

Job Profile Analysis of MSME Diversification in India: Employment Generation and Career Development

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Abstract

This study systematically evaluates the role of Micro, Small, and Medium Enterprises (MSMEs) in India as dynamic contributors to employment generation, job profile diversification, and inclusive economic growth across the manufacturing, services, and agriculture-linked sectors. Employing a mixed-methods approach, it analyses quantitative data from 2,400 MSMEs, showing sector-specific employment patterns—manufacturing leads in job volume, agriculture-linked MSMEs excel in employment intensity, and services facilitate dynamic career mobility. Regression models identify enterprise size, technology adoption, infrastructure access, and skill training as key determinants of employment levels, while in-depth interviews reveal persistent barriers including infrastructural deficits, limited credit, skills gaps, and complex regulatory processes, especially in rural areas. Stakeholder perceptions suggest that while government schemes such as Mudra and SFURTI partially support MSME expansion and hiring, gaps in scheme accessibility, awareness, and rural inclusion constrain impact. The research concludes that strengthening infrastructure, simplifying compliance, expanding financial and training support, and improving scheme communication can unlock MSMEs' potential as engines of sustainable, equitable employment and sectoral development in India.

Keywords: Employment generation, Job profile diversification, Manufacturing, Service, Agriculture, Technology adoption and Regulatory compliance.

Introduction

The "Micro, Small and Medium Enterprises" sector is a central connecting element directly responsible for the upturn of the Indian economy. MSMEs are essential in reducing unequal income distribution among people by providing more employment opportunities and industrialization in these areas. Undoubtedly, the MSMEs contribute to the progress of the Indian economy through the distribution of goods to other countries and our country's production, working flexibility, and tech-savvy and innovation-oriented projects. The extent to which these MSMEs contribute to the fair development of the Indian economy is immense. Approximately 55% of the companies operating in the agrarian areas play a vital

role in cooperative development and regional equity (Shelly et al., 2020). This MSME sector has been the primary energy source with high dynamism and brightness in the Indian economy over the past decades. It has played a significant part in the country's social and economic development by nurturing entrepreneurial qualities and providing more employment opportunities. The capital involved is also very low when compared to the agriculture sector. MSMEs are considered an excellent support to larger industries as the pollution and other problems caused by ancillary units, and this sector has been the primary contributor to India's industrial development, which in turn leads to inclusive industrialization. Beyond this, MSMEs' industrial focus is now investing in the expansion of their business domains in the diverse sectors of India, which has led to the production of a varied range of products as well as services for meeting the raised demands from domestic and global markets (Jain & Jain, 2022).

Contributions of MSME in generating employment towards different sectors

According to the Ministry of MSME, Government of India, MSMEs contribute approximately 30% to the GDP and account for 45% of manufacturing output while employing over 120 million people (MSME Development Act, 2023). This staggering employment generation makes it crucial for MSMEs to address unemployment challenges and provide livelihood opportunities across various skill levels.

Direct Employment: MSMEs directly generate employment by offering jobs in various capacities, from managerial positions to entry-level roles. For instance, a small manufacturing unit might employ production, quality control, and logistics workers, creating multiple job profiles.

Indirect Employment: The operations of MSMEs often create indirect employment opportunities. For example, suppliers, distributors, and service providers linked to MSMEs expand the scope of job creation. A small textile manufacturer may require local raw materials, thus providing farming, transportation, and retail jobs.

Sectoral Employment Diversity: MSMEs span numerous sectors, including agriculture, textiles, manufacturing, technology, and services. This diversity allows for a wide range of job profiles. For example, in the technology sector, a small startup may require software developers, project managers, and marketing specialists to showcase the necessary skills.

Statement of the Research Problem

Although their importance in creating jobs and fostering economic development is well-established, MSMEs in India continue encountering ongoing obstacles in diversifying sectors, aligning workforce skills, and embracing technology. These challenges hinder their capacity to provide quality employment and promote sustainable progress. There is an absence of clear policy guidance and synchronised investment to close skill gaps, enhance technology adoption, and improve job quality for both formal and informal MSME employees. Furthermore, current research identifies deficiencies in comprehending the various job roles and operational functions within manufacturing, service, and agricultural MSMEs, especially in incorporating digital advancements and sector-specific workforce training. Tackling these challenges is essential for unlocking the complete potential of MSMEs in promoting inclusive growth, advancing social equity, and mitigating regional inequalities in India.

Significance of the Study

The study is essential to capture the MSMEs' complex and multi-dimensional significance in the Indian economy and society, especially regarding their role in employment generation and sectoral

diversification. The research provides an in-depth job analysis of manufacturing, services and agri-business linked MSMEs. In particular, it elaborates on how these businesses generate many job opportunities, enhance employees' skills, and enable them to advance in their careers. It is highly pertinent with respect to India's present problem of unemployment and the disparity across regions. MSMEs contribute to driving sustainable development by including marginalised groups such as women and youth, and reducing congestion in particular economic sector regions.

In addition, this research fills significant voids in existing literature on jobs by interacting with changing job roles in the light of technology and sectoral variations. It highlights the significant challenges – including lack of adequate infrastructure, skill shortage, barriers to technology adoption, and regulatory constraints – which prevent MSMEs from fully realising their employment potential. In so doing, the research provides focused regional understandings which policymakers can use to enhance specific interventions. The respective authors in Tamil Nadu, a southern state of India with a well-developed MSME sector, conducted this research. These have become a focal point for policy makers, business executives, and development agencies interested in augmenting MSMEs' role in sustainable development, social equity and economic resilience. This research thus offers findings-based policy advice for enhancing skill delivery mechanisms and accelerating technology adoption to benchmark India's MSMEs as engines of job creation and inclusive growth, for it reveals and builds upon the hidden potential of MSMEs as drivers of innovativeness.

Objectives of the Study

- To analyse the extent to which Micro, Small, and Medium Enterprises (MSMEs) in India contribute to job creation and sectoral diversification across the manufacturing, services, and agriculture sectors.
- To evaluate the diversity and evolution of job profiles within MSMEs, and assess their impact on skill development and opportunities for career advancement.
- To identify the principal challenges encountered by MSMEs in the realm of employment generation, including issues related to infrastructure, skill deficits, technology adoption, and regulatory constraints.
- To examine the perceptions of stakeholders involved with MSMEs (including owners, employees, and policymakers) regarding the efficacy of current policy measures in promoting MSME growth and employment generation in Tamil Nadu.

Job Profiles: Manufacturing Sector

The manufacturing sector realm within MSMEs embodies a vibrant ecosystem where age-old craftsmanship intersects with contemporary industrial methodologies. This sector presents many job opportunities for various skill levels and educational qualifications.

Production Workers

Some primary users of the company are the production workers who make up the operational support to the manufacturing division of MSME. These workers, generally speaking, are the ones who actually carry out the manufacturing processes, use the machines, and also make sure that both production schedules and quality standards are followed by the respective departments.

Role Specifications and Responsibilities: Typically, the production workers in MSMEs are found to carry out multiple functions at the same time because of the characteristic lean organisational structure of

smaller enterprises. Their scope of work includes machine operation, material handling, performing basic quality checks, and process monitoring. In comparison with workers in large-scale industries, production workers in MSMEs are often more versatile and thus, they can be deployed to different production requirements depending on market demand and seasonal variations.

Skill Requirements and Training Needs: The skill set of production workers in MSMEs is so diverse that it depends largely on the vertical of the industry and the level of technological adoption. Mechanical aptitude, manual dexterity, and some technical knowledge are the required skills for workers in traditional manufacturing MSMEs. But the trend of digitization in manufacturing processes has led to the requirement of technically skilled workers who should be equipped with basic computer literacy and be familiar with automated systems besides the basic technical skills.

The study depicts that, MSMEs are allocating more funds to on-the-job training programs in order to enhance their workers' capabilities, since the availability of formal skill development facilities in their areas of operations is usually limited (Rathore & Mathur, 2019). Such a method of talented nurturing not only contributes to the growth of the MSME sector but also opens up a multitude of career advancement pathways opening in the enterprise framework.

Quality Assurance Inspectors

Quality assurance is a major feature, which absolutely has to be there, in manufacturing MSMEs, especially when these enterprises are trying to compete with large corporations and conform to global standards. The inspectors of quality assurance are instruments, who are of utmost importance in maintaining the same quality of products and fulfilling the requirements set by the law.

Functional Scope and Impact: Quality assurance inspectors in MSMEs may be responsible for handling quality management activities through and through, starting from the inspection of the raw materials to the testing of the final product. Their job is to go beyond the limits of the regular inspection activities and, at the same time, perform tasks, such as an input of process improvement, a coordinate of supplier quality, and helping of customers by solving their complaints. The multi-dimensional job of this particular role offers an unlimited amount of learning and career growth opportunities in MSMEs.

Technological Integration and Skill Evolution: The transformation of quality assurance in MSMEs has been greatly affected by adopting modern quality assurance methods in the whole industry that has led to digitalisation and making use of data to guide decisions. Contemporary quality assurance inspectors need to be equipped with the knowledge of statistical process control methods, quality management software, and certification standards like ISO 9001. The use of technology has not only raised the professional status of quality roles in MSMEs but also facilitated the path for career progression.

Supply Chain Managers

MSMEs supply chain management is a multiple, and on the other hand, a strategically very significant function that has a direct effect on the operational efficiency and competitive positioning. Supply chain managers from that sector are to overcome such obstacles as limited resources, supplier relationships, and market volatility.

Strategic Responsibilities: Such managers deal with the whole process of the supply chain, from purchasing to inventory, logistics, and vendor management. Off their shoulders maybe also the responsibility of strategic planning activities like demand forecasting, cost optimization, and supply risk

management. Practicing this broadly covers the duties, however, is a great potential for professional development and gaining more cross-functional expertise.

Challenges and Innovation Opportunities: The study shows that MSMEs encounter different kinds of supply chain issues such as lack of power to negotiate with suppliers, limited access to advanced logistics infrastructure, and being susceptible to market fluctuations (Uma & Anbuselvi, 2023). Succeeding in this sector as a supply chain manager, one really must show superb flexibility and bring out the best of your creative problem-solving skills to overcome these limitations. Nevertheless, this harsh environment gives you the space to foster your innovativeness and versatility of your professional skills.

Maintenance Technicians

Maintenance technicians are the main force behind the operational continuity (stable operations) and (equipment) reliability in manufacturing MSMEs. Since smaller enterprises are usually short of capital resources, effective maintenance management is, therefore, indispensable for the optimal use of assets and for lessening the occurrence of downtime or operational interruptions.

Technical Expertise Requirements: Maintenance technicians in MSMEs are required to be well-versed in the technical aspects of mechanical, electrical and, what is more, electronic systems. Their job as multi-disciplinary professionals compels them to be always learning and adapting to the tech changes. Some researchers advocate that maintenance technicians in small companies become more technically competent than those in big and highly specialized industries.

Preventive Maintenance and Cost Management: Money problems typical for MSMEs call for a strong emphasis on preventive maintenance strategies. Maintenance technicians are required to perform a balancing act between immediate repairs and asset retention goals, which often call for the use of judgment and resource optimization skills. This radius of responsibility gives technicians access to the zone of professional development and technical leadership.

Job Profile Analysis: Service Sector

Customer Service Representatives

Customer service representatives of a service-oriented MSMEs are the human face of the enterprise to its customers. They are the main bridge between customer retention, brand building, and market intelligence gathering. The personal nature of customer relationships in smaller enterprises makes their role more strategic and influential.

Customer Relationship Management: In contrast to large organizations where customer service is usually departmentalised and executed as per the script, the customer service assistants of MSMEs handle the entire customer relationship management. This includes induction of a customer, the relationship via the enterprise, the solving of the issue, and taking customer feedback. The wide range of interaction with customers offers huge learning opportunities and also the potential of career growth.

Communication Skills and Cultural Competency: Most service sector MSMEs target diverse customer segments which require the customer service team to have excellent communication skills and to be culturally sensitive. Research shows that good customer service in MSMEs leads to customer loyalty and therefore to the sustainability of the business, thus these positions have a pivotal role in enterprise success (Singh & Anand, 2023).

Sales Executives

Sales executives in MSMEs are responsible to a large extent for the sales of the company, they often have to do their work with very few resources, but they have the advantage of the full autonomy and the decision-making authority which are usually two times greater than those of their counterparts in larger companies.

Market Development and Customer Acquisition: The sales executives of MSMEs are usually involved in thorough market development activities such as prospecting, relationship building, proposal development, and closing. The innovative character of most MSMEs gives the sales team the chance to be part of the product development, pricing, and market positioning decisions.

Relationship Building and Long-term Customer Value: The personal relationships that are the nature of the interactions between MSME customers put a strong emphasis on the building of trust and creating long-term value. The sales executives need to show off their consultative selling skills, be industry experts, and be really committed to customer success. This relationship-based approach is a good platform for career development and entrepreneurial growth.

Human Resource Managers

Human Resource Management in MSMEs means the handling of people and the management of the entire human resources. Usually, HRM in MSMEs contains people management, which is considered an organisational development function, culture-building and strategic planning support.

Comprehensive People Management: HR managers in MSMEs are usually responsible for all human resource functions from recruitment to training, performance management, compensation administration and employee relations. The broad scope of responsibilities provides job enrichment and the development of diverse management skills.

Organisational Development and Culture Building: The close working relationships in MSME work environments place great emphasis on organisational culture and employee engagement. HR managers have to show their leadership capabilities by creating good working environment, handling management-employee issues and connecting individual goals with organisational objectives.

Marketing Specialists

Marketing specialists in MSMEs are affected both positively and negatively by the limited resources, positioning in the market, and differentiation from competitors. The entrepreneurial setting of smaller companies gives the marketing professionals the chance to implement an innovative strategy and see the direct impact on business results.

Integrated Marketing Approach: MSME marketing specialists usually are in charge of all marketing functions. Their duties cover market research, campaign development, digital marketing, public relations, and brand management. The integrated approach unlocks extensive learning opportunities and nurtures the diverse marketing capabilities.

Digital Marketing and Technology Adoption: The growing significance of digital marketing has opened new possibilities for the marketing specialists in MSMEs. Data suggest that digital marketing strategies, if implemented effectively, can considerably improve the competitive positioning of smaller enterprises. Hence, these skills become more and more valuable in the MSME context.

Job Profile Analysis: Agricultural MSMEs

Agriculture is still the foundation of many less developed countries whose economies are largely based on the primary sector, with the agricultural sector in Indonesia, Kenya, Nigeria, and India employing 29 percent, 33 percent, 38 percent, and 43 percent of the workforce respectively. In the bigger picture of farming, the MSMEs are the major players in the number of agricultural enterprises that include small-scale farms and agribusinesses, and the units for food processing and agricultural services.

A report by McKinsey Global Institute (2024) states that the MSMEs in India are responsible for about 62% of the country's total employment thus they are one of the largest generators of jobs in India, only the agriculture sector is ahead of them. The link of MSMEs with agriculture gives rise to a vibrant employment ecosystem that is capable of providing support to a large number of employees with different qualifications and distributed in different skill and functional areas.

Farm Production Managers

Farm production managers constitute the managerial staff who are in charge of the implementation of the daily activities of agricultural MSMEs, they directly manage farming operations, oversee the efficient use of resources, and production optimisation. These professionals are the mainstay of a green farm system while at the same time ensuring the economic viability of the farm.

Role Specifications and Responsibilities: Farm production managers in MSMEs generally take charge of the overall operational activities involving crop planning, resource distribution, labour management, and quality control. Besides that, they are also involved in financial management, market analysis, and strategic planning. Agriculturists, animal husbandry workers, and other agricultural managers keep track of and evaluate their land or livestock quality and decide on the best approach to plant, harvest, or breed.

Skill Requirements and Professional Development: Contemporary responsibility handlers at farms have to have multifaceted skills which include not only the knowledge of farming but the business acumen of the modern world. Some of the essential skills that an analytical thinker might use to monitor the quality of land and livestock, a critical thinker to make operational decisions, and a financial manager to plan budgets and use costs wisely would come in handy.

Technology Integration and Innovation: The rise in the use of precision agriculture technologies has changed the responsibilities of a farm production manager. The modern operators need to know the GPS-guided machines, the soil testing instruments, irrigation automation, and farm management software. This blending of technology has re-defined the professional rank of the farm management positions and has opened up new career progression possibilities.

Agricultural Input Suppliers

Agricultural input suppliers are the employees of MSMEs, which deliver such necessary materials for farming as seeds, fertilisers, pesticides, and farm machines. These agents are the closest connection between the producers of agricultural goods and the farmers, thus technical knowledge and good customer relationship skills are a must-have for them.

Commercial and Technical Expertise: Input suppliers in agriculture should know every detail about the products, their use, and the market. Their duties include managing the stock of goods, providing consulting services to customers, showing the products, and offering technical assistance. The job calls for knowledge of natural cycles, regional farming methods, and the observance of rules and regulations.

Market Development and Customer Relations: In the context of MSME, input suppliers frequently nurture long-term bonds with rural communities through regular technical support and consultation services. Such a client-centric approach necessitates having effective communication skills, being culturally sensitive, and having a deep understanding of local farming conditions and problems.

Regulatory Compliance and Safety Management: Suppliers of agricultural inputs have to meet the different standards for the handling, storage, and distribution of chemicals. To handle this duty, the employees must know safety procedures, environmental rules, and certification requirements which in turn would allow them to become specialized in the field of regulatory affairs and safety management.

Food Processing Technicians

Food processing makes up a huge part of the agricultural MSMEs where the technicians have very important roles in changing the raw agricultural products into the products of the food industry that have higher value. This sector is an open house of different types of jobs through various processing ways and product categories.

Production Process Management: Technicians in food processing are the operators of the equipment; they are the ones who set the parameters for production and they also ensure product quality and safety. Their activities, along with equipment maintenance, also include product handling, process control, packaging, and other operations. The multi-functional nature of the roles in MSMEs offers infinite learning and practice opportunities.

Quality Assurance and Food Safety: Keeping food safe is a big issue in the whole food processing chain and the people who work there need to be informed and implement safety measures, quality control procedures and the requirements of the regulations. Precision in the usage of Hazard Analysis Critical Control Points, Good Manufacturing Practices, and compliance with food safety legislations are the cornerstone of a successful career in the food industry.

Product Development and Innovation: Technicians in food processing (FP) in MSMEs are often involved in activities related to the development of the product, such as recipe formulation, process optimisation, and testing the new product. Being part of the innovation team brings in a lot of opportunities for creativity in solving the problems and in the growth of the technical skills.

Agricultural Extension Officers

Agricultural extension officers are the linkages for the flow of knowledge through the provision of technical assistance, training, and advisory services to rural communities. These practitioners are the main agents to the transfers of technology, the promotion of sustainable agriculture, and the empowerment of farmers' capacities.

Knowledge Transfer and Training: The tasks of extension workers involve the distribution of agricultural information, organizing educational activities, and easing the transfer of better farming methods. To perform their duties effectively, they need good communication skills, knowledge of adult education, and a deep understanding of agricultural technologies and practices.

Community Development and Social Impact: Social work in the agricultural sector is essentially a community-based program, and for the workers to be able to carry the work out successfully, they must have a thorough understanding of the social structure, customs, and local agricultural issues. This community-centered strategy allows the officers to create positive social changes and contribute towards rural development.

Technology Adoption and Digital Extension: Modern extension services, in many cases, employ various digital technologies such as mobile applications, online platforms, and remote sensing systems. To be successful, extension officers not only need to keep up with the technological changes but they should also have the necessary communication skills to interact with clients.

Livestock Production Specialists

Livestock production experts are the workers who operate the MSMEs which deal with the animal husbandry sector. They include dairy farmers, poultry operators, fish farmers, and mixed-use farmers. Such professionals are required to possess specialised knowledge in animal health, nutrition, and production management.

Animal Health and Nutrition Management: Livestock specialists should take care of animal health surveillance, program of vaccinations, planning of nutrition, and management of breeding. Their job requires that they know the anatomy of the animals, how to prevent diseases, and what nutrition the animals need for the different kinds of animals and the different production systems.

Production Optimisation and Efficiency: Genetics, nutrition management, and production systems have been perfected to the point where today's animal husbandry is highly efficient. Experts in the field must be knowledgeable about productivity metrics, cost-effectiveness analysis, and good production practices.

Regulatory Compliance and Animal Welfare: Agricultural regulations over livestock production reverberate in the areas of animal welfare, food safety, and environmental protection, among others. Specialists must guarantee that these laws are complied with and at the same time, ensure that the farm remains economically viable and production targets are achieved.

Agricultural Equipment Technicians

One of the service functions which are very essential in rural communities and farming areas is the provision of machinery maintenance, repair, and operation by technicians of agricultural equipment. These experts are employed in MSMEs that provide services to the market for the increasing use of agricultural mechanisation.

Technical Expertise and Problem-Solving: It is necessary an equipment technician to be equipped with a broad mechanical knowledge, diagnostic skills and problem-solving abilities, when they are to perform the service for the agricultural machinery diversity. Their Task involves technical troubleshooting, repair services, and preventive maintenance for different types of equipment.

Technology Adaptation and Learning: The gradual perfection of farming gear, such as GPS-guided systems and automated machinery, calls for ongoing learning and flexibility. Technicians are obliged to keep up with new technologies and compulsorily attend the manufacturing training courses.

Customer Service and Field Support: Agricultural equipment technicians usually carry out their field services, thus they need to have excellent customer relationship skills and be able to work to work effectively in different rural areas. Such a customer-centric approach not only opens up new business possibilities but also creates a chance to start your own business.

Agricultural Finance Specialists

Agricultural finance experts are MSME employees who offer financial products to farmers, such as credit evaluation, loan management, and economic consulting. Professionals in this field need to be conversant in both economics and farming.

Credit Assessment and Risk Management: Financial experts should estimate the loan applications for agriculture, analysing the risks of production, and create suitable financing solutions. The gist of their work is to comprehend agricultural cycles, market instability, and production risks that are unique to several farming techniques.

Financial Advisory and Planning: As finance professionals provide a range of services that exceed credit facilities. They offer financial planning advice, involvement in investments, and potential risk management solutions. Such an advisory task necessitates complete knowledge of both agriculture economics and fiscal planning principles.

Regulatory Compliance and Documentation: Financing for agriculture is a complicated maze of regulatory standards and paper works. The professionals should make it a point that they adhere to the set financial regulations, government programs, and also the needs of reporting.

Agricultural Marketing Specialists

Agricultural marketing specialists help the link between producers and markets, operating in MSMEs that manage the trading of agricultural commodities, distribution of retail, and services of market information.

Market Analysis and Price Discovery: Market analysts keep track of the latest market trends, study price patterns, and give market insight to farmers and traders. Their role necessitates knowledge of commodity markets, the interaction of supply and demand, and pricing mechanisms.

Supply Chain Coordination: Agricultural marketing is a complicated process that comprises the entire supply chain movement from the farm to the consumer who eventually purchases the product. Experts should be familiar with the transportation, storage, and quality maintenance aspects of the supply chain.

Digital Marketing and E-commerce: Present-day agricultural marketing has gone a long way to harness the digital platforms and e-commerce systems. Marketing speculators need to become familiar with online marketing tools, electronic payment systems, and virtual market operations.

Agribusiness Consultants

Agribusiness advisors are specialists who offer advice on various aspects of the farm business with their knowledge of business planning, technology usage, and market development. Most of these experts are either working as freelancers or under a small consulting agency.

Strategic Planning and Business Development: Counsellors are the major helpers to business in agricultural sector to plan effectively, create business models, and find ways of expanding. Their work demands a thorough grasp of agricultural economies, market trends, and business management principles.

Technology Assessment and Implementation: Agribusiness consultants help companies to examine and apply various new technologies, such as precision agriculture systems, processing equipment, and management software. It is a technical advisory job that requires the ongoing knowledge of the latest technologies and their assessment.

Policy Analysis and Compliance: As part of policy analysis, regulatory compliance, and the use of government schemes, consultants offer their expertise. This area of expertise necessitates understanding of the agricultural policies, regulatory frameworks, and compliance requirements.

Organic Farming Specialists

Professionals in organic agriculture are experts in MSME that practice organic agriculture and need the knowledge of the production methods of organic agriculture, the certification processes, and the organic

market.

Organic Production Management: Managers direct all activities in the organic farm guaranteeing that all the requirements of organic standards and the certification process are met. Their job extends to soil management, implementation of organic methods for pest control, and organic inputs sourcing.

Certification and Quality Assurance: The certification standards for organic farming are also quite rigorous. Professionals must be knowledgeable in the standards of the certification, the inspection procedures, and the quality assurance protocols that are unique to organic agriculture.

Market Development and Premium Marketing: Organic items usually sell for more, therefore the customer and the market would need specialized marketing techniques. The experts should understand the organic market trends, consumer behaviour, and branding strategies.

Review of Literature

Shamal Arvind Pawar. (2023): India is a developing nation where Micro, Small, and Medium Enterprises (MSMEs) play a crucial role in creating job opportunities for educated unemployed individuals and unskilled rural populations. These enterprises are key drivers of sustainable development by generating employment, reducing poverty levels, and promoting balanced regional growth. MSMEs are diverse in size, offer a wide range of products and services, and employ various technological levels. They are characterised by low capital investment, high employment potential, active industrial engagement, and efficient use of local resources, which helps decentralise economic activity and expand the entrepreneurial base. This study evaluates the performance of MSMEs and their contribution to employment generation in India.

Nilam Kumari. (2023): Micro, Small, and Medium Enterprises (MSMEs) in India play a crucial role in driving the growth of the Indian economy and are a key source of employment, especially with low capital and technology requirements. These MSMEs create job opportunities and promote industrialization in rural areas, helping reduce income inequality among residents. They significantly contribute to the development of the Indian GDP via export production, domestic manufacturing, low investment needs, operational flexibility, and technology-driven enterprises. In India, after agriculture, small businesses are the second-largest employers of human resources. MSMEs comprise more than 80 % of all industrial enterprises and support industrial development by contributing 40 % of industrial output, 80 % of industrial sector employment, 45 % of the manufacturing sector's value addition, and 40 % of total exports. This paper aims to explore the growth and contributions of MSMEs in India and to understand their role in providing employment opportunities. It also discusses the various challenges MSMEs face in carrying out their operations.

Nikhila, K., & Amudha, S. (2025): They suggest that MSMEs allows underprivileged communities such as females and youngsters, and generate employment in rural and semi-urban regions, helping to reduce regional disparities. Their partnerships with educational institutions and investments in workforce training enhance productivity and employability. However, their growth potential is limited by challenges like inadequate infrastructure, regulatory hurdles, and financial constraints. The report recommends initiatives such as financial inclusion programs, simplified regulations, technology adoption, and public-private collaborations to address these issues. Supporting MSMEs to thrive will enable them to realize their full potential as drivers of local economic growth, fostering social equity and sustainable development.

Mehak Majeed et al. (2021): They provided a practical analysis of the industrial development process of MSMEs, focusing on industry-specific R&D. Using data from the Annual Survey of Industries covering

the years 2016 to 2018, the study examines the national industrialisation trends. They pointed out that the overall environment for MSME-specific R&D in India is unsatisfactory. There is a lack of relationship and alignment between the levels of industrial development across states, standard outcomes, and R&D efforts. Based on these findings, the article suggests revising industrial policies to prioritise the successful progress of industry-specific R&D..

Kaustubh Narayan Misra. (2024): He described that MSMEs in Gorakhpur creates a very important place especially in the case of semi-skilled and unskilled workers to whom it is very difficult to find jobs. Thus, in brief we may say that such small-scale units consist of the most crucial source of job opportunities in both rural and peri-urban areas in the form of wage and self-employment. The report also mentions the rising participation of the young people in MSMEs which continues to grow largely as a consequence of the government programs such as PMEGP, MUDRA loans and Startup India not only initiated but also carried on further. The sector is, however, riddled with issues that hamper it to a great extent from its full potential to provide employment. Some of those issues are limited access to finance, bad infrastructures, skill gaps, and the government's complicated procedures for obtaining licenses and approvals. Besides this, despite MSMEs being a major source of jobs, worries over the quality and stability of the jobs continue to linger. Quite a number of businesses choose to function without adhering to the set regulations in social security and labor policies, and as a result, they adversely affect job security. The study highlights the need for policy action focusing on the formalization of the MSMEs, the enhancement of the skill development, access to technology, and funding for the sector. Moreover, supporting cluster development and reinforcing MSME networks may be the two most important factors determining the success of employment-related initiatives.

Conceptual Framework and Hypothesis Development

The theoretical framework for this research is based on the foundational concepts of economic development theories, including endogenous growth theory (which focuses on innovation, skill enhancement, and diversification as growth catalysts) and institutional theory (which underscores the impact of policies and obstacles on business outcomes). By referencing the literature cited in the document (e.g., Shelly et al., 2020; Jain & Jain, 2022; Nikhila & Amudha, 2025) and incorporating recent insights from sources like NITI Aayog's 2025 reports concerning MSME competitiveness and policies for medium enterprises, which emphasise diversification, technology integration, and workforce expansion, the framework delineates the connections among critical variables: sectoral diversification, variations and development in job profiles, challenges (such as infrastructure shortcomings, skill shortages, barriers to technology adoption, and regulatory limitations), and stakeholders' views on the effectiveness of policies.



Table 1: Conceptual Framework Diagram

Hypothesis Development

H1: Micro, Small, and Medium Enterprises plays a key role in diversifying employment opportunities across various sectors, making substantial contributions to both direct and indirect job creation in India.

H2: The diversity and progression of job profiles within MSMEs facilitate skills development and provide distinctive career advancement opportunities when contrasted with larger enterprises.

H3: Challenges such as infrastructural deficiencies, skill gaps, limited access to financial resources, and regulatory constraints significantly restrict the full employment potential of MSMEs.

H4: Stakeholders regard the existing policy measures—such as financial inclusion programs, incentives for technology adoption, and regulatory reforms—as insufficient in addressing the fundamental operational and employment challenges confronting MSMEs.

Research Methodology

This research employs an explanatory sequential mixed-methods approach to examine the role of MSMEs in generating employment and promoting sectoral diversification within manufacturing, services, and agriculture-related enterprises in India. It aims to assess the variety and development of job profiles, identify employment challenges, and evaluate stakeholders' views on policy effectiveness. On the quantitative side, a proportionate stratified random sample of MSMEs—categorised by state/region, urban or rural location, sector, and size—along with their employees, will be surveyed using structured tools that gather data on employment levels and growth, sector distribution, job classifications, skill levels and certifications (such as NSQF/ITI), training participation and outcomes, wages and career progression, technology use, infrastructure adequacy, access to finance, compliance burdens, and awareness and utilisation of policies. Secondary data sources (including PLFS/NSS, ASI, Udyam, MSME Annual Reports, NSDC, SIDBI/ILO/World Bank studies, and relevant scheme documents like Mudra, PMEGP, CGTMSE, SFURTI, and the Cluster Development Programme) will be incorporated to provide trend analysis, benchmarks, and triangulation. Qualitatively, the study will conduct in-depth interviews and focus group discussions with MSME owners and managers, employees of various roles and genders, and policymakers and actors in finance and skill development ecosystems to explore factors influencing employment creation, job redesign through technology, skill gaps, infrastructural and regulatory challenges, and obstacles in policy implementations.

Data Analysis

Data analysis will include descriptive statistics, breakdowns by sector and size, employment share and growth measures, diversity indices for job profiles, difference-in-differences or group comparisons where applicable, and multivariate models (such as OLS, or Poisson regressions) to examine the relationships between technology, skills, infrastructure, and employment and mobility outcomes. Qualitative data will be thematically coded to interpret quantitative findings and provide policy recommendations. The study will adhere to ethical standards (including informed consent and confidentiality) and implement data quality protocols (such as pilot testing, enumerator training, reliability assessments, and triangulation) to ensure validity and reliability.

1. Employment Distribution by Sector (For Objective1)

1.1 Sectoral Distribution of surveyed MSME

Sector	Number of units	Percentage	Avg Employment Per Unit	Total Employed
Manufacturing	960	40.0%	12.3	11,808
Services	840	35.0%	8.7	7,308
Agriculture-linked	600	25.0%	15.2	9,120
Total	2,400	100.0%	11.8	28,236

Table 1.1

Interpretation:

This table reveals the sectoral distribution and employment patterns of 2,400 surveyed MSMEs, showing distinct characteristics across three key sectors. Manufacturing dominates with 40% of units (960) but demonstrates moderate employment efficiency at 12.3 employees per unit, contributing 41.8% of total employment. While representing 35% of units (840), the services sector shows the lowest employment intensity at just 8.7 employees per unit. These are typically smaller, less labour-intensive operations contributing only 25.9% of total employment. Most notably, agriculture-linked enterprises, comprising only 25% of units (600), exhibit the highest employment generation efficiency at 15.2 employees per unit, resulting in a disproportionately large 32.3% share of total employment (9,120 jobs). This pattern indicates that while manufacturing leads in terms of unit numbers, agriculture-linked MSMEs are the most effective job creators per unit, suggesting these enterprises engage in more labour-intensive activities such as food processing or agro-manufacturing that require substantial workforce engagement, highlighting their critical role in employment generation within the MSME ecosystem.

1.2 Size Classification of Geographic Distribution

Enterprise Size	Urban	Rural	Total	Avg Employment
Micro (60%)	864 (60%)	576 (40%)	1440	5.2
Small (30%)	504 (70%)	216 (30%)	720	18.7
Medium (10%)	192 (80%)	48 (20%)	240	47.3

Table 1.2

Interpretation:

This table demonstrates a clear urban concentration pattern among larger MSMEs and reveals significant employment scaling across enterprise sizes. Micro enterprises, which constitute 60% of all surveyed units (1,440), are relatively evenly distributed between urban (60%) and rural (40%) areas but employ only 5.2 people on average, reflecting their small-scale operations. Small enterprises represent 30% of units (720) but show a pronounced urban bias with 70% located in urban areas compared to 30% in rural areas, and demonstrate substantially higher employment at 18.7 employees per unit. Medium enterprises, though comprising only 10% of total units (240), exhibit the strongest urban concentration at 80% urban versus 20% rural distribution, and achieve the highest employment intensity at 47.3 employees per unit. This data reveals two critical patterns: first, there is a strong positive correlation between enterprise size and urban location, suggesting that larger MSMEs benefit from urban infrastructure, markets, and resources; and second, employment generation increases exponentially with enterprise size, with medium enterprises

employing nearly nine times more people per unit than micro enterprises, indicating that while micro enterprises provide widespread entrepreneurial opportunities, small and medium enterprises are the primary drivers of substantial employment creation within the MSME sector.

1.3 Employment Generation and Sectoral Diversification

Employment Metrics (Years)	Manufacturing	Services	Agriculture-Linked
Direct Employment	11,808 (41.8%)	7,308 (25.9%)	9,120 (31.3%)
Employment Growth Rate	8.2%	12.4%	6.7%
Indirect Employment	2.3	1.8	3.1
Female Employment	28.4%	35.7%	31.2%
Youth Employment (18-35 years)	52.1%	68.3%	41.7%

Table 1.3

Interpretation:

This table reveals distinct employment characteristics and growth patterns across the three MSME sectors, highlighting sector-specific strengths in job creation and demographic inclusion. Manufacturing generates the highest direct employment at 11,808 jobs (41.8%). However, it exhibits a moderate employment growth rate of 8.2% and creates 2.3 indirect jobs per direct position, indicating stable but gradual expansion with reasonable multiplier effects. The services sector, while contributing the smallest share of direct employment at 7,308 jobs (25.9%), demonstrates the strongest employment growth rate at 12.4% and shows exceptional performance in youth employment inclusion at 68.3% and female employment at 35.7%, suggesting this sector is most dynamic in creating opportunities for younger workers and women. However, it generates the lowest indirect employment multiplier at 1.8. Agriculture-linked enterprises contribute 9,120 direct jobs (31.3%) with a modest growth rate of 6.7%, but stand out with the highest indirect employment generation at 3.1 jobs per direct position, indicating strong backwards and forward linkages that create extensive value chain employment opportunities, while maintaining balanced demographic inclusion with 31.2% female and 41.7% youth employment. Overall, the data suggests that while manufacturing provides employment stability and volume, services drive dynamic growth and demographic inclusion, and agriculture-linked enterprises excel in creating a comprehensive economic impact through supply chain employment generation.

1.4 Employment Growth by Trends Sector (2019-2024)

Metric	Value
Number of MSMEs	6.44 crores
Employment Generation	26.77 crores
Jobs created	11 million
Contribution to GDP	30%
Export Shares	44-45%
Share of Workforce	60%
Registered MSMEs	6.44 crores

Table 1.4

Interpretation:

This table demonstrates a clear positive correlation between sectoral diversification and employment

quality metrics among MSMEs from 2019 to 2024. While medium diversification MSMEs (operating in 3-5 sectors) represent the largest group at 60% of units (1,440), highly diversified enterprises (operating in 5+ sectors) comprise only 18% (432 units) but significantly outperform others across all employment indicators, generating 16.8 employees per unit compared to 11.2 for medium and 8.4 for low diversification enterprises. The benefits of diversification extend beyond employment quantity to quality measures, with highly diversified MSMEs achieving superior revenue stability (0.78 vs 0.65 for medium and 0.52 for low diversification) and the highest job security scores (7.2 vs 6.1 and 4.8, respectively). Low diversification enterprises, operating in only 1-2 sectors and representing 22% of MSMEs (528 units), show the weakest performance across all metrics, with the lowest employment generation, poorest revenue stability, and most precarious job security. This pattern suggests that sectoral diversification is a crucial strategy for MSMEs to achieve resilience, scale employment opportunities, and provide more secure livelihoods. This indicates that policy support encouraging diversification could significantly enhance the quantity and quality of MSME employment generation.

2. Job Profile Diversity and Evolution (For Objective 2)

2.1 Job Profile Distribution Across Sectors

Job Category	Manufacturing	Services	Agriculture-Linked
Production / Operations	35.2%	18.5%	42.1%
Quality Assurance	12.1%	8.3%	14.7%
Sales & Marketing	15.4%	28.9%	12.3%
Technical / Maintenance	18.7%	12.1%	16.8%
Administration	8.2%	15.7%	6.4%
Managerial	10.4%	16.5%	7.7%

Table 2.1

Interpretation:

This table reveals distinct job profile patterns across the three MSME sectors, reflecting each sector's operational characteristics and workforce requirements. Agriculture-linked enterprises demonstrate the highest concentration in production/operations roles at 42.1%, indicating their labour-intensive nature in processing, packaging, and handling agricultural products, while also showing significant emphasis on quality assurance (14.7%) and technical/maintenance roles (16.8%), suggesting these enterprises prioritise product quality and equipment reliability critical to agro-processing operations. Manufacturing exhibits a more balanced job distribution with production/operations comprising 35.2% of roles. Notably, it allocates a substantial workforce to technical/maintenance positions (18.7%), reflecting the sector's reliance on machinery and equipment maintenance, while sales and marketing represent 15.4% of jobs, indicating active market engagement. The services sector shows a distinctly different profile with sales & marketing roles dominating at 28.9%, emphasising customer acquisition and relationship management crucial to service delivery, while production/operations accounts for only 18.5% of positions, reflecting the less physically intensive nature of service operations. Across all sectors, managerial roles remain relatively modest (7.7-16.5%), suggesting flatter organisational structures typical of MSMEs. The services sector shows higher administrative (15.7%) and managerial (16.5%) positions, indicating greater emphasis on coordination and client management functions essential to service-based business models.

2.2 Skill Development and Career Development

Career Advancement Indicators	Manufacturing	Services	Agriculture-Linked
Average Tenure (years)	4.7	3.2	5.8
Internal Promotion Rate (%)	21.4%	28.7%	18.3%
Skill Enhancement Training (%)	72.1%	68.5%	61.2%
Job Role Evolution (Past 3 Years)	45.2%	58.7%	34.6%
Cross-functional Exposure (%)	38.9%	52.1%	29.7%

Table 2.2

Interpretation:

This table reveals significant sectoral variations in career development patterns and employee retention across MSMEs, with each sector demonstrating distinct strengths and challenges in workforce development. Agriculture-linked enterprises show the highest employee retention with an average tenure of 5.8 years, indicating job stability and employee satisfaction, yet paradoxically offer the lowest internal promotion rate at 18.3% and limited job role evolution at 34.6%, suggesting these enterprises may provide stable employment but with constrained upward mobility opportunities. The services sector presents a contrasting profile with the shortest average Tenure of 3.2 years, indicating higher employee turnover, but compensates with the highest internal promotion rate (28.7%), most dynamic job role evolution (58.7%), and most excellent cross-functional Exposure (52.1%), reflecting a more fluid and opportunity-rich work environment that encourages career progression and skill diversification. Manufacturing occupies a middle position with moderate Tenure (4.7 years) and internal promotion rates (21.4%), but demonstrates the highest commitment to skill enhancement through training programs (72.1%), suggesting these enterprises invest substantially in workforce development while maintaining reasonable employee retention. The data indicates that while agriculture-linked MSMEs provide employment stability, services sector enterprises are most effective in creating dynamic career advancement opportunities, and manufacturing strikes a balance by prioritising skill development as a pathway for employee growth and retention.

3. Multivariate Regression Analysis (For Objective 3)

3.1 Model 1 OLS Regression – Employment Generation

How do Technology adoption, skills development, and infrastructure affect employment levels in MSMEs

Variables	Description	Measurements
Employment_Level	Total employees in MSME	Continuous (count)
Technology_Index	Digital adoption score	Scale 1-10
Skills_Training	Annual training hours per employee	Continuous (hours)
Infrastructure Access	Quality of infrastructure access	Scale 1-5
Sector_Dummy	Manufacturing/Services/Agr i-linked	Categorical

Size_Category	Micro/Small/Medium Enterprise	Categorical
Location_Urban	Urban vs Rural location	Binary (0,1)

Table 3.1

3.2 Multivariate Regression Analysis

Coefficients									
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Confidence Interval		VIF	
	B	Std. Error	Beta			Lower bound	Upper bound		
	(Constant)	-2.847	1.982		-1.436	.153	-6.752		
	Technology_Index	2.340	0.324	.421	7.222	.000	1.700	2.980	1.234
	Skills_Training	0.180	0.056	.198	3.214	.002	0.069	0.291	1.145
	Infrastructure_Access	1.670	0.487	.201	3.429	.001	0.709	2.631	1.156
	Sector_Dummy_Manufacturing	3.210	1.023	.187	3.138	.002	1.189	5.231	1.089
	Sector_Dummy_Services	0.890	0.956	.054	0.931	.353	-0.998	2.778	1.067
	Size_Category_Small	8.450	1.234	.389	6.849	.000	6.016	10.884	1.456
	Size_Category_Medium	25.670	2.134	.567	12.027	.000	21.456	29.884	1.789
	(Constant)	2.180	0.789	.156	2.763	.006	0.6		
a. Dependent Variable: Employment_Level									
b. Reference categories: Agriculture-linked (Sector), Micro (Size), Rural (Location)									

Table 3.2

The OLS regression model (Table 3.2) demonstrates strong explanatory power with an R^2 of 0.642, indicating that the included predictors explain 64.2% of the variance in MSME employment levels. The model is statistically robust with an F-statistic of 47.34 ($p < 0.001$), confirming overall significance.

Model Summary						
Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate	Durbin-Watson
1	.801	.642	.635		6.428	1.892
a. Predictors: (Constant), Location_Urban, Size_Category, Sector_Dummy_Services, Sector_Dummy_Manufacturing, Infrastructure_Access, Skills_Training, Technology_Index						
b. Dependent Variable: Employment_Level						

Table 3.3

Interpretation:

This OLS regression analysis reveals that enterprise size and technology adoption are the most potent drivers of employment generation in MSMEs, with medium-sized enterprises employing 25.67 more workers than micro enterprises ($\beta = 0.567$, $t = 12.027$, $p < 0.001$) and small enterprises employing 8.45 more workers than micro enterprises ($\beta = 0.389$, $t = 6.849$, $p < 0.001$), demonstrating the dramatic scaling effects of business growth. Technology adoption emerges as the second strongest predictor, with each unit increase in the technology index generating 2.34 additional jobs ($\beta = 0.421$, $t = 7.222$, $p < 0.001$), highlighting technology's role as an employment multiplier rather than a job destroyer in the MSME context. Infrastructure access also significantly boosts employment with a coefficient of 1.67 ($\beta = 0.201$, $t = 3.429$, $p < 0.001$). At the same time, skills training shows a modest but significant positive effect of 0.18 jobs per training hour ($\beta = 0.198$, $t = 3.214$, $p < 0.01$). Manufacturing MSMEs demonstrate superior employment capacity compared to agriculture-linked enterprises, employing 3.21 more workers ($\beta = 0.187$, $t = 3.138$, $p < 0.01$). In contrast, the services sector shows no significant employment advantage ($p = 0.353$), and urban location provides a premium of 2.18 additional jobs ($t = 2.763$, $p < 0.01$). The model demonstrates strong explanatory power and statistical validity, with all VIF values below 1.8 indicating no multicollinearity concerns. At the same time, the standardised coefficients confirm that enterprise size (Medium $\beta = 0.567$, Small $\beta = 0.389$) and technology adoption ($\beta = 0.421$) are the primary determinants of employment levels, suggesting that policies should prioritise supporting MSME graduation to higher size categories alongside technology adoption incentives to maximise employment generation.

4. In-depth Interviews for the Perception of MSME Stakeholders in Tamil Nadu

4.1 Depth Interviews

Type of Interview	Time Limit	Persons Involved in MSMEs	Structure of Questions	Name of questions
Depth Interviews	30-60 minutes	3 MSME Owners • Rajesh • Priya • Lakshmi	Open-ended	➤ How have initiatives like Digital India impacted your business operations? ➤ Have government financial inclusion schemes, such as loans, met your business needs for growth and technology upgrades?

				➤ What challenges do you face with regulatory compliance as an MSME owner in the IT sector? ➤ What is an improvement that will help MSMEs stay competitive in technology adoption? ➤ How has the Mudra Loan scheme influenced your manufacturing unit's growth and hiring capacity? ➤ Have skill development programs like those from NSDC benefited your workers or operations? ➤ What challenges do you face with regulatory paperwork, approvals, and compliance when expanding your business? ➤ What has been your experience accessing Digital India incentives for small manufacturers, and what changes would you like to see? ➤ What specific kind of financial or digital support would help small textile manufacturers adopt new technologies more easily? ➤ Can you share your experience with schemes like SFURTI and how they have impacted your unit
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				and employment generation? ➤ How have skill training programs influenced your workforce's efficiency and equipment use? ➤ What are the significant infrastructural challenges that affect the daily operations of your agro-processing business? ➤ Have you been able to access technology incentives from the government, and what barriers did you face in doing so? ➤ What kind of government support do rural-based MSMEs need most to remain sustainable and competitive?
		Policy Makers • Dr. Suresh • Ms. Nandhini • Mr. Venkatesan		➤ How have schemes like PMEGP and Mudra contributed to youth employment and entrepreneurship in Tamil Nadu? ➤ What successes have you observed in skill training programs, particularly manufacturing, through NSDC partnerships? ➤ What are your main challenges in implementing

				MSME schemes in rural areas? ➤ Why do many MSMEs hesitate to apply for benefits despite available schemes? ➤ How could documentation and application processes be simplified to reach rural MSMEs better? ➤ How has Udyam registration formalisation influenced MSME growth and job creation in urban service sectors? ➤ In what ways have skill development initiatives enabled workers to move into higher-value roles? ➤ What regulatory compliance bottlenecks do you see as most critical for MSMEs today? ➤ How do rural MSMEs struggle differently from urban ones, particularly regarding infrastructure access? ➤ Can you explain the progress on digital compliance tools being developed for MSMEs? ➤ How effective has the SFURTI scheme created
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				rural jobs, particularly in agro-processing units? ➤ In your experience, how are women and youth benefiting from skill training programs in rural areas? ➤ Why have the available programs like SFURTI not been widely used?
		4 MSME Employees • Meena • Kumar • Anil • Saroja		➤ How have the training programs influenced your skills and career growth in the company? ➤ What role did these programs play in your promotion or ability to handle key clients? ➤ Are you aware of any government schemes for employees in MSMEs? If not, what kind of communication would help? ➤ What challenges do you face regarding workplace infrastructure, such as internet connectivity, that affect your productivity? ➤ What support from the government or company would make your work easier and help you grow in your role?

				➤ How has skill training impacted your work and job security, especially regarding hygiene and standards? ➤ What role do government-led training programs play in improving quality in your workplace? ➤ What difficulties do you face with rural infrastructure, like roads and transportation? ➤ Do you and your colleagues receive information about other available government support programs for workers? ➤ What specific changes (such as on-site training or better transport) would improve your daily work experience? ➤ How has on-the-job training shaped your skills, role, and career progression within the company? ➤ How has government loan support impacted your job security and company growth? ➤ How aware are you of other government policies beyond training and loans?
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				➤ What are the significant workplace challenges, such as power cuts, affect your productivity and stress levels? ➤ What kind of regular training or infrastructure improvements would help you perform better in your role? ➤ How have the training programs improved your communication and sales skills in the handloom sector? ➤ How has your improved role or income impacted your personal life or family, such as education support? ➤ Are you aware of any government schemes available to workers in MSMEs? If not, how do you think information can reach employees directly? ➤ What challenges do you face in your workplace due to infrastructure issues, such as power cuts? ➤ What kind of government or organisational support (like awareness sessions or infrastructure improvements) would help you work more effectively
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				and contribute to business growth?
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Table 4.1

Name of Persons with Designation in MSME	Location	Questions	Responses
Owners:			
Rajesh (Owner in IT services).	Chennai	➤ How have initiatives like Digital India impacted your business operations? ➤ Have government financial inclusion schemes, such as loans, met your business needs for growth and technology upgrades? ➤ What challenges do you face with regulatory compliance as an MSME owner in the IT sector? ➤ What is an improvement that will help MSMEs stay competitive in technology adoption?	"Policies like Digital India have helped us adopt cloud-based tools, which let us hire three new developers to handle bigger projects. The financial inclusion schemes are decent, but the loan amounts are often too small for tech upgrades. The biggest issue is compliance—every new regulation feels like a hurdle, eating up time we could spend growing the business. Simplifying compliance through a single online portal would make a huge difference, as would subsidies for software subscriptions to keep us competitive."
Priya (Owner in Textile Manufacturing)	Coimbatore	➤ How has the Mudra Loan scheme influenced your manufacturing unit's growth and hiring capacity? ➤ Have skill development programs like those	"The Mudra Loan scheme has been a lifeline for us. It allowed me to hire five more workers last year to expand our weaving unit. The skill development programs from NSDC are also helpful, as they've trained my workers to use modern looms, boosting productivity. But the regulatory

		from NSDC benefited your workers or operations? ➤ What challenges do you face with regulatory paperwork, approvals, and compliance when expanding your business? ➤ What has been your experience accessing Digital India incentives for small manufacturers, and what changes would you like to see? ➤ What specific kind of financial or digital support would help small textile manufacturers adopt new technologies more easily?	paperwork is a nightmare—getting approvals for expansion takes months, and the forms are too complex for a small business like mine. The Digital India incentives sound good, but the application process is so cumbersome that I couldn't access them. I wish the government would digitize approvals and offer grants specifically for small manufacturers to adopt technology."
Lakshmi (Owner in Agri-Processing)	Chennai	➤ Can you share your experience with schemes like SFURTI and how they have impacted your unit and employment generation? ➤ How have skill training programs influenced your workforce's efficiency and equipment use? ➤ What are the significant infrastructural challenges that affect the daily operations of your agro-processing business?	"The SFURTI scheme helped us set up a better processing unit, creating jobs for 10 local women. Skill training programs have improved our workers' ability to handle modern equipment, which is great. But unreliable electricity and poor roads make it hard to operate efficiently, and the technology incentives are out of reach because we don't have the expertise to apply. I'd like to see more government support for rural infrastructure and simpler processes for accessing tech funds."

		➤ Have you been able to access technology incentives from the government, and what barriers did you face in doing so? ➤ What kind of government support do rural-based MSMEs need most to remain sustainable and competitive?	
Policy Makers:			
Dr. Suresh	Tamil Nadu	➤ How have schemes like PMEGP and Mudra contributed to youth employment and entrepreneurship in Tamil Nadu? ➤ What successes have you observed in skill training programs, particularly manufacturing, through NSDC partnerships? ➤ What are your main challenges in implementing MSME schemes in rural areas? ➤ Why do many MSMEs hesitate to apply for benefits despite available schemes? ➤ How could documentation and application processes be simplified to reach rural MSMEs better?	"Our policies like PMEGP and Mudra have significantly increased youth employment, with many young entrepreneurs starting MSMEs in Tamil Nadu. Partnerships with NSDC for skill training are working well, especially in manufacturing. However, rural implementation is tough due to logistical issues, and many MSMEs don't apply for benefits because of complex documentation. We need better local coordination and simpler application processes to ensure policies reach rural businesses effectively."

		➤ How has Udyam registration formalisation influenced MSME growth and job creation in urban service sectors?	
Ms. Nandhini	Chennai	➤ How has Udyam registration formalisation influenced MSME growth and job creation in urban service sectors? ➤ In what ways have skill development initiatives enabled workers to move into higher-value roles? ➤ What regulatory compliance bottlenecks do you see as most critical for MSMEs today? ➤ How do rural MSMEs struggle differently from urban ones, particularly regarding infrastructure access? ➤ Can you explain the progress on digital compliance tools being developed for MSMEs?	"The formalization of MSMEs through policies like Udyam registration has boosted job creation, especially in urban services sectors. Skill development initiatives are helping workers move into higher-value roles. But regulatory compliance is a bottleneck, and rural MSMEs struggle with infrastructure access. We're working on digital compliance tools, but more collaboration with local bodies and real-time monitoring could improve policy outcomes."
Dr. Venkatesan	Madurai	➤ How effective has the SFURTI scheme created rural jobs, particularly in agro-processing units? ➤ In your experience, how are women and youth benefiting from	"Schemes like SFURTI have created jobs in rural agro-processing units, and our training programs are empowering women and youth. But the uptake is low because of documentation barriers, and infrastructure gaps like poor roads limit growth. We need to

		skill training programs in rural areas? ➤ Why have the available programs like SFURTI not been widely used	work closely with village panchayats to deliver policies and invest more in rural connectivity to make these schemes more effective."
Employees:			
Meena	Chennai	➤ How have the training programs influenced your skills and career growth in the company? ➤ What role did these programs play in your promotion or ability to handle key clients? ➤ Are you aware of any government schemes for employees in MSMEs? If not, what kind of communication would help? ➤ What challenges do you face regarding workplace infrastructure, such as internet connectivity, that affect your productivity? ➤ What support from the government or company would make your work easier and help you grow in your role?	"The training programs helped me improve my communication skills, and I got promoted to handle key clients last year, which is exciting. But I don't hear much about government schemes, and the office internet is unreliable, which affects customer calls. If the government could run workshops to explain policies and improve internet access, it would make our work easier and help us grow in our roles."
Kumar	Salem	➤ How has skill training impacted your work and job security, especially	"The skill training I got through a government scheme taught me how to maintain hygiene standards, which improved our product quality and my job

		regarding hygiene and standards? ➤ What role do government-led training programs play in improving quality in your workplace? ➤ What difficulties do you face with rural infrastructure, like roads and transportation? ➤ Do you and your colleagues receive information about other available government support programs for workers? ➤ What specific changes (such as on-site training or better transport) would improve your daily work experience? ➤ How has on-the-job training shaped your skills, role, and career progression within the company?	stability. But rural roads are bad, so getting to work is tough, and we don't know much about other support programs. More on-site training and better transport infrastructure would make a big difference for us workers in rural areas."
Anil	Tirupur	➤ How has on-the-job training shaped your skills, role, and career progression within the company? ➤ How has government loan support impacted your job security and company growth? ➤ How aware are you of other government	"The on-the-job training I got through a government program helped me learn to operate new machines, and now I'm a team leader with a better salary. The job feels secure because the company is growing with loan support. But I don't know much about other policies, and the factory's power cuts disrupt work, making it stressful. More training sessions at the

		policies beyond training and loans? ➤ What are the significant workplace challenges, such as power cuts, affect your productivity and stress levels? ➤ What kind of regular training or infrastructure improvements would help you perform better in your role?	workplace and better power supply would help us do our jobs better."
Saroja	Erode	➤ How have the training programs improved your communication and sales skills in the handloom sector? ➤ How has your improved role or income impacted your personal life or family, such as education support? ➤ Are you aware of any government schemes available to workers in MSMEs? If not, how do you think information can reach employees directly? ➤ What challenges do you face in your workplace due to infrastructure issues, such as power cuts? ➤ What kind of government or organisational support (like awareness	"The training programs gave me confidence to talk with customers in both Tamil and English, which helped me increase sales at our outlet. I feel proud that my income supports my children's education. But I don't get clear information about government schemes for workers; mostly only the owners know. Also, our area faces frequent power cuts, which disrupt digital sales at the shop. If the government could organize awareness sessions for workers and improve reliable electricity in smaller towns, it would help us contribute more to the MSME's growth."

		sessions or infrastructure improvements) would help you work more effectively and contribute to business growth?	
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Table 4.2

Results

Objective 1: To analyse the extent to which MSMEs contribute to employment generation and sectoral diversification

The analysis of 2,400 MSMEs revealed distinct employment patterns across sectors. Manufacturing accounted for the largest share with 40% of enterprises, generating 11,808 jobs (41.8%). Agriculture-linked enterprises, though only 25% of units, showed the highest employment intensity at 15.2 workers per unit, creating 32.3% of total jobs (9,120). The services sector comprised 35% of firms but contributed just 25.9% of employment, averaging 8.7 workers per unit. Highly diversified MSMEs, operating in more than five sectors, significantly outperformed others by employing 16.8 workers per unit and providing higher job security and revenue stability.

Hypothesis 1 (H1): Supported. MSMEs play a pivotal role in diversifying employment opportunities across manufacturing, services, and agriculture-linked enterprises, thereby contributing substantially to direct and indirect job creation.

Objective 2: To evaluate the diversity and evolution of job profiles within MSMEs

Job profile distribution varied by sector. Agriculture-linked MSMEs concentrated heavily in production/operations (42.1%) and quality assurance (14.7%), while services emphasised sales and marketing (28.9%). Manufacturing showed a balanced distribution across production (35.2%), technical/maintenance (18.7%), and sales/marketing (15.4%). Career development analysis revealed that agriculture-linked enterprises ensured job stability with the highest average tenure (5.8 years) but offered limited promotion opportunities. Services, conversely, provided faster career progression through higher promotion rates (28.7%) and dynamic job role evolution (58.7%), though with shorter tenures (3.2 years). Manufacturing enterprises focused on skill training, with 72.1% of employees receiving structured programs.

Hypothesis 2 (H2): Supported. MSMEs demonstrate diverse and evolving job profiles that facilitate skill development and create career advancement pathways, distinguishing them from larger enterprises.

Objective 3: To identify the principal challenges encountered by MSMEs in employment generation

Regression analysis confirmed that enterprise size and technology adoption were the most significant drivers of employment. Medium enterprises employed 25.67 more workers than micro firms ($p < 0.001$), and small enterprises added 8.45 more employees ($p < 0.001$). Technology adoption showed a strong positive effect, with every unit increase in the technology index generating 2.34 additional jobs ($p < 0.001$). Infrastructure access ($\beta = 0.201$, $p < 0.001$) and training hours ($\beta = 0.198$, $p < 0.01$) also positively influenced employment. However, interviews highlighted barriers including limited access to credit, poor infrastructure in rural areas, skills mismatches, and burdensome compliance processes.

Hypothesis 3 (H3): Supported. Infrastructure deficits, skill gaps, limited finance, and regulatory burdens significantly constrain MSMEs' employment potential.

Objective 4: To examine stakeholder perceptions regarding policy effectiveness in Tamil Nadu

Stakeholders provided mixed views on policy support. Owners acknowledged schemes such as Mudra loans and SFURTI as enablers of expansion and hiring but criticized complex application procedures and insufficient funding. Employees valued training programs for enhancing skills, promotions, and confidence but lacked awareness of broader welfare schemes. Policymakers recognised gains in formalisation (via Udyam registration) and youth entrepreneurship but admitted low uptake in rural areas due to poor infrastructure and cumbersome documentation.

Hypothesis 4 (H4): Supported. Stakeholders consider current policy measures inadequate to fully address MSMEs' operational and employment challenges, especially regarding accessibility, awareness, and rural inclusiveness.

Discussions

The study establishes MSMEs as a vital source of jobs in India, but with strengths and weaknesses that vary by sector. The number of jobs is highly led by manufacturing. At the same time, enterprises linked to agriculture show the use and value chain linkages, and services are the primary driver of social participation, especially for the youth and women. This discovery recovers the prior research base (e.g., Nikhila & Amudha, 2025; Pawar, 2023) and indicates how diversification increases the number of jobs and improves their quality and permanence.

The analysis of this job profile shows that MSMEs can adapt by having their employees fulfil multifunctional roles, as in their lean organisational structure. However, there are trade-offs at the sectoral level—agriculture-based firms are stable but immobile, services advance but with high turnover, and manufacturing is biased toward skill training rather than career progression. It corroborates the view of MSMEs as inclusive and flexible, though career trajectories vary across sectors.

The results obtained from regression analysis strongly support the necessity of both the adoption of technology and the scaling of enterprises for job creation. That is consistent with the findings of Patel & Singh (2024), who claimed that digitalisation is a key driver for MSME growth in productivity and employment. However, the views of stakeholders reveal a "policy-practice gap". Although there are programs, obstacles such as red tape, poor infrastructure, and low levels of awareness restrict their reach. Especially in the rural parts of Tamil Nadu, the issues of unmanageable regulations and poor connectivity are the leading causes of the inefficiency of the schemes.

Conclusion:

This study confirms that MSMEs are vital contributors to India's employment landscape, generating diverse opportunities across manufacturing, services, and agriculture-linked enterprises. While manufacturing dominates in job volume, agriculture-linked MSMEs are the most efficient job creators, and services drive inclusivity and dynamic career paths. The diversity of job profiles demonstrates MSMEs' adaptability, but sectoral differences in stability, skill training, and upward mobility reflect structural challenges. Employment generation is strongly influenced by enterprise size and technology adoption, with infrastructure and training also playing significant roles. However, persistent barriers such as inadequate infrastructure, regulatory complexities, and poor access to finance constrain the sector's full potential.

Stakeholder perspectives highlight the partial success of government schemes, but also reveal gaps in awareness, accessibility, and rural outreach. To unlock MSMEs' potential as engines of inclusive growth, policy reforms must prioritise simplified compliance, digital approval systems, targeted financial support, stronger rural infrastructure, and more effective communication of schemes to workers as well as owners. By addressing these gaps, MSMEs can achieve sustainable growth, generate quality employment, and significantly contribute to India's socio-economic development.

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