages for this cluster at 11.65% and 10.22%, respectively. Maharashtra, Tamil Nadu, West Bengal, and Rajasthan followed with shares of 10.26%, 9.02%, 8.97%, and 7.59% in workforce, respectively. Notably, with the exception of Ladakh, Mizoram, and Sikkim, all states demonstrated activity in the food processing sector, with lower participation in Lakshadweep, Meghalaya, Chandigarh, and Daman and Diu.
- Punjab, despite contributing a modest 3.98% to the workforce, commanded a 5.54% share in average wages, while West Bengal, with an 8.9% workforce share, only held a 3.35% share in average wages.

In the local food and beverages distribution cluster

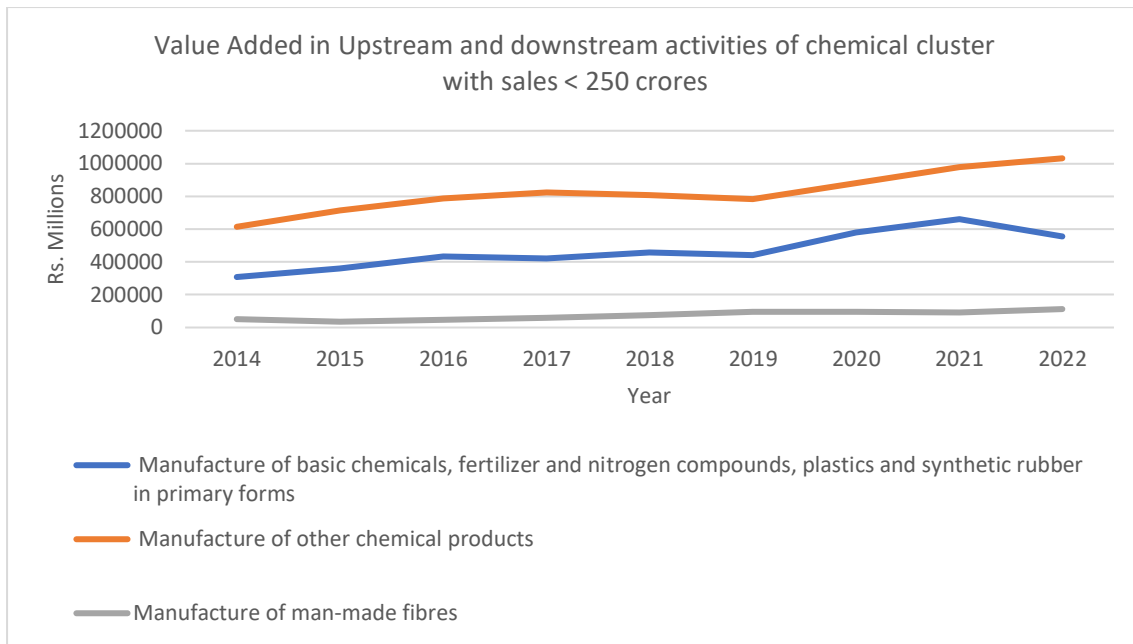
- Uttar Pradesh continued to dominate with a 15.12% share in workforce and a 9.85% share in average wages. Maharashtra, West Bengal, and Bihar followed with shares of 8.45%, 7.9%, and 7.5% in workforce, respectively. Notably, Madhya Pradesh and Rajasthan, despite having lower workforce shares (4.99% and 4.38%), made substantial contributions to average wages, with shares of 5.82% and 5.4%, respectively. West Bengal, with a high workforce share of 7.9%, held a comparatively low share of 2.41% in total average wages for the cluster.

- Whereas, delving into the food processing and manufacturing cluster in Uttar Pradesh, a notable 11.78% increase in the workforce and a substantial 34.61% increase in total wages were observed in 2020-21 compared to 2017-18. The cluster displayed a dispersed pattern across districts of Uttar Pradesh, lacking significant specialization.
- Notably, Ghaziabad, Varanasi, Sitapur, and Balarampur covered the highest share in wages, while Shahjahanpur, Pilibhit, Kapur Nagar, and Jhansi contributed the most to the workforce. This lack of concentrated specialization may be attributed to the state's large size and population.
- Similarly, in Maharashtra, districts such as Pune, Sangli, Kolhapur, and Nashik held substantial shares in workforce, with Pune leading at 14.50%. However, their shares in average wages were slightly lower, indicating a disparity in productivity. Mumbai suburban, with a 9.91% share in wages, employed only 3.57% of the workforce in the food processing cluster. Thane contributed 5.82% to total wages with a 4.91% share in the workforce. Despite Pune having the highest workforce share, its contribution to wages was only 4.55%. This trend was observed in other districts as well, suggesting a nuanced relationship between workforce distribution and wage contribution in Maharashtra's food processing sector.

3. Chemical Products

Value addition in chemical sector

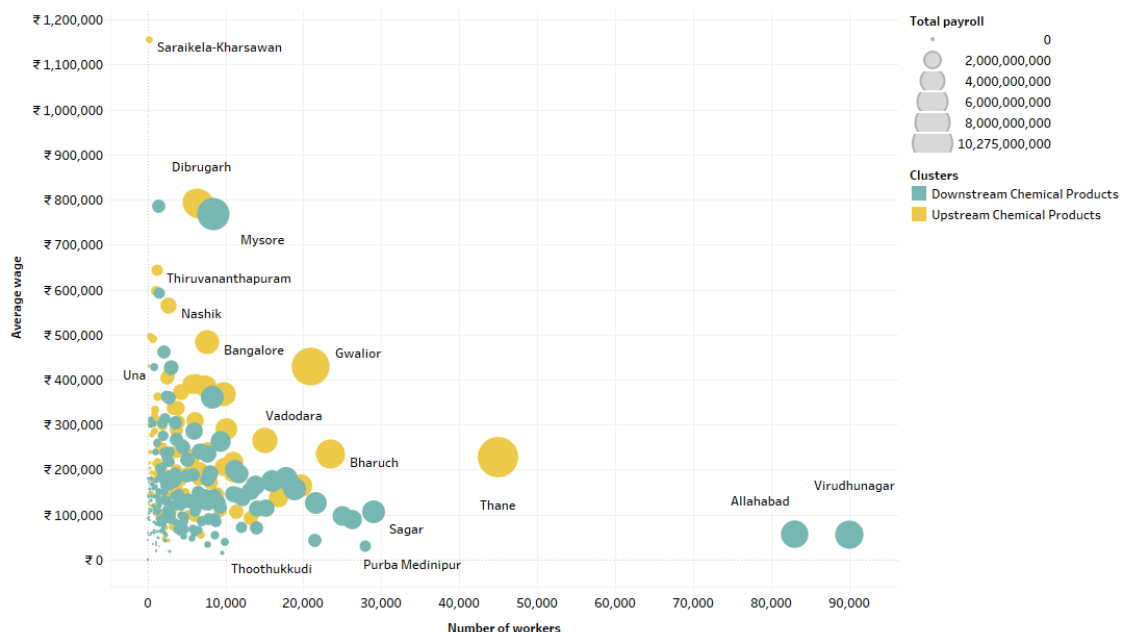
The comprehensive analysis of value addition in the Chemicals sector from 2014 to 2022 takes into account the specific distribution of enterprises within cluster. Out of the total 1512 enterprises assessed, the manufacture of basic chemicals, fertilizer and nitrogen compounds, plastics, and synthetic rubber in primary forms constitutes 48%, highlighting its substantial presence in the industry. The steady and remarkable increase in value addition in this sub-cluster underscores its dominant role, particularly in upstream activities. Similarly, the manufacture of other chemical products, representing 49% of the assessed enterprises, displays consistent growth, especially in 2022, indicating the prominence of downstream activities. The manufacture of man-made fibres, although comprising 3% of the enterprises, exhibits noteworthy fluctuations and an overall positive trend, emphasizing the need for careful consideration in the analysis.



In light of these insights, the Chemicals sector portrays a dynamic landscape where both upstream and downstream activities coexist and contribute significantly to the overall value addition. The dominance of basic chemical production, coupled with the growth in other chemical products, highlights the sector's adaptability and competitiveness. The relatively smaller share of enterprises involved in the manufacture of man-made fibres suggests a specialized niche within the industry, warranting focused attention in understanding its unique dynamics. This nuanced analysis underscores the importance of considering the diverse composition of enterprises when evaluating the performance and trends within the Chemicals sector.

Workforce Trends

In the fiscal year 2020-21, the chemical industry in India was analyzed across two distinct clusters: upstream chemical and downstream chemical. The cumulative workforce within these clusters amounted to approximately 8.4 lakh workers, constituting 0.34% of the total payroll across all clusters.



In the downstream chemical cluster,

- Virudhunagar in Tamil Nadu emerged as the district with the highest workforce share at 16.31%, followed by Thane in Maharashtra (7.83%), Bharuch (6.36%), and Valsad (4.73%) in Gujarat. Notably, these districts witnessed substantial increases in workforce shares compared to 2017-18.
- Mysore, Karnataka, claimed the highest share in average wages at 11.78%, despite having a modest 1.96% share in the workforce. Conversely, districts with high workforce shares, such as Virudhunagar, exhibited lower shares in average wages (0.30%). Gujarat, Tamil Nadu, and Maharashtra dominated in terms of both workforce and average wage shares at the state level.

In the upstream chemical cluster,

- Thane and Bharuch again emerged as the leading districts with 10.17% and 8.90% shares in the workforce, respectively. Gujarat maintained the highest state-level share in workforce (27%) and average wage (14.45%) for upstream chemical clusters, despite experiencing declines in both workforce and average wages from 2017-18 to 2020-21. Maharashtra, Jharkhand, and Tamil Nadu followed suit in terms of state-level shares.
- Gujarat's nine districts with upstream chemical clusters exhibited varying workforce and average wage shares. Bharuch led with 32.89% in workforce and 17.27% in average wages, while Vadodara contributed 25.06% to the workforce and 8.27% to average wages. Kheda experienced a notable increase from 0.5% to 9.6% in workforce share and from almost 0% to 17.48% in average wage share from 2017-18 to 2020-21.
- Jharkhand, with three districts in the upstream chemical cluster, witnessed Purbi Singhbhum commanding the highest workforce share at 81.25%, while Sarai Kela-Kharsawan exhibited a noteworthy 76.87% share in average wages with an 8.05% workforce contribution. Ranchi contributed 10.70% to the workforce and 13.48% to average wages. The state exhibited growth in both workforce and average wages shares from 2017-18, indicating the evolving landscape of chemical clusters.

4. Automotive

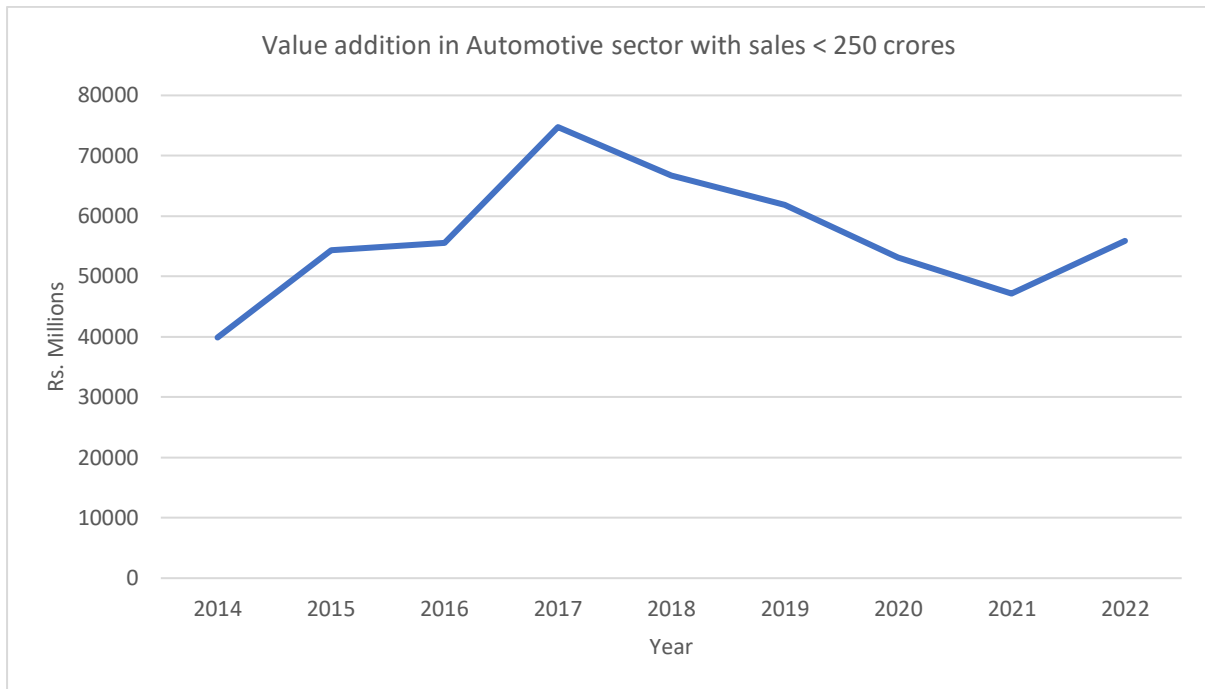
Value addition in Automotive Sector

The examination of value added by 327 enterprises with yearly sales less than 250 crore, encompassing the period from 2014 to 2022, provides crucial insights into the performance of the automotive industry.

- The steady and continuous growth observed between 2014 and 2017 indicates a resilient and expanding automotive industry throughout this time period. However, a notable contraction occurred in 2018, characterised by a decline of 10.81%. This decline suggests that the industry may have faced potential challenges or disruptions during that particular fiscal period. The aforementioned negative trajectory continued into 2019 and 2020, during which it experienced additional declines of 7.17% and 14.09%, respectively. These

figures seemingly arose from the influence of wider economic conditions, global trends, and sector-specific obstacles.

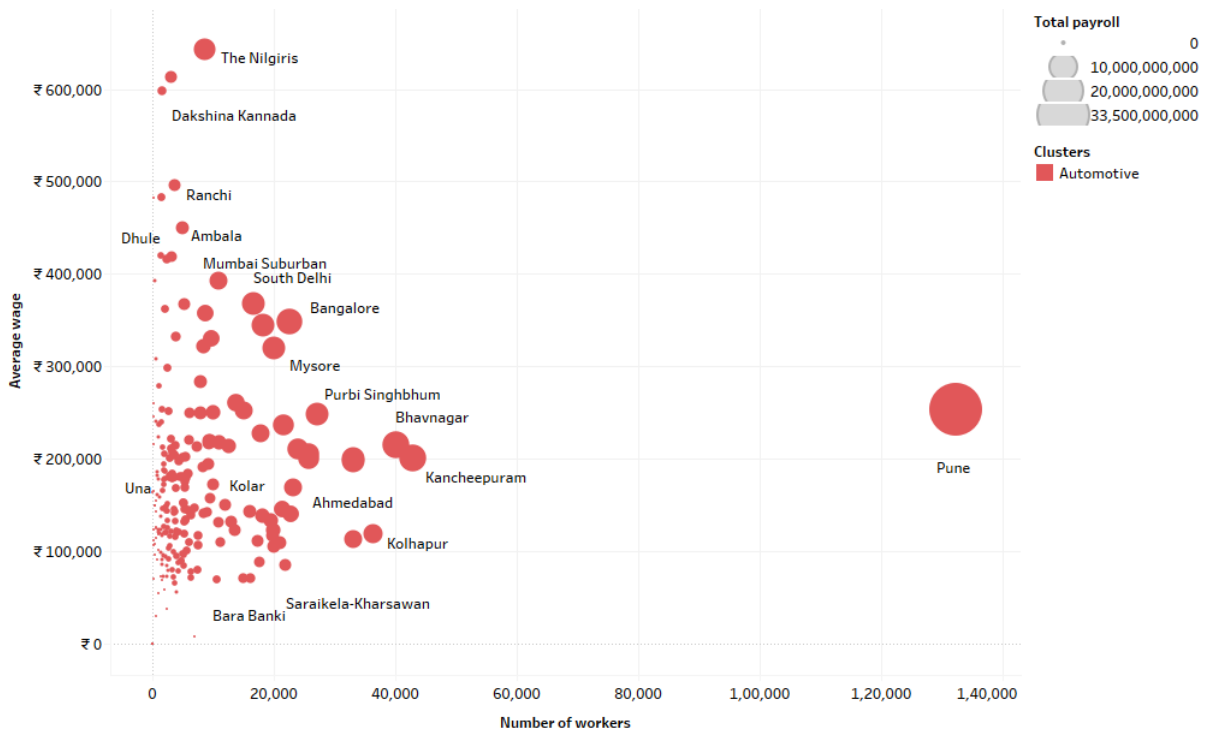
- A significant recovery emerged within the automotive industry in 2021, marked by a value-added growth of 18.5%. The observed resurgence may indicate effective industry adjustments, recuperation from previous obstacles, or an improved market environment. The positive trajectory of expansion continued through 2022, reaching its pinnacle with a value added of 55,892.8, surpassing the levels recorded in 2020.



Workforce Trends

The automotive sector in India employed an estimated 12.5 lakh workers during 2020-21. Despite an 18% increase in the total workforce from 2017-18, there was a noteworthy 14% decrease in the overall wages within the cluster during the same period. District-level analysis revealed distinct patterns, with Bokaro, Nagpur, Nysore, Gurgaon, and Southwest Delhi exhibiting the higher productivity with a comparatively lower share in the workforce. In contrast, Pune, Ahmedabad, Kolhapur, Rewari, and Tiruvallur have the highest workforce share but lower productivity.

Within the automotive sector, Maharashtra maintained its preeminent position by securing the highest share in average wages at 17.67%, followed sequentially by Tamil Nadu, Gujarat, Jharkhand, and Haryana.



Further, the analysis of districts in Maharashtra indicated varied dynamics, with Pune leading in workforce share (48.59%) but having a relatively low productivity as its average wage share in Maharashtra is just 7.8%. Whereas, in Tamil Nadu, Tiruvallur held the highest share in both workforce (23.57%) and average wages (11.27%). Gujarat showcased a diverse landscape, with Ahmedabad leading in workforce share (69.41%) and Mehsana leading in average wage share (16.59%). The intricacies of these trends underscore the need for nuanced strategies in the automotive industry, taking into account regional variations in workforce distribution and average wages.

Chapter 4: Policies for MSMEs in India

In this chapter, we delve into a comprehensive analysis of the policy landscape governing Micro, Small, and Medium Enterprises (MSMEs) in India, aiming to augment our understanding of the challenges faced by these enterprises. Our inquiry commences by applying the OECD/DAC framework to conduct a thorough assessment of the policies implemented by the central government in relation to MSMEs. This framework enables us to assess the breadth and depth of these policies in addressing the multifaceted challenges encountered by MSMEs across diverse sectors. While our analysis discerns the relevance of the objectives outlined in these policies, it also sheds light on areas where policy implementation can be refined, emphasizing the imperative for heightened sustainability.

In the next step, we broaden our perspective to encompass the schemes and initiatives implemented by various state governments in India, thereby creating a more detailed depiction of the decentralised policy ecosystem. Our investigation uncovers a certain disjointedness in state-level policies, indicative of a lack of uniformity and synchronized efforts across regions. This revelation underscores the necessity for a more cohesive and coordinated approach among states to fortify the collective impact of MSME policies. As we traverse through this chapter, we endeavour to unravel the intricacies of these policies, offering insights into their effectiveness,

collaborative potential, and opportunities for refinement to foster a more conducive environment for the flourishing MSME sector in India.

I. Evaluation of National-Level Policies for MSMEs in India

The enactment of the MSMED Act in 2006 marked a pivotal milestone in creating a conducive policy framework for advancing the MSME sector in India. This legislation not only provided a definitive classification for MSMEs as opposed to the previous “Small Scale Industries” but also established a foundation for bolstering their competitiveness. Before this Act, small industries in India were referred to as Small Scale Industries (SSIs) under the Industrial Development and Regulation (IDR) Act of 1951⁹, which encompassed tiny, cottage, traditional, and village enterprises. The MSMED Act of 2006 established a legal framework, defining the concept of an 'enterprise' to include entities in both manufacturing and service sectors, and categorized them into three tiers: Micro, Small, and Medium. The classification of MSMEs varies globally, relying on diverse factors like turnover, workforce size, and investment. In India, historically, the definition was contingent on the number of employees as per the Industrial Development and Regulation (IDR) Act of 1951. However, due to challenges in obtaining accurate employment data and the fact that most enterprises in India are Own Account Enterprises, informal, and/or employ very few labourers due to the complexity in labour laws (Khatri, A Study of the Challenges of the Indian MSME Sector, 2019), the focus shifted to using investments in plant, machinery, and equipment as a reliable proxy. Recently, there has been a shift towards a turnover-based definition due to issues with data reliability and to account for depreciation in the definition on the basis of plant and machinery. The original investment-based criteria set in 2006 doesn't fully align with the present cost index of plant and machinery (Sinha U. K., 2019). Additionally, many MSMEs operate informally, without proper accounting practices, making it challenging for them to fit within the current definition criteria, highlighting the necessity for periodic adjustments in line with evolving economic conditions. As a move to overcome these shortcomings, in July 2020, the Ministry of Micro, Small and Medium Enterprises revised the definition of MSMEs to take into account the changing circumstances by giving primacy to the classification on the basis of turnover rather than investment in plant and machinery¹⁰. Given the changing circumstances, it's crucial to shift the focus of this important legislation towards making it easier for MSMEs to operate in the market. The goal is to tackle key challenges like limited infrastructure, informal practices, adopting new technologies, building capacity, establishing market linkages, accessing credit, and securing investment.

Both the Government of India and state governments have been proactive in introducing a multitude of schemes and policies to bolster this sector. Yet, MSMEs continue to grapple with issues concerning formalization, access to technology, timely and adequate financial support, enhancement of competitiveness, availability of skilled workforce, and market linkages. Currently, India has a range of institutions dedicated to addressing the challenges faced by MSMEs. The Ministry of MSME oversees policy formulation for its holistic advancement, and these policies are executed by various organizations under the Office of Development Commissioner MSME. The MSMED Act of 2006 encompasses provisions aimed at promoting and nurturing the MSME sector. SIDBI serves as the principal financial institution supporting MSME financing and development. RBI and SEBI establish overarching policies to facilitate financial backing for the sector. While these bodies have played a crucial role through legislation

⁹ <https://www.dcmsme.gov.in/publications/circulars/circularmay1994.html>

¹⁰ [Revised Classification of MSMEs w.e.f 1st July 2020](#)

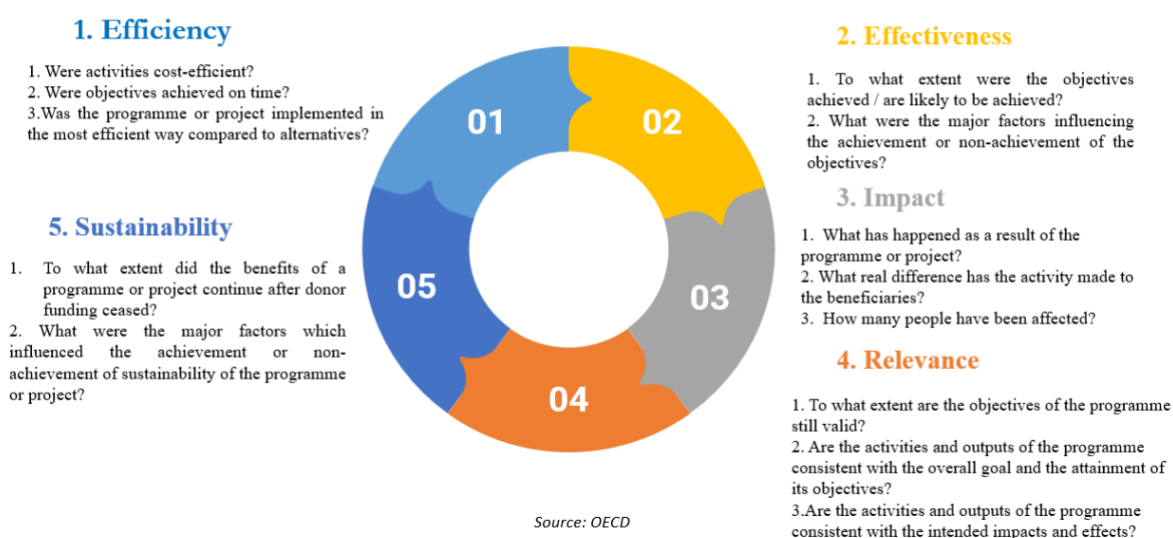
and policies in driving sectoral growth, crafting targeted policies in areas such as infrastructure, formalization, technology integration, linkages, credit accessibility, and prompt payments to MSMEs, and ensuring their effective implementation, has proven to be a challenge for all stakeholders.

This section aims to assess the execution of the various measures brought about at the national level to uplift MSMEs. The evaluation of the schemes under consideration is grounded in a multi-dimensional approach, drawing from a combination of audit reports by the Comptroller and Auditor General of India (CAG), annual reports by the implementation authorities of the schemes, existing academic literature, and the OECD/DAC framework for policy evaluation. The success of any scheme can be gauged by the physical and financial progress carried out under the scheme as well as its socio-economic impact. This information is made available by the CAG of India in their annual audit reports. These reports were leveraged as a critical source of evidence. Additionally, a review of academic literature pertaining to the schemes for the MSME sector in India was conducted. The literature review served to contextualise the evaluation within the broader academic discourse, providing empirical insights and comparative analyses with schemes of peer economies.

OECD/DAC Policy Evaluation Framework

The OECD/DAC framework was adopted as the primary evaluative tool to assess the schemes across dimensions of Relevance, Effectiveness, Efficiency, Impact, and Sustainability. This internationally recognized framework offers a structured and systematic approach to program evaluation, aligning with best practices in assessing the performance of development interventions. The chosen dimensions enable a comprehensive appraisal, ensuring that the evaluation encompasses both immediate outcomes and long-term effects.

Evaluation Criteria for OECD/DAC Policy Evaluation Framework



The 'Scheme' dimension encapsulates the specific program or initiative under evaluation. The 'Determinant' dimension underscores the underlying factors that the program seeks to influence. This dimension delves into the core drivers, such as access to finance which underpin the necessity and rationale for the specific scheme. It establishes a link between the identified determinant and the targeted outcomes. The 'Efficiency' dimension assesses the extent to which resources, both financial and non-financial, are optimised in the implementation of the scheme. It seeks to ascertain whether the allocation and utilisation of resources are conducted judiciously, ensuring the program achieves its intended outcomes with minimal waste or redundancy. By evaluating efficiency, the assessment endeavours to appraise the programme's cost-effectiveness and resource allocation strategies, ultimately providing insights into the economic viability of the intervention. The 'Effectiveness' dimension gauges the extent to which the program attains its predefined objectives. It seeks to quantify and qualify the actual outcomes vis-à-vis the intended goals. This dimension serves as a test for the program's efficacy, offering an empirical basis to ascertain the degree of goal attainment and signalling the extent of alignment between inputs, outputs, and outcomes. The 'Impact' dimension goes beyond the immediate outcomes assessed under effectiveness and delves into the broader and long-term effects of the program. The 'Relevance' dimension addresses the appropriateness of the scheme's objectives with respect to the prevailing socio-economic context. It interrogates whether the program's goals remain aligned with the evolving needs and priorities of the stakeholders it seeks to serve. This dimension is instrumental in safeguarding against programmatic obsolescence, ensuring that the scheme remains responsive to the dynamic needs of the environment in which it operates. The 'Sustainability' dimension delves into the enduring impact and viability of the program beyond the tenure of donor funding. It assesses the program's capacity to persist and deliver benefits over an extended period of time, even in the absence of external financial support. These dimensions collectively form a comprehensive evaluative framework that systematically dissects and scrutinises the various facets of a scheme (Better Criteria for Better Evaluation Revised Evaluation Criteria Definitions and Principles for Use, 2019). The below table outlines the questions to be taken into consideration while evaluating a scheme via the lens of each dimension:

Table 2: Table Showing below the Policy Analysis of Schemes for MSMEs in India on the basis of OECD/DAC Policy Evaluation Framework

Scheme	Determinant	Policy Objectives	Efficiency	Effectiveness	Impact	Relevance
Credit Guarantee Trust for MSMEs (CGTMSE)	Access to Finance	Strengthen credit system and enable flow of credit to MSEs via collateral-free loans	<ul style="list-style-type: none"> - Smaller corpus fund size compared to international counterparts. - Limited supporting services to MSMEs; no direct contact with them. - One office and limited staff for PAN-India operations. 	<ul style="list-style-type: none"> - Provisions of the scheme were partially complied with. - Flow of funds to MSEs has been achieved, but there's room for improvement. - Corpus fund not fully utilized, and claim settlement process is relatively straightforward 	<ul style="list-style-type: none"> - CAG notes that these figures are estimates on the basis of information furnished by MLIs; not verifiable; questionable quality of data fed by - Appraisal done by MLIs may not adequately verify project viability. - Reasons for NPAs suggest inadequate assessment by MLIs. - Fraudulent loans and lack of CIBIL report assessment contribute to NPAs. 	<ul style="list-style-type: none"> -Financial inclusion of MSMEs is crucial for economic growth and job creation. -High credit gap for MSMEs. MSMEs not integrated into the formal financial framework. CGTMSE aims to bridge this gap. <p>Relevant</p>
Public Procurement Policy for MSMEs	Access to Markets	Develop MSEs by supporting their marketing activities	<ul style="list-style-type: none"> Exclusion of significant items from reporting compliance raises questions about the efficiency of monitoring and reporting mechanisms. - Lack of authority of the DC, MSME to penalize CPSEs for non-compliance impacts the efficiency of enforcement. 	<ul style="list-style-type: none"> - Achievement of the 20% procurement target by only 7 out of 18 selected CPSEs indicates mixed effectiveness. - Non-compliance with the 4% target for SC/ST entrepreneurs is a significant gap in effectiveness. - Lack of reasons provided for non-compliance hampers accountability and corrective action. 	<ul style="list-style-type: none"> - Outstanding payables to MSE vendors highlight potential financial strain on MSEs, indicating a negative impact. - Non-conducting of vendor development programs, especially for SC/ST entrepreneurs, 	<ul style="list-style-type: none"> -The policy addresses the need for supporting MSEs in marketing their products and services. - The inclusion of specific targets for procurement from MSEs and SC/ST entrepreneurs reflects the policy's relevance to socio-economic development. <p>Relevant</p>
Assistance to Training Institutions Scheme	Skill Development	Upgrading training infrastructure, creating and delivering innovative programs, and imparting	Data unavailable on cost-efficiency, timely achievement of objectives, and implementation in comparison with alternatives	<ul style="list-style-type: none"> - The effectiveness of the ATI Scheme is mixed. While it trained a substantial number of individuals, approximately 36% of trainees found employment, indicating that there 	The ATI Scheme resulted in the training of a substantial number of individuals (4,01,927 trainees) and approximately	<ul style="list-style-type: none"> - The objectives of the ATI Scheme, which focus on skill development and entrepreneurship promotion in the MSME sector, remain valid given the importance of these goals for economic growth and employment generation. - The activities of the ATI Scheme, including upgrading infrastructure,

		skills to a significant number of individuals for the MSME sector's benefit		may be room for improvement in achieving the scheme's objectives. - Factors like non-assessment of capabilities of institutes, non-assessment of skill requirements, and irregularities in program implementation have decreased the effectiveness of the ATI Scheme.	36% of them found employment, indicating a positive impact on employment generation.	delivering training programs, and providing capital support, align with the goal of skill development and entrepreneurship promotion in the MSME sector. Relevant
Micro and Small Enterprises – Cluster Development Programme	Access to Technology	Enhance the productivity and competitiveness of MSEs for their holistic development	The program incurred a total expenditure of ₹8.89 crore, including a GoI grant of ₹5.67 crore. However, due to various implementation issues, including underutilization of facilities, the efficiency of resource utilization was compromised. The program experienced delays in operationalizing the CFC, impacting the timely achievement of objectives. The effectiveness of the program was hindered by planning and execution issues, indicating potential inefficiencies compared to alternative approaches.	The program faced challenges in achieving its objectives due to issues in planning and execution. The CFC was partially operational, but faced significant hindrances. Lapses in planning and implementation, including discrepancies in member enterprises, underutilization of facilities, and infrastructure deficiencies, were significant factors affecting program effectiveness.	The program aimed to establish MSE Fly Ash processing units, increase cluster turnover, and generate employment. However, due to implementation challenges, these outcomes were not fully realized. The program's intended benefits, including increased employment and enhanced cluster turnover, were not fully achieved due to execution difficulties.	The objectives of the MSME Cluster Development program remain relevant in the context of promoting growth and development of MSMEs through GoI's definition of cluster development . -The establishment of a Special Purpose Vehicle (SPV) and a Common Facility Centre (CFC) aligns with the goal of leveraging resources, enhancing marketing competitiveness, and providing common services

II. Examination of Key policies designed to assist MSMEs

1. Credit Guarantees Trust for MSMEs

Financial inclusion for MSMEs is imperative for economic growth. However, the persistent credit gap excludes them from India's formal financial institutions. A significant reason for the limited access to bank financing in this industry is the banks' perception of high risk when lending to micro and small enterprises (MSEs). The challenge in providing collaterals, especially for very small businesses seeking small loans and first-generation entrepreneurs, makes it harder for them to access finance for their enterprise. (Ministry of Micro, Small & Medium Enterprises)

In response, the Ministry of Micro, Small, and Medium Enterprises, in collaboration with the Small Industries Development Bank of India (SIDBI), established the Credit Guarantee Fund Trust for Micro and Small Enterprises (CGTMSE) in 2000. The main objective was to offer a collateral-free guarantee for loans and advances, which include term loans and working capital assistance, provided by lending institutions to both new and existing Micro and Small Enterprises. Additionally, lending institutions are required to pay guarantee fees, annual service fees, and other charges as determined by the Government of India and SIDBI (About CGTMSE, 2023).

Working of the Scheme/ Status of the Scheme/ Implementation of the Scheme

The CAG audit assesses the effectiveness of the scheme. Regarding the financial performance of the Trust, it has reported an excess of income over expenditure in varying amounts from the fiscal year ending March 2015 to March 2019. However, there was a decline in guarantees covered. The establishment of the National Credit Guarantee Trustee Company (NCGTC), providing guarantees for loans up to ₹10 lakh under the Credit Guarantee Fund for Micro Units (CGFMU), resulted in a reduction in the Trust's activities. Specifically, the coverage of loans up to ₹10 lakh decreased from 4.77 lakh (₹9,994.11 crore) in 2015-16 to 2.25 lakh (₹6,450.28 crore) in 2017-18.

Issues in the Scheme

The CGTMSE, operating as a registered trust, relies on a 4:1 ratio of contributions from the Government of India and SIDBI to its corpus fund. Member Lending Institutions (MLIs) must register and form a formal agreement with CGTMSE to access guarantees for MSE credit. MLIs include commercial banks that enter into an agreement with CGTMSE and can apply guarantee cover in respect of eligible credit facility sanctioned to any eligible borrower¹¹. However, procedural inefficiencies are evident.

These issues affect both the institutions and the MSMEs they serve. Institutions struggle with a lack of regulatory support and procedural consistency, leading to resource misallocation. Operational challenges include accountability lapses, delayed settlements, and a slow claim process. There's also role duplication with the National Credit Guarantee Trustee Company Limited (NCGTC) due to unaligned policies, causing wastage of time and resources.

For MSMEs, the burden of high guarantee fees on top of already significant interest rates makes accessing the scheme costly. Recognizing these challenges, experts have recommended increasing the guarantee cover, absorbing guarantee fees, streamlining procedures, and offering truly collateral-free loans under certain conditions. Responding to this, a restructured CGTMSE scheme was introduced in April 2023, with a notable ₹9,000 crore boost from the Union Budget

¹¹ <https://www.cgtmse.in/Home/VS/94>

FY 2023-24 to guarantee an additional ₹2 lakh crore for MSEs. The scheme's updates include halving the guarantee fees for loans up to ₹1 crore and reducing the minimum fee to 0.37% annually. The guarantee cap has been raised from ₹2 crore to ₹5 crore, and the threshold for claim settlements without legal action has been increased to ₹10 lakh. ((Mund, 2020) (Anu & Lakshmisree, 2013; Anu & Lakshmisree, 2013)).

MSMEs also face NPA challenges, as RBI's classification criteria (principal or interest payment remained overdue for a period of 90 days) doesn't align with the sector's working capital cycle. Extending the classification period to 180 days, which takes into consideration the enterprise's payment abilities and allowing restructuring without downgrading accounts can provide breathing space for MSMEs¹².

For CGTMSE to effectively address credit access challenges, a comprehensive policy framework with robust checks and balances is essential, enabling both borrowers and lenders to fully utilize the credit system.

Key Takeaways from other countries

In many developing nations in Asia and the Pacific, the credit system is mostly centred around banks, with nonbank financial institutions playing a minor role. The lack of credit infrastructure, such as credit and collateral registries, contributes to information imbalances that hinder credit access (Asian Development Bank, 2022).

In Asia's developing countries, the primary institutional credit mechanism is Credit Guarantee Schemes (CGSs), which have effectively addressed information imbalances and expanded credit access for SMEs. These schemes share the default risk with financial institutions, allowing SMEs to navigate traditional credit assessments and institutional preferences.

When comparing India's CGTMSE with similar schemes in other countries like Korea's KODIT, Japan's JFC, Malaysia's CGCM, and Indonesia's PUJKI, it's evident that India's CGTMSE has a smaller corpus or fund size. This smaller corpus has also increased at a slow pace and selective provision of services by the Indian CGS. Some of these schemes have evolved into credit information bureaus, providing SMEs with reliable risk assessments, along with provision of services that facilitate access to finance and ensure efficient operations with strong risk management practices. In contrast, CGTMSE lacks additional support services for MSMEs and has limited direct interaction with them. (Asian Development Bank, 2022)

These restrictions hinder the competitiveness of Indian MSMEs despite their proportion in the economy. The competitiveness of MSMEs extends beyond credit access; it encompasses the entire credit utilization process. Recognizing and improving services related to credit access, ensuring efficient resource allocation at the enterprise, government, and institutional levels, and creating an enabling environment based on ground-level challenges is crucial. This approach, focused on aiding sound financial decision-making and risk mitigation rather than merely offering access to a select group of formalized MSMEs, can significantly amplify the scheme's impact.

¹² Stakeholder Interaction.

2. Assistance to Training Institutions Scheme

The Assistance to Training Institutions Scheme, overseen by the Ministry of Micro, Small and Medium Enterprises, Government of India, is a centrally sponsored initiative. It extends financial aid to training institutions, aiming to enhance skill development within the MSME sector. The scheme's primary objectives encompass upgrading training infrastructure, creating and delivering innovative programs, and imparting skills to a significant number of individuals for the MSME sector's benefit (Invest India, 2023).

Under this programme, it was found that from 2012-13 to 2019-20, 87% of the allocated 17,615 training programs were completed, training approximately 87% of the target of 4.7 lakh persons.

However, investigation into the scheme's performance by the CAG audit (Comptroller and Auditor General of India, 2021) reveals several critical aspects of the training programs under review.

1. Assigning training programs to unauthorized agencies and setting training targets for institutions without considering their capacity and staff strength led to overburdened staff and inefficient training.
2. The Ministry neglected to assess the necessary skills before designing skill development programs.
3. The Ministry's sanction orders failed to establish targets for training institutes regarding indigenous entrepreneurship, wage employment, or trainee self-employment. There was an absence of post-training employment or entrepreneurship targets and monitoring mechanisms.
4. Invoices and a number of completed trainings were fabricated. About 70% of the recorded trainees were legitimate, with instances of duplicate and unclear duplicate trainees. The unutilized training funds were neither reported to the Ministry nor returned by the institutions, highlighting a lack of transparency and accountability in financial management

The Ministry fell short in realizing the intended results of the schemes primarily due to the absence of a proper assessment of necessary skills, skill gaps, and the trade-offs involved in conducting these trainings. Additionally, there were no requirements set by the Ministry for training institutions to ensure the employability of trainees and guarantee the desired outcomes of the training programs.

The scheme's incapacity to effectively address a fundamental skilling issue discourages enterprises from engaging in government programs. This, in turn, deprives them of affordable and relevant training opportunities, forcing them to rely on costly upskilling courses that are hard to access. This obstacle significantly hampers the scalability and competitiveness of MSMEs.

3. Public Procurement Policy 2012, for Micro and Small Enterprises

The Public Procurement Policy for Micro, Small, and Medium Enterprises (MSMEs) in India mandates that central government ministries and departments should procure at least 25% of their annual goods and services from MSMEs, with an additional 4% from MSMEs owned by Scheduled Castes and Scheduled Tribes. The fundamental motive of this Policy is to advance and develop Micro and Small Enterprises by aiding them in marketing their products and services. The primary objectives are to foster the growth of MSMEs, enhance their participation in public procurement, and ensure equitable opportunities for them. These objectives rely on principles of competitiveness, adherence to sound procurement practices, and the execution of supplies in accordance with a system that is fair, transparent, competitive, and cost-effective. To

promote greater involvement of MSEs in government procurement, Central Public Sector Enterprises (CPSEs) are encouraged to conduct Vendor Development Programmes or Buyer-Seller Meets, particularly for SC/ST entrepreneurs (Public Procurement Policy, 2016)¹³.

The CAG Audit (Comptroller and Auditor General of India, 2018) encompasses various procurement practices and compliance within the Central Public Sector Enterprises and finds that there have been shortcomings in procurement targets and compliance, payment issues to vendors, outstanding dues, billing practices, and conducting vendor development programs. This necessitates a need for stronger regulations, better financial management, transparency in transactions and clearer policy communication and enforcement mechanisms. The handling of complaints and grievances also raised concerns. While complaints were received, it was found that they were not adequately processed through the grievance cell. Furthermore, the outcomes of these complaints were not updated on the portal, indicating a lack of transparency and accountability in addressing vendor concerns. Nodal officers, important for coordination and communication not appointed by all CPSEs. The website was rarely updated with procurement plans or updates.

This highlights India's challenges related to the capacity of policy administration, leading to significant issues and uncertainties in the implementation of SME support measures. Along with this, anti-competitive practices like corruption meddle with schemes like public procurement in India leading to artificial inflation in prices (Patil, 2017). In a nation where the *missing middle* persists with a *missing small* as well, these schemes are crucial as they offer opportunities for such enterprises to engage in the market. The inefficiency in these programs not only hampers competition among existing enterprises by restricting diversity and inadvertently favouring larger businesses, but it also establishes obstacles to the entry of new and emerging small businesses.

4. Micro and Small Enterprises – Cluster Development Programme (MSE-CDP)

MSME Cluster Development is a program of the Government of India that aims to promote the growth and development of MSMEs by developing and upgrading their clusters. The objective of the scheme is to enhance the productivity and competitiveness of Micro and Small Enterprises (MSEs) for their holistic development. This involves providing financial assistance in the form of a Government of India (GoI) grant to establish Common Facility Centres (CFCs)¹⁴ provide shared services to enterprises in existing clusters and for upgrading or establishing new Industrial Areas, Estates, and Flatted Factory Complexes. The scheme also involved the establishment of a Special Purpose Vehicle (SPV)¹⁵ to leverage resources, enhance access to public resources, and improve linkages to credit and marketing competitiveness (Comptroller and Auditor General of India, 2021).

¹³ Evidence to support achievements of participation in Vendor Development Programmes could not be furnished hence the successful execution for the same cannot be verified

(https://msme.gov.in/sites/default/files/Vendor_Development_Programme_Ancillarisation.pdf)

¹⁴ A Common Facility Centre (CFC) is defined as an infrastructural hub for processing, training, marketing, raw material depot, effluent treatment, complementary production processes, testing laboratory, and ancillary activities for MSMEs

(https://msme.gov.in/sites/default/files/ModifiedGuidelinesofMSE_0.pdf)

¹⁵ A Special Purpose Vehicle (SPV) is a company registered under Section 8 of Companies Act set up for the purpose of running projects under MSE-CDP. A company registered under Section 8 of the Companies Act is a non-profit organization with limited liability that aims to promote charitable activities, art, science, education, and sports. (<https://msme.gov.in/sites/default/files/FAQs-MSE-CDP.pdf>, https://www.icsi.edu/media/webmodules/publications/FAQs_on_Section_8_Companies.pdf)

Applying for the MSE-CDP consists of a ten-step procedure according to the recently revised guidelines (Ministry of MSME). Such a complicated procedure may prove to be a hindrance and beyond the scope of the limited capabilities of Micro- and Small-Enterprises. Additionally, the project approval process requires the applicants to produce multiple documents including a project appraisal report, registered land documents, thus increasing the compliance burden on the enterprises. According to the newly released guidelines in 2022, the digital portal for the scheme would be revamped to include photographs of ongoing projects, a map of clusters across India, workflow of the scheme, and proposals to ensure transparency among applicants (Ministry of MSME, 2022). An inspection of the portal revealed that the aforementioned updates have not been made since the inception of the new guidelines in 2022. Furthermore, the guidelines indicate that UDYAM Data on detailed NIC Classification and PIN Codes of registered enterprises have been used to formulate detailed cluster maps of all states. This data is not available for perusal in the public domain.

Currently, 111 out of the 208 sanctioned Common Facility Centres (CFCs) in India have not been completed and 111 out of 309 Infrastructure Development (ID) Projects are still ongoing (Ministry of MSME). A total of 1,018 initiatives have been implemented across 964 clusters in 29 States and 1 Union Territory as part of the program. A total expenditure of Rs. 75.01 Crore has been utilized during the financial year 2015-16, up to March 30, 2016, under the Micro and Small Enterprises-Cluster Development Programme (MSE-CDP) to implement diverse interventions^[22]. However, inadequate planning and implementation of the project, the inability to complete and operationalize the Common Facility Centre (CFC) due to delayed plot allotment to Special Purpose Vehicle (SPV) members, insufficient infrastructure development, and the failure to secure the remaining grant from the Government of India (GoI), not only led to the non-achievement of scheme objectives but also made the expenditure of ₹8.89 crore, including a GoI grant of ₹5.67 crore, invested in establishing the CFC unproductive. (Comptroller and Auditor General of India, 2021) (PIB, 2023) (Ministry of Micro, Small and Medium Enterprises, 2023)

The limited effectiveness of a widely acknowledged competitiveness tool, such as cluster development, can be attributed to the incomplete adoption and application of this concept within the Indian context. The definition and formation of clusters in India is narrow and restrictive considering geographical proximity as the main criteria. However, successful frameworks using cluster analysis consider complementarities, linkages and interconnections. Italy, a success story in cluster development encompasses supporting industries in its programme and bases its analysis on “specialization, cooperation and flexibility” (Report of the Expert Committee on Micro, Small and Medium Enterprises, 2019). Indian MSMEs are in dire need of a framework that takes into account both preceding and succeeding complementarities, forming a comprehensive system that enhances competitiveness across all facets of their growth.

III. Evaluation of State Policies

The Central Government in India has established a range of policies to bolster the MSME sector. These central schemes, while beneficial nationally, require state-level policies tailored to local industrial needs for MSMEs to be effective. State-level MSME policies, however, have not been the focus of extensive research and lack of consistent evaluation and detailed performance data. In our study, we adopted a structured approach to assess state-specific MSME policies across India. Initially, we collected policy documents from each state, categorizing them by the presence of a dedicated MSME policy or recent updates to their industrial policy. We then pinpointed four crucial pillars for MSME development and examined the initiatives each state implemented under these pillars. Through a comparative analysis, we evaluated the breadth and

impact of these initiatives, offering insights into their potential effects on India's MSME sector. However, our study was limited by the inability to perform deep, on-the-ground analyses due to a lack of comprehensive data on policy implementation. This limitation restricted our ability to suggest highly effective policy recommendations. Our research serves as an initial, comprehensive step towards understanding state policy impacts on MSMEs and paves the way for future studies, contingent on the availability of more detailed data on policy performance.

The Central Government has implemented numerous policies to support the MSME sector, as discussed in detail in the preceding section. While these central schemes are designed to serve the entire nation, effective state-level policies are crucial for the growth of MSMEs as State-specific policies can be tailored to the unique requirements of industrial units within a particular state and can assist these units in addressing the specific challenges they face. The MSME policies at the state level is a subject that has not drawn much focus in the literature. The state policies thus have suffered from a lack of regular evaluations and scrutiny. There is also lack of information on the performance of such policies as even though these policies are implemented, there is lack of information regarding their performance at the grass roots level. In this section, we employed a structured methodology to evaluate the MSME policies of various states in India. Initially, we gathered policy documents from each state, classifying them based on whether they possessed a dedicated MSME policy document or had recently updated their industrial policy. Subsequently, we identified four fundamental pillars critical to MSME development and proceeded to scrutinize the initiatives implemented by each state under these identified pillars. Through a systematic comparative analysis, we assessed the scope and coverage of these initiatives. This methodological approach facilitated a nuanced evaluation of state-level policies, shedding light on their potential impact on the thriving MSME landscape in India. While we recognize the limitations inherent in our study, particularly our inability to conduct in-depth on-the-ground performance and implementation analyses of these policies, which consequently constrains our capacity to provide highly efficient policy recommendations for the states, the primary challenge we encountered during our analysis was the unavailability of comprehensive data regarding the execution of these policies. Our study would have been significantly more reflective of the actual on-the-ground conditions and outcomes of these schemes had there been access to high-quality data on the performance of these policies. However, our work can be taken as a very thorough first step towards making such an analysis of state policies and can lead to further research on the topic.

There are some significant efforts made by a few states to promote MSME development in the country. However, there is a general lack of adequate emphasis on this sector among state governments. The evidence for the lack of emphasis lies in the fact that only 15 out of the 28 states¹⁶ have a specialised MSME policy in the country, For the other 13 states, either MSME sector forms a small part of the elaborate industrial policy or there is absence of MSME specific policies in the state. Although there has been lack of adequate focus from the states on the sector, the states have made some progress in providing some impetus to the MSME units especially in recovering the costs of setting up of new businesses. There is presence of capital investment subsidy provided to the states usually up to 25%, that helps MSMEs in setting up their plant and machinery and cover major capital expenditure for the same. The Stamp duty exemption of up to 100% is being provided to the sector that incentivises the firms to set up and eventually formalize. To ascertain that the MSMEs are producing quality products and able to

¹⁶ The states with MSME policy are Andhra Pradesh, Assam, Chhattisgarh, Goa, Haryana, Madhya Pradesh, Meghalaya, Odisha, Sikkim, Tamil Nadu, Uttar Pradesh, Kerala, Rajasthan, Uttarakhand and West Bengal.

market their product better, the firms are encouraged to get certified through subsidies and reimbursement for costs incurred for certification. In addition to the financial incentive, a single window clearance system is established to make the process simpler for the units. The introduction of the Zero Defect Zero Effect (ZED) certification is a new concept in the policy space. Acquisition of the ZED certification helps the firms publicise the fact that they have sustainable production methods and are able to market their products better especially in the foreign market. While the state government's initiatives represent a positive step towards addressing the challenges faced by MSME's in the country, these policies fall short of adequately addressing the fundamental issues that hinder their growth and success.

Learning and Recommendations

1. Learnings from States MSME policy

On examining the landscape of MSME policies across various states and union territories, it is evident that there are existing schemes and incentives in place to support them. However, the mere existence of these policies falls short in ensuring their efficacy. A substantial challenge arises from the lack of awareness among MSMEs regarding these policies, impeding their macro-level utilization.

Furthermore, the prevailing policies often inadequately address the substantial challenges faced by MSMEs, primarily stemming from the omission of various stakeholders during the policy formulation process. **To augment the formulation of effective policies, policymakers must prioritize regular consultations with stakeholders at all levels.**

At the individual level, MSMEs confront disproportionate challenges in navigating and deriving benefits from available schemes. Inherent limitations in financial, technical, and administrative capabilities impede their access to opportunities, preparation of tender documents, and fulfillment of contractual obligations. Financial constraints frequently hinder their participation in schemes that necessitate substantial investments.

The response of state governments to these challenges has been less than comprehensive. Existing policies lack the requisite depth to effectively target individual-level challenges. State governments ought to identify and prioritize specific issues, concurrently working to enhance awareness about existing schemes. The current piecemeal approach in policy design and implementation underscores the urgent need for a more cohesive, strategic, and inclusive approach to fortify businesses in the MSME sector. This necessitates not only addressing individual-level challenges but also ensuring the effective implementation and widespread dissemination of these schemes.

Challenge for MSMEs	State gov't's action	Short term Solution	Long term Solution
Access to finance	<p>State governments have implemented policies aimed at addressing the challenges faced by SMEs, particularly through capital intensive subsidies, which aim to reduce the significant capital expenditure required by firms for business establishment or expansion.</p>	<p>Financing policies focusing solely on the initial stages of an enterprise's life cycle may be insufficient for the survival of MSMEs in the country due to their unique financial requirements.</p> <p>Some states such as Uttar Pradesh, Jharkhand and Manipur have taken definitive steps in overcoming these issues by introducing interest subsidy schemes not only for term loans but also for working capital requirements of the MSME's.</p>	<p>Although these policies can be beneficial but the presence of minimum turnover requirements for availing these subsidies forms a major barrier for the micro enterprises to make benefit.</p> <p>So, there needs to be a move towards more policies focusing on financing units in their later stages along with reducing the eligibility requirements for msme's to avail such policies.</p>
	<p>Absence of policies catering to financing instruments beyond traditional bank credit is a significant gap in the support system for MSMEs.</p> <p>Policies aim to reduce banking sector credit costs and encourage formal credit, but continued ignorance of alternative financing sources like cash-based lending, equity financing, factoring, leasing, and venture capital remains a challenge.</p>	<p>States like Haryana, Gujarat, Odisha and Himachal Pradesh have incentivized firms to list on the two SME specific stock exchanges in the country namely BSE SME platform and EMERGE (NSE) platforms. These states will bear a significant part of the expenses incurred by the SMEs in listing on such platforms.</p>	<p>Stock exchange listing is beneficial for high-end SME's with adequate financial knowledge and proper record maintenance. However, smaller firms lack the necessary knowledge and bookkeeping skills for listing. Therefore, policymakers at the state level should address the identification of other sources of finance, particularly for smaller MSME firms, to ensure their financial stability and legal compliance.</p>
	<p>Absence of schemes pertaining to insurance</p>	<p>Out of all the states, only Manipur provides an incentive for the MSME's to be insured through a subsidy on the payment of insurance premium by the firms. This means that businesses, particularly MSMEs, are left without a structured framework to safeguard against unforeseen risks and losses, potentially leaving them vulnerable in the face of unexpected challenges.</p>	<p>There are no initiatives by States to assess the current financial literacy levels in the respective state and provide appropriate interventions.</p>

Challenge for MSMEs	State govt's action	Short term Solution	Long term Solution
<p>Access to markets</p>	<p>MSMEs in India face challenges in accessing markets due to limited production capacity and internal resources. A public procurement policy was introduced to help MSEs sell their goods at competitive prices, but medium enterprises are not covered, disincentivizing growth.</p> <p>Majority of SMEs do not want to scale up as they lack branding and have the notion to serve only local markets.</p> <p>Additionally, there is a lack of state government initiatives to improve the competitiveness of MSMEs' goods and services in local and international markets. This policy is not sufficient to support MSMEs' growth and competitiveness.</p>	<p>Only a few states, including Andhra Pradesh, Madhya Pradesh, Sikkim, Tamil Nadu, Tripura, and Kerala, have implemented incentives to boost exports for MSMEs. This is concerning as achieving export competitiveness requires standardized, high-quality products and quality-check certificates.</p> <p>Andhra Pradesh, Bihar, and Haryana are providing support to MSMEs in various areas, such as quality certifications, market research, and quality improvement. Bihar offers reimbursement on freight charges, while Haryana has an e-commerce platform called "Made in Haryana." Other states hold annual buyer-seller meet-ups and trade fairs, promoting networking and business expansion.</p>	<p>Most states lack proactive measures and incentives, leaving MSMEs at a disadvantage in the global market. This highlights the need for coordinated state governments to empower and enable MSMEs in their export endeavors.</p> <p>State governments should monitor the environment to determine necessary policies and measures. Ensuring regulatory, administrative, and policy changes are in place can help SMEs access global markets. This will empower SMEs to target foreign market for which they are largely less prepared.</p> <p>Each segment of SME's foreign demand maybe which is characterised differently for countries based on its regulatory , administrative and policy circumstances that a MSME exporters or investor.</p> <p>The MSME has significant potential for developing innovative products and services, especially in high-technology sectors like semiconductors and biotechnology. This should be targeted on those districts where MSMEs have enabling environment to integrate their existing businesses into this.</p>

Challenge for MSMEs	State govt's action	Short term Solution	Long term Solution
Skill Development	<p>MSMEs face significant challenges in accessing capacity building opportunities due to financial illiteracy, operational skill gaps, and lack of awareness of government schemes. Despite these obstacles, only eight states currently offer partial subsidies for employment training.</p> <p>This glaring gap in support exacerbates the difficulties faced by these enterprises. Moreover, the existing curricula of training programs are often outdated and fail to align with the dynamic skill development requirements of MSMEs.</p>	<p>States have provisions for skill development—such as Andhra Pradesh, Bihar, Goa, Chhattisgarh, Haryana, Karnataka, Kerala, and Rajasthan—most only offer partial reimbursement for employment training costs.</p> <p>Regrettably, they have not devised comprehensive programs that address the specific skill gaps and needs of MSMEs.</p>	<p>Own Account Enterprises (OAEs) and nano-enterprises face high opportunity costs due to the need for lengthy training programs, which may temporarily divert their focus from business operations, making it crucial to design these courses accordingly.</p> <p>Tailor-made policies are crucial for rural India to promote last-mile connectivity and extend training benefits to micro-enterprises. These programs should be accessible and free of charge, especially in rural communities. MSMEs often lack awareness of necessary skills and technologies. States must take proactive steps to equip them with the necessary knowledge and skills for sustained growth and success in rural India.</p>

Challenge for MSMEs	State govt's action	Short term Solution	Long term Solution
Access to technology and infrastructure	<p>The National Credit Linked Capital Subsidy for Technology Upgradation (CLCS-TU) is a national-level incentive for MSMEs to integrate new technologies.</p> <p>State-wise incentives include the Industry varsity linkages scheme in Kerala, Credit Linked Advanced Technology Adoption scheme in Haryana, and subsidies for technological purchase in Odisha and Punjab.</p>	<p>As noted by the India SME forum in the stakeholder meeting, there are hardly 41,000 medium enterprises in the country. The technological schemes addressed above are usually focused upon moving MSME's towards new advanced technologies such as Information Technologies, automation, IP registrations.</p> <p>These schemes are primarily designed for medium and high-earning small enterprises, primarily for technological upgradation, as they cater to the unique needs of these medium- to large-sized firms.</p>	<p>Micro firms make up the vast majority of firms. They don't scale up yet as their needs are not catered to which makes the schemes ineffective in addressing the issues at large.</p> <p>States should expand existing schemes to address the lack of basic technology or obsolete technology used by micro and small firms. This requires a better understanding of the specific needs of different sectors. Incorporating sector-specific MSME policies can help address unique needs and</p>

	<p>Even though these schemes may cause huge improvements in the technological levels of firms, the question that needs to be addressed is the reach of these schemes in the MSME sector as a whole.</p>		<p>enhance firms' productive capacity, ultimately benefiting the entire state.</p>
	<p>State governments have established industrial parks to facilitate business activities in specific regions by providing high-quality infrastructure facilities, enabling firms to reap the benefits of cost sharing and economies of scale. These states have reserved some parts of their parks especially for MSME's to set up and operate.</p>	<p>Even though it's a good preliminary step in ensuring the proper access of quality infrastructure for the MSME's, the high rental costs associated with the same makes it inaccessible for many micro- and small-sized MSMEs.</p> <p>The Central government's Common Facility centres for MSME are a step towards providing quality infrastructure to the sector. However, States should develop their own facilities to cater to the needs of micro enterprises, who often have small units under sheds and benefit from co-working spaces and shared infrastructure.</p>	<p>IFC collaboration based on targeted intervention – sector wise is the need of the hour</p> <p>Also before embarking upon building new Industrial parks, resolving issues identified from existing IP parks in CAG reports is important.</p>
	<p>Uninterrupted access of power</p> <p>The states have mostly focused upon making power affordable for the MSMEs through either the reimbursement of connection charges, for example in Gujarat to offering per unit subsidies to the firms to the extent of Rs. 2.5 per unit in Madhya Pradesh.</p>	<p>The states need to realise that making the electricity affordable does not address the entire problem faced by MSME's as the main issue faced by them and even the entire industries is the lack of quality and regular supply of the same in the states.</p> <p>The MSME are significantly affected by it as they don't have enough capital to invest in machines such as generators which could be used to gain regular supply of electricity even during power cuts. None of the states are able to significantly resolve the issue, thus reducing the ability for the MSME firms to operate effectively and efficiently.</p>	<p>Subsidized Energy Solutions - The government can introduce subsidies or tax credits for MSMEs investing in backup power solutions like generators or renewable energy sources such as solar panels. This would alleviate the burden of power cuts without significant capital expenditure</p> <p>Encourage the development of industrial clusters where MSMEs can share resources. This approach could include shared facilities for power generation, research labs, and even shared logistics for better access to markets.</p>

2. Learnings from Cluster level Analysis

A dominance of upstream activities is observed in almost all clusters . This may suggest reliance on raw material processing and intermediate production stages rather than a focus on higher-value end products, posing challenges for enterprise competitiveness.

Cluster	Solution	Regions to focus on
Textile Manufacturing and Apparel	<p>SMEs in Textile Manufacturing should focus on high value product design, local branding, customization, integrated supply chain services, and higher product quality.</p> <p>To achieve these objectives without increasing costs, they should collaborate with overseas and Indian design schools, invest in new product technology, partner with high-end retail outlets, link supply chains electronically, and invest in capital equipment and local training institutions for process innovation, product management, and quality control.</p>	<p>The analysis indicates regional specialization in</p> <ol style="list-style-type: none"> 1. <u>Textile manufacturing</u> in Surat, Panipat, Sant Ravidas Nagar, Ludhiana, Varanasi, Imphal East, Tiruppur, Namakkal, and Erode. 2. <u>Apparel</u> in Tiruppur , Ludhiana, Haulakandi , Bangalore, Erode, Supaul , Coimbatore, Kaushambi , Gautam Buddha Nagar and Sant Ravidas Nagar <p>To ensure economies of scale happen, districts around these regions should become more competitive.</p>
Food Processing Cluster	<p>Agri Food policy actively directed at developing link between production and processing is need of the hour. Eg: GOI efforts to put Millet Indian products on global map</p> <p>Maximize value added throughout the supply chain by improving on current processes, and through innovation.</p> <p>Stagnant market share in food products ; Need to diversify into other by products -and developing other niche markets.</p> <p>Development of branding guidance to agricultural products for MSME projects for the food cluster formation are needed at state level.</p>	<p>The analysis indicates regional specialization in</p> <ol style="list-style-type: none"> 1. <u>Food Processing and Manufacturing</u> in Tinsukia, Dakshin. Bastar Dantewada, Kiphire, Mahoba 2. <u>Local Food and Beverage Processing and Distribution</u> <p>This cluster is present in most of the districts of india.</p> <p>It must be noted that regional specialization is almost low and stagnant as more than 60 % of districts have lower LQ , which lies between 2 and 0 . Since it's a traded cluster and employs most of the MSME sector. Immediate steps are required to improve the productivity of this cluster across india .</p> <p>Strengthening efforts at north east and eastern belt of india is the need of the hour as they demonstrate huge potential for integration in GVCs with the uniqueness and diversity of the food products.</p>

<p>Chemical Cluster</p>	<p>For SMEs involved in chemical products , lot depends on integrated ecosystem but attracting and retaining skilled workers is the biggest challenge.</p> <p>It is advisable for state governments s to focus on expanding the pool of engineers and researchers through increased collaboration domestically and internationally in students .</p> <p>SMEs face higher barriers in regulatory and compliance when it comes to products, due to their less bargaining power. There is need to streamline compliance and regulatory efforts in order to further minimize risk.</p> <p>Moreover, building stronger marketing capabilities is imperative to facilitate progress downstream in the value chain.</p>	<p>The analysis indicates regional specialization in</p> <ol style="list-style-type: none"> 1. Upstream Chemical Products in Bharuch , Gwalior, Gandhinagar, Medak , Nainital , Valsad , Palamu , Raigarh and Uttara Kannada , Samba , Palwal and Ujjain 2. Downstream Chemical Products in Virudhunagar , Dadra and Nagar Haveli , Prayagraj , Bharuch , Karaikal , Sagar and Thoothukkudi <p>More Focus needs to be on targeting MSMEs and strengthening their dominant in both sub-clusters.</p>
<p>Automotive Cluster</p>	<p>MSMEs allocate a higher proportion of their investments to tangible assets rather than intangible ones. Only a subset of these enterprises engages in activities associated with research and development, design, and product development.</p> <p>Cooperation within value chain stems from dependence on larger player in the market. Most of the SMEs have little or no freedom to select the market in which to operate.</p> <p>To attain global competitiveness, the Indian automotive industry must expeditiously transition into a sector focused on "design and innovation" by MSMEs engaged in car segment.</p>	<p>The analysis indicates regional specialization in automotive clusters such as Gurgaon, Saraikela-Kharsawan, Rewari, Udham Singh Nagar, Faridabad, and Pune, showcasing higher Location Quotient.</p>

Overall Learnings

1. Rethinking clusters for MSME development

In the context of India's cluster policy, established in 1987, the approach has been rooted in the amalgamation of collective efficiency and flexible specialization, diverging significantly from strategies employed by developed nations following Michael E. Porter's cluster approach. Notable examples include the United States and the European Union, which utilize cluster mapping initiatives to inform policy decisions and promote cross-border collaboration.

For instance, the United States, through the Cluster Mapping Initiative led by the Harvard Business School Institute for Strategy and Competitiveness, employs data and insights to shape economic development strategies at various governance levels. Similarly, the European Union, over the past thirty years, has been promoting cluster mapping through initiatives like the European Cluster Observatory (ECO) and the European Cluster Collaboration Platform (ECCP). ECO collects and disseminates data, while ECCP fosters cross-border collaboration among businesses, research institutions, and clusters, particularly focusing on small and medium-sized enterprises (SMEs).

In the Indian context, clusters cater to diverse markets, spanning local, regional, national, and international levels. However, the success of these clusters should not be solely gauged by international market links. Instead, there should be a shift towards emphasizing product diversification and enhancing local technological capabilities. While export-oriented strategies are crucial, acknowledging the strong presence of a large, segmented domestic market is essential—a dimension sometimes overlooked in discussions on value chain analyses.

To enhance the cluster development program for micro and small enterprises in India, it is imperative to revisit the definition of clusters. Regional policymakers can leverage cluster policies as a pragmatic and convenient place-based organizing principle, demonstrating political commitment, pursuing an innovation policy-mix, efficiently mobilizing public resources, and prioritizing strategic regional sectors. Personalized services to SMEs, addressing regional research and innovation weaknesses, should be offered. These services can assess and review the innovation capabilities of private companies, providing roadmaps for improvement. Additionally, clusters can play a pivotal role in promoting university-industry collaboration, essential for fostering innovation, knowledge transfer, and strengthening regional competitiveness. Clusters should actively encourage broader collaboration among public and private research and technology organizations, serving as catalysts for collaborative innovation activities between universities and industries.

1. Increase Institute for Collaborations (IFCs)

As defined by Porter and Emmons in (Institutions for Collaboration : Overview . Background note, January 2003), IFCs encompass both formal and informal actors that actively promote the establishment and growth of clusters among involved stakeholders. IFCs serve as instrumental entities in cluster development, contributing significantly to research and development (R&D) for products. Their influence extends beyond product development, encompassing the

enhancement of productivity, fostering innovation, and optimizing processes through innovative methodologies. The proximity of IFCs to any cluster is paramount, as it substantially contributes to its overall productivity and innovative capacity.

For MSMEs, forging connections with IFCs proves particularly beneficial, providing them with opportunities to upgrade their technology. Given the inherent constraints of limited resources and capabilities faced by MSMEs, IFCs emerge as invaluable partners in undertaking essential research and innovation endeavours. In the Indian context, the Micro and Small Enterprises-Cluster Development Programme (MSE-CDP) has incorporated Common Facilitation Centres (CFCs). These CFCs are designed to furnish shared infrastructural facilities to MSMEs. However, there exists a compelling need to elevate the sophistication of these CFCs to align them with the high standards set by IFCs. Strengthening IFCs demands a strategic approach that involves the consolidation and expansion of membership.

To achieve this, initiatives should be undertaken to foster collaboration and knowledge networks among universities, research institutes, and private entities. Such collaborative efforts will facilitate seamless R&D and knowledge exchange, thereby enhancing the overall capabilities of IFCs and, consequently, the clusters they support. Furthermore, it is imperative to establish forums for the timely sharing of industry information. Additionally, a thorough review of the property rights framework is essential to mitigate the risks associated with companies divulging trade details through IFCs to other industry players.

2. Evaluation of State Policies

A significant challenge faced by state-level policies in the country is the absence of consistent monitoring and evaluation. Despite the existence of numerous policies, the issues plaguing the MSME sector persist. A primary reason for this is the lack of awareness among potential beneficiaries regarding these policies. There is a critical need for increased awareness to ensure that the schemes introduced for the sector reach and benefit the intended recipients. Additionally, the introduction of policies alone is insufficient; their performance needs continuous evaluation by states to gauge their effectiveness in achieving objectives. The lack of evaluation results in a dearth of informative evidence, hindering independent research and the formulation of key recommendations for policy improvement. Before considering augmenting or altering existing policies, a thorough evaluation of their implementation and performance through timely government-conducted surveys is imperative. Furthermore, making the evidence from these assessments' public would facilitate further research in the field.

Another significant issue is the inadequate interaction between stakeholders and policymakers in the realm of MSMEs. The lack of engagement has led to policymakers overlooking grassroots challenges faced by enterprises, such as Owner-Operated Enterprises (OAEs) and women-owned enterprises. These enterprises face unique challenges that differ from capital- and technology-intensive enterprises. Many policies focus on technology upgrading, neglecting OAEs and women-led enterprises that may not be as technology-intensive. To identify and address such issues more effectively in future policy formulation, increased participation of stakeholders, including representatives and lobbyists of MSMEs, is crucial. Establishing MSME-specific forums could serve as a foundational step for enhanced participation and improved policy formulation in the sector.

Way forward

The analysis of the MSME landscape in India faces several challenges stemming from the limitations of the available data. One notable concern is the limited sample size of the dataset, which may compromise its representativeness in the broader MSME sector. The inclusion bias towards firms adhering to standardized bookkeeping practices raises questions about the accuracy of assessing the value added by diverse enterprises, particularly micro-enterprises that may not follow such practices.

Additionally, the dataset is plagued by a significant number of missing values, posing a challenge to the reliability and comprehensiveness of the analysis. These gaps in crucial indicators can affect the accuracy of value-added calculations, emphasising the need for cautious interpretation of findings. Moreover, the methodological variations in the data collection employed by the Centre for Monitoring the Indian Economy (CMIE) introduce another layer of complexity. The proprietary nature of this methodology may deviate from national and international standards, requiring careful consideration in interpreting analysis results.

To address the limitations mentioned, in the study we have used Michael Porter's approach to understand SME cluster development. We used PLFS (Periodic Labour Force Survey) data, underscoring the rationale for this inclusion. Given the scarcity of regular data specific to MSMEs, we advocate for utilising available sources like PLFS data as an interim measure. In our opinion, until a comprehensive and regularly updated dataset becomes available, policymakers and researchers should give due consideration to this data, particularly for its potential in understanding cluster-led developments in India. The PLFS data facilitates a focus on state and district-specific requirements, providing valuable insights that can aid in formulating targeted strategies for the growth and development of the MSME sector. This approach acknowledges the current data constraints while emphasising the importance of leveraging existing resources to inform more effective policy decisions and research initiatives.

The broader issue of insufficient data on Indian MSMEs, particularly concerning employment trends, export contribution, and GVC integration, further compounds the challenges. The lack of robust data impedes effective study of these factors, posing a substantial hurdle for policymakers seeking to formulate strategies for the MSME sector. While the UDYAM database stands as the sole regularly updated source, its limitations in capturing detailed data on economic activity for employment, exports, and productivity restrict its utility. Furthermore, the existing databases, including UDYAM and Prowess, fall short in providing comprehensive insights into value addition, exports, and GVC integration, highlighting the necessity for their enhancement.

Addressing these limitations is crucial for guiding an urgent and comprehensive examination of the MSME sector. Specifically, improvements in the functionality of the UDYAM portal, such as incorporating cluster-specific data and addressing the absence of NIC-level data categorised by states, are essential steps. This enhancement is pivotal in establishing a foundation for more informed policy decisions and fostering the competitiveness of MSMEs in India.

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