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SURVEY OF THE MSME SECTOR OF ASSAM WITH FOCUS ON SECTORS WITH DATA GAPS

January, 2025

Study Conducted for
Directorate of Economics and Statistics, Government of Assam

NATIONAL COUNCIL OF APPLIED ECONOMIC RESEARCH

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NCAER India Centre 11 Indraprastha Estate, New Delhi 110 002, India.
Tel: +91-11-2345-2698, info@ncaer.org www.ncaer.org

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Professor Anil K. Sharma
Secretary and Operations Director
National Council of Applied Economic Research (NCAER)
NCAER India Centre
11, Indraprastha Estate, New Delhi–110 002
Tel: +91-11-2345 2657, 6120 2698
Email: aksharma@ncaer.org
www.ncaer.org

Study Team

Project Leader
Dr Palash Baruah

Team Leader
Dr Poonam Munjal

Senior Advisor
Dr Gurucharan Manna

Research Team
Ms. Anindita Barua, Mr. Ravi Kumar Gupta, Mr. Sagnik Das,
Mr. Manish Daggumalli, Mr. Kahaan Vyas

Team Assistant
Ms. Tara Kumari

Report Design
Mr. Praveen Sachdeva

Editor
Ms. Mini Narayan

Foreword

The state of Assam, is the gateway to the North-eastern states of the country. It is a region known for its stunning natural beauty and rich cultural heritage. The state's strategic geographical location, coupled with its abundant natural resources has the potential to play a key role in India's broader economic growth. At the heart of this dynamic landscape lies the micro, small, and medium enterprises (MSME) sector, which is a critical sector shaping both Assam's economy and society.

This comprehensive study on the MSME sector of Assam with a focus on data gaps, offers valuable insights into Assam's MSMEs— that reflect the region's resilience, innovation, and immense growth potential.

These enterprises sustain livelihoods, foster regional development, and contribute significantly to Assam's Gross Value Added (GVA), which accounted for 33.3 percent in 2022–23. The study reveals that it is as diverse as it is dynamic, encompassing everything from retail trade and essential services to manufacturing—which taken together form a vibrant and interconnected economic ecosystem in the state.

Despite their profound contributions, state's MSMEs face several challenges, including limited access to finance and infrastructural gaps particularly electricity that hinder their full potential. While a notable progress has been made in areas such as digital adoption, formalization, and gender inclusion.

Furthermore, the study identifies critical areas of untapped potential. Addressing gender disparities, enhancing digital integration for micro-enterprises, and improving the Ease of Doing Business in underperforming districts—are essential steps toward creating a more inclusive, sustainable future for Assam's MSMEs.

We extend our sincere gratitude to the Directorate of Economics and Statistics, Assam, for their steadfast support throughout the course of this study. We would also like to express our appreciation for Dr Palash Baruah, the Project Leader, and his dedicated team for their meticulous research and tireless efforts in successfully completing this study. The team greatly benefited from the expert guidance of Dr Poonam Munjal, Professor at NCAER, who consistently monitored the progress and provided invaluable insights.

As we look to the state's future, we encourage policymakers, industry leaders, and academics to leverage the insights from this report to build a thriving ecosystem for MSMEs in Assam.

New Delhi
January, 2025

Dr Poonam Gupta
Director General, NCAER

Acknowledgements

The successful completion of the "Survey of the MSME Sector of Assam with Focus on Sectors with Data Gaps" would not have been possible without the unwavering support, guidance, and contributions of several key individuals and institutions. On behalf of the entire study team, we extend our heartfelt gratitude to all who have played a role in this important endeavor.

We would like to begin by expressing our heartfelt gratitude to the Directorate of Economics and Statistics, Government of Assam, for entrusting us with this significant study. We extend special thanks to Reena Mech, Nirupama Talukdar, Ajit Baruah, Amar Jyoti Goswami, Diganta Thakuria, Mukul Sharma, Pankaj Gogoi, Kameswar Nath, Rajesh Mishra, and Dipshikha Buragohain. Their continuous support and encouragement laid a solid foundation for the successful execution of this project.

We are also profoundly grateful to the esteemed members of the Advisory Committee—Prof. Kalyan Das, Prof. Amit Choudhury, Prof. Gautam Mazumdar, Prof. Dibyojyoti Bhattacharjee, and Prof. Raju Mandal—whose invaluable insights and expert advice have greatly enriched our work. Their continuous guidance has been instrumental in refining our approach and ensuring the quality and relevance of the research.

A special note of thanks is due to the numerous MSME stakeholders across Assam, including entrepreneurs, workers, and business owners, who generously offered their time, knowledge, and personal experiences during the survey process. Their active participation and openness have been crucial in shaping the findings and formulating the recommendations presented in this report.

Our sincere appreciation also extends to the officials of the Federation of Indian Chambers of Commerce and Industry (FICCI), the Federation of Industry and Commerce of North Eastern Region (FINER), and the Assam Industrial Development Corporation (AIDC), among others, for their constructive feedback and unwavering support during various consultations. Their contributions have significantly enriched the research process.

We also acknowledge with deep gratitude the tireless efforts of the field survey teams, who worked relentlessly to collect the data. Their commitment to maintaining the highest standards of accuracy and integrity was key to producing a comprehensive and credible report.

Lastly, we would like to express our sincere thanks to Dr Poonam Gupta, Director General of the National Council of Applied Economic Research (NCAER), for her steadfast encouragement and guidance throughout the duration of the study, as well as to Dr Anil K. Sharma, Secretary of NCAER, for facilitating the study at every stage and providing valuable administrative support.

It is our sincere hope that the findings and recommendations presented in this report will serve as a useful resource for policymakers, industry stakeholders, and the broader community, contributing to the sustainable growth and development of the MSME sector in Assam.

Study Team
National Council of Applied Economic Research

Table of Contents

List of Tables

List of Figures

Executive Summary

The survey findings reveal that there are more than 20.27 lakh MSMEs contributing significantly to the economy of Assam. From bustling bazaars to manufacturing hubs, these enterprises are not just businesses; they are the heartbeat of local economies, providing livelihoods and fostering growth. The survey unveils the diverse tapestry of Assam's MSMEs, with nearly half engaged in the pulse of local markets through 'Retail or Wholesale Trade'. Essential services follow closely, constituting approximately 28 per cent, while 23 percent contribute to the domains of 'Manufacturing/Assembling/Processing'.

Interestingly, the survey shows that approximately 84.63 per cent of MSMEs operate as individual proprietorships which showcase that the people of Assam possess self-reliance in earning a living for themselves. Majority of the districts in Assam also possess a competitive business environment, which suggests that removing the barriers to ease of doing business for the micro, small and medium enterprises in Assam can further enhance the entrepreneurial spirit in the economy. However, only 10 per cent of the MSMEs are currently registered under Udyog Aadhar or Udyam Registration, hinting at latent potential for formalization and the need for streamlined registration processes. The MSMEs in Assam are not just economic contributors but vital generators of employment, employing over 36.07 lakh workers. However, a notable gender disparity persists, with approximately 79 per cent of the workforce being male. Addressing this gender gap is not just a social imperative but a strategic move to unlock the untapped potential of female talent within the MSME sector.

The financial landscape reveals that the MSME sector contributed a significant Rs 148578.84 crore to the State's Gross Value Added (GVA), accounting for 33.29 per cent of the total GVA for the financial year 2022–23. On average, each enterprise contributes around 7.3 lakhs to the state GVA, showcasing the sector's substantial economic weight. In this digital age, it is heartening to note that around 87 per cent of MSMEs in Assam have embraced digital transactions. However, micro-enterprises lag in digital integration, standing at 31.3 per cent, emphasizing the need for targeted initiatives to bridge this gap. Small enterprises exhibit a more favourable inclination at 51.47 per cent, while medium enterprises lead the charge with an impressive 76.57 per cent adoption rate. This digital leap is not just a convenience but a strategic move to enhance efficiency, transparency, and market reach.

The survey brings to light the hurdles faced by MSMEs, ranging from financial constraints to electricity infrastructure challenges. Micro-enterprises, constituting the backbone of local markets, showcase resilience by not seeking credit to navigate financial challenges. Small and medium enterprises, on the other hand, eagerly embrace credit opportunities, recognizing it as a catalyst for growth.

Nagaon emerges as a beacon of hope, leading the districts in both the Ease of Doing Business and District Competitiveness for MSMEs. In contrast, districts such as Karbi-Anglong, Dima Hasao, and Dhubri face challenges, signalling the need for targeted interventions to enhance competitiveness.

I

Introduction

I.1 The Impetus

Over the past few decades, the Micro, Small and Medium Enterprise (MSME) sector has evolved as one of the fundamental pillars of the Indian economy. Distinguished by its capacity to generate and provide employment with minimal capital investments, MSMEs play a pivotal role in the socio-economic development of the nation. Recognizing their significance, the Indian government has formulated and devised supportive policies and introduced various schemes at both national and state-level to nurture and foster the growth of this sector. However, despite these concerted efforts, several critical issues still persist underscoring the need for a thorough and comprehensive understanding of the MSME landscape.

Towards this end, one of the major challenges is the dearth of data, particularly those of unregistered MSMEs. The inherent complexity of these enterprises often eludes conventional data gathering methods. This data gap poses significant obstacle to the formulation of effective policies and targeted interventions. To address this , there is an imperative need for a more nuanced and comprehensive analysis of the MSME sector. Such an analysis should take into account regional variations, acknowledging the challenges and opportunities faced by MSMEs across diverse geographical landscapes.

This study aims to delve into the intricacies of the MSME sector and shedding light on the specific challenges faced by these enterprises. It endeavours to fill the existing data gaps by examining the performance and contributions of MSMEs, with a specific emphasis on Assam. By bridging the data gap and understanding the nuances and intricate dynamics of MSME across different regions, we can pave the way for tailored strategies that will catalyse and bolster the growth of this vital sector and contribute to the overall economic prosperity of the nation.

As highlighted by Dey and Datta (2021)[1], Assam stands out as a dominant player in the MSME landscape compared to other North Eastern States of India). This is seen from the fact that 61.48 per cent of MSME units are concentrated in Assam, with the remaining 38.52 per cent are distributed across the rest of the North Eastern States.

The Government of India defines Micro, Small, and Medium Enterprises (MSMEs) as enterprises (both Manufacturing Enterprises and Enterprises rendering Services) with upper limits for turnover and investment in Plant and Machinery or Equipment as follows:

(i) **Micro enterprise**: where the investment in Plant and Machinery or Equipment does not exceed one crore rupees, and turnover does not exceed five crore rupees.

(ii) **Small enterprise**: where the investment in Plant and Machinery or Equipment does not exceed ten crore rupees, and turnover does not exceed fifty crore rupees.

(iii) **Medium enterprise**: where the investment in Plant and Machinery or Equipment does not exceed fifty crore rupees, and turnover does not exceed two hundred and fifty crore rupees.

[1]*Bijoy Kumar Dey and Kanchan Datta (2020), "Micro, Small and Medium Scale Enterprises in Assam: Some Aspects of Size, Growth and Structure", Journal of Development Economics and Management Research Studies (JDMS), ISSN: 2582 5119 (Online) 05(05), 1–10, July–September, 2020*

I.2 Importance of the Study

The study of the MSME sector in Assam carries considerable significance for several reasons. Despite the implementation of numerous schemes and initiatives, ample opportunities for growth and expansion for the sector exists. In order to have a proper understanding of the issues within the MSME sector, the availability of critical data with various dimensions across the sector within the state covering both the formal and informal sector is the need of the hour. But the availability of detailed updated data with all the characteristics associated with the MSME sector has been lacking. Acknowledging this gap aiming to facilitate well-informed decision-making, the Directorate of Economics and Statistics, Government of Assam undertook this study. The findings will provide valuable insights into the current state of the sector, identifying its strengths and weaknesses.

The study will contribute to enhancing the understanding of the MSME sector within the overall economic landscape of Assam. By analysing the economic and employment contributions of the MSME sector, policymakers can devise strategies to maximize its potential. This includes creating an enabling environment for MSMEs to not only thrive, but to attract more investments, promote entrepreneurship, and facilitate skill development. It will also provide clarity on various aspects such as regulatory frameworks, access to finance, market opportunities, and technological advancements. Such insights will empower MSMEs by equipping them with the necessary knowledge and resources to overcome challenges and capitalize on emerging trends. It will aid in improving the business ecosystem in Assam.

I.3 Objectives of the Study

The objective of the study is to make an assessment of different parameters for MSME sector. These may include the following:

- MSMEs by different sectors and identification of focus sectors
- Identification of data gaps. The last All-India Census of MSME was conducted in 2006–07. Since then, no census has been conducted. The only data source for all parameters is NSS enterprise surveys (latest being 73rd round)
- Performance of MSMEs in focus sectors, like contribution to economy and employment
- Derive key economic characteristics, for MSMEs in focus sectors, such as:
    - GVA per worker
    - NVA per worker
    - Output per worker
    - GVA per enterprise
    - Output per enterprise
    - Number of workers per enterprise
    - Credit availed by MSMEs
    - Access to raw material
    - Ease of doing business norms, indicators for Global Competitiveness Index,
- Issues faced by MSME sectors
- Recommendations to mitigate the issues/ concerns

I.4 Literature Review

The importance of the MSME sector has been highlighted by numerous studies. The link between employment generation and the number of MSMEs has been discussed in detail emphasizing the capabilities of MSMEs in terms of employment generation.

Venkatesh and Kumari (2015) in their analysis highlighted the strengths of MSMEs in terms of their potential for employment generations at low capital and technology requirements making them the perfect vehicle of progress for developing countries. This is supported by the World Bank in the form of grants worth more than $10 billion, mandated to carry out MSMEs development programs, aided by the belief that the MSME sector has potential to reduce global poverty.

As evidenced in ***Linking Growth of MSMEs to Employment: An Empirical Study of Assam*** **by**

Rajdeep Deb, there is indeed a proven positive correlation between employment generation and MSME growth in the state. The study mainly used secondary data obtained from government reports, census reports and economic surveys conducted both at a state and national level. By the application of Pearson's correlation test between the number of MSME Units and the employment level, the author showed that there is significant correlation between the two for a given confidence level. Comparing the growth in the rest of India and in Assam, he opined that the MSME growth has been notably slower in the state.

In ***Performance of Micro, Small and Medium Enterprises in Assam*, Sri Aditya Kr. Borah** attempts to analyse district wise growth performance of MSMEs as well as find out the motivational factors for commencement of MSMEs in Assam. Both primary and secondary data were used in this study from the Economic Surveys in Assam of 2009–10, 2010–11 and 2013–14. Borah has used Garrett ranking to rank the different motivational factors. Data shows that investment in plant and machinery has increased over the time period in consideration, but the number of registrations under various government schemes has declined.

Rubab Fatema Nomani used four indicators of performance in ***Performance of MSMEs in Assam and India: A Statistical Analysis*** — number of enterprises, production, employment, and investment. Data used was from secondary sources i.e., for All India and Assam from 2006–07 to 2011–12. For each individual indicator, Coefficient of Variation (CV) and Karl Pearson's correlation coefficient was calculated. Results showed that there was a strong correlation between Assam and All India for the selected variables. The study concluded that there was an increasing trend for all four indicators and that production and investment were more consistent for Assam, while number of enterprises and employment were more consistent for All India.

Gaps in MSME Financing in Assam: The MSME Side by Maumita Choudhury and Chandana Goswami, aims to find out what issues enterprises face in obtaining institutional finance. For borrowers, what problems lead to difficulties in borrowing, and for non-borrowers, reasons behind not seeking financing, are covered in this study. The study is limited to the Kamrup district of Assam, due to it having the highest concentration of enterprises. The study used random sampling for registered MSMEs and convenience sampling for unregistered MSMEs. Primary data was collected with the help of a schedule, while secondary data was collected from published reports from RBI, SLBC, and reports from MSME Development Institutes, Planning Commission reports, and ASI data. The author used a chi-squared test to check the relation between satisfaction with credit and registration status of the enterprise.

MS. Jyoti Sharma & MS. Guneet Gill (2016): This paper analyzed the contribution of MSMEs relating to Indian economic growth. It highlighted the importance of MSMEs to the Indian economy in respect of its contribution to the GDP.

Bina Sarkar has also used GDP as the primary indicator to evaluate the impact development has on community social and economic well-being in **Socio-Economic Impact of MSMEs on Its Employees in Lakhimpur (Assam).** The study uses secondary data from the 4th All India MSME Census of 2006-07 and the 11th Five Year Plan. The study collected data from a survey schedule based on results from the abovementioned reports and census based on a random sampling methodology. Results were analysed using the percentile method. The study concluded that the socioeconomic parameters best for measuring the socioeconomic impact were gender, age, marital status, monthly income, monthly savings, house ownership, type of house and assets owned.

Despite the widely accepted potential of the MSME sector in reducing unemployment, a serious issue is the lack of data on the unregistered MSMEs which poses a serious obstacle to effective policy making.

I.5 Chapter Organisation

A brief but concise introduction and review-related literature is presented in this chapter. The objectives are clearly spelled out, emphasizing the study's importance. **Chapter II** delves into issues concerning "Survey Design and Research Methodology," covering

essential aspects such as sample size calculation and the method of data collection. **Chapter III**, titled "Amar Axom," provides an overview of the socio-economic and demographic characteristics of the Indian state of Assam. **Chapter IV**, " Enterprise Landscape and Schemes in Assam" intends to shed light on the overall landscape of enterprises in Assam. This includes their size, sectoral distribution, contributions, and employment generation potential. The analysis is based on secondary data sources such as the Annual Survey of Industries (ASI) and the National Sample Survey (NSS). Additionally, the chapter addresses various central and state government schemes supporting the MSME sector in Assam. **Chapter V**, "MSME Sector in Assam: Findings from the Survey," comprehensively examines a range of parameters related to the MSME sector in Assam. It also attempts to determine its economic significance and employment contributions to the Assam economy. **Chapter VI**, "Looking Ahead and Recommendations," besides providing an overview of the salient findings, delineates some issues for future investigation and offers recommendations to mitigate concerns.

II

Survey Design and Research Methodology

II.1 Background

In the pursuit of sustainable economic development and regional prosperity, the department of Industries and Commerce, Government of Assam, has strategically identified key thrust areas and focus sectors to drive growth within the state. This comprehensive vision encompasses a diverse range of industries, each selected for its potential to catalyse economic advancement and create employment opportunities. The identified sectors include Food Processing and Agro-based industries, Mineral-based and Plastic industries, Bamboo-based industries, Extraction of Herbal, Medicinal, and Aromatic Plants, Information Technology-related activities, Tourism, Weaving, Wood products, and Beverages among others.

To gain deeper insights into the current landscape and future prospects of these prioritized sectors for Micro, Small, and Medium Enterprises (MSMEs), a meticulous survey methodology has been designed. This survey aims to gather valuable data and intelligence, shedding light on the existing challenges, opportunities, and potential interventions required for fostering growth in these key areas.

Through systematic data collection and analysis, this survey seeks to provide actionable recommendations that can inform policy decisions and strategies to propel Assam's Industries and Commerce sector towards sustainable development and prosperity. The ultimate goal is to ensure a holistic understanding of the MSME sector in Assam, paving the way for targeted initiatives and policies that support the growth and success of businesses in these critical sectors.

II.2 Sample Size Calculation

According to sixth Economic Census (EC) – 2013–14, there are around 20.3 lakh enterprises in the state of Assam. This includes enterprises of all sizes, from micro to small, medium, and large.

In addition to basic information such as the number and type of enterprises, the EC also collected data on the number of workers employed by each enterprise. This information is important as it allows policymakers, researchers, and other stakeholders to better understand the employment landscape in the state and to identify opportunities to support the growth and development of various industries.

Based on our study's focus on Micro, Small and Medium Enterprises (MSME), we need to exclude large enterprises from our analysis. According to various reviews of literature, large enterprises are typically defined as those that employ more than 99 workers.

In general, to calculate the minimum sample size needed for a particular study, several factors must be taken into account, including the level of confidence desired, the level of precision required for the estimate to be derived based on the primary survey, the variability of units in the population in respect of the study variable, and the size of the population.

Since we have information on the number of workers, we can calculate the minimum number of sample enterprises needed from the state of Assam to obtain an accurate estimate of the population parameter in terms of the average number of workers engaged per enterprise.

We can calculate minimum sample size (n) required for the study by the following formula:

$$\text{RSE} = \frac{\sigma}{\mu\sqrt{n}}$$

where RSE represents relative standard error of the estimate, σ denotes population standard deviation of number of workers in the MSMEs and μ denotes population mean of number of workers per enterprise. Putting appropriate estimated values of population standard deviation and mean based on the sixth EC data along with the value of RSE as 0.1 (i.e. 10%) to above formula, minimum sample size comes out to be around 192 enterprises.

In other words, if we survey approximately 200 (which is greater than equal to 192) enterprises, from the state of Assam, we can obtain a true estimate of the average number of workers per MSME with a 10 percent RSE.

In order to cover all three categories of MSMEs, namely micro, small, and medium enterprises, we would require to survey around 600 enterprises. Furthermore, we have classified the MSMEs into two additional groups: Registered and Unregistered MSMEs. Therefore, we have decided to increase the number of sampled enterprises to 1200.

For our convenience, we have made some district-wise adjustments to achieve an even number of enterprises to be surveyed from each district. As a result, the final number of enterprises that has been surveyed for this study stands at 1214.

II.3 Sampling Methodology and Design

A total of 1200 enterprises were sampled and allocated to all 31 districts. Initially, it was decided that 24 enterprises would be allocated to each district, making a total of 744 enterprises. The remaining 456 enterprises were then distributed proportionately based on the total number of enterprises in the districts, derived from EC-2013–14. It should be noted that adjustments were made at the district level to ensure that the figures were rounded up to the nearest even number, resulting in a total of 1214 enterprises.

Within each district, enterprises were sampled and further categorized into Micro, Small, and Medium enterprises. Out of the allocated number of enterprises for a particular district, a fixed number was initially assigned to these MSMEs through certain approximations, while the remainder was distributed among them through apportionment based on data provided by the Office of the Commissioner of Industries and Commerce in Bamunimaidan, Assam, in the form of registered MSMEs.

Both registered and unregistered MSMEs were included in the sample, with an equal distribution of enterprises between these two categories. The details are given in Table II.1

II.4 Selection of MSMEs

II.4.1 Registered MSME Units: Detailed list of MSMEs at the district level were collected from the Office of the Commissioner of Industries and Commerce in Bamunimaidan, Guwahati, Assam. Enterprises in each district will be classified into three strata based on their size: Micro, Small, and Medium enterprises. A predetermined number of units were randomly selected from each effective stratum.

II.4.2 Unregistered MSME Units: In case of unregistered units, in the absence of a sampling frame, we have used snowball and convenience sampling procedures to select the enterprises. Convenience were based on various factors, such as the availability and accessibility of concrete financial data and the willingness of a competent authority to answer the survey schedule.

II.5 Method of Data Collection

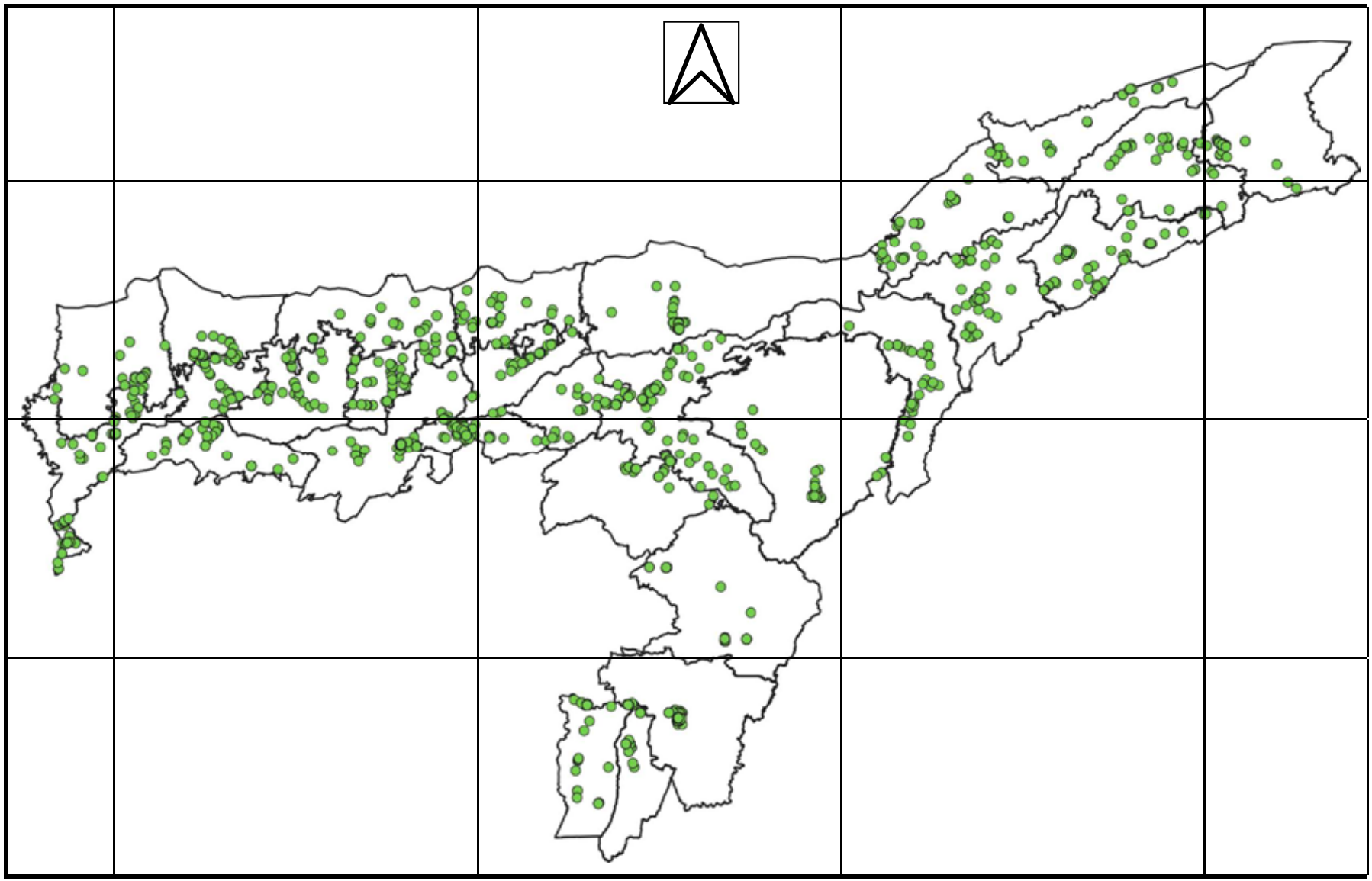
Computer-Assisted Personal Interviews (CAPI) were used for data collection across 31 districts in Assam. CAPI is a face-to-face data collection method where interviewers employ tablets, mobile phones, or computers to record responses during interviews. The key advantage of CAPI is the ability to monitor data quality in real-time. In this specific

survey, Global Positioning System (GPS) coordinates were gathered, represented as latitude and longitude, for the sample enterprises. These coordinates were subsequently mapped onto the geographical layout of Assam, visually illustrating the locations and spatial distribution of the enterprises.

Table II. 1: District-wise summary of sample places for the primary survey

Serial No.	District Name	Sample Number of Registered MSME	Sample Number of Unregistered MSME	Total Number of MSME
1	Baksa	18	18	36
2	Barpeta	31	31	62
3	Bongaigaon	17	17	34
4	Cachar	28	28	56
5	Charaideo	14	14	28
6	Chirang	14	14	28
7	Darrang	17	17	34
8	Dhemaji	15	15	30
9	Dhubri	21	21	42
10	Dibrugarh	20	20	40
11	Dima Hasao	17	17	34
12	Goalpara	18	18	36
13	Golaghat	19	19	38
14	Hailakandi	17	17	34
15	Jorhat	21	21	42
16	Kamrup	23	23	46
17	Kamrup Metropolitan	35	35	70
18	Karbi Anglong	17	17	34
19	Karimganj	22	22	44
20	Kokrajhar	18	18	36
21	Lakhimpur	18	18	36
22	Majuli	14	14	28
23	Morigaon	17	17	34
24	Nagaon	34	34	68
25	Nalbari	18	18	36
26	Sivasagar	18	18	36
27	Sonitpur	23	23	46
28	South Salmara Mancachar	13	13	26
29	Tinsukia	20	20	40
30	Udalguri	16	16	32
31	West Karbi Anglong	14	14	28
	Total	**607**	**607**	**1214**

Figure II. 1: Geographic spread of the surveyed MSMEs in Assam



III

Aamar Axom

III.1 Introduction

A unique showcase of diversities in numerous forms, Assam is a "landlocked" state, sharing its borders with Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura, Meghalaya, West Bengal, Bhutan, and Bangladesh. Having 2,276.3 kilometres (km) of interstate and 529 km of international borders marks the physical remoteness of the border areas, with limited connectivity and economic opportunities for the people living in these areas. The state is a mix of hills and plains, containing 31 administrative districts. The three hill districts of Karbi-Anglong, West Karbi-Anglong, and Dima Hasao comprise 20 per cent of the total geographical area and 4 per cent of the total population of the state. The plains of the remaining 28 districts are divided into two valleys— the Brahmaputra and the Barak valley. The Brahmaputra valley is further divided into two banks—southern and northern—and, with respect to the course of the river Brahmaputra, the valley is divided as "upper" and "lower" Assam. The Brahmaputra valley covers two-thirds of the state's land area and is home to the state's largest cities, including Guwahati, Tezpur, and Dibrugarh. The Barak Valley is located in the southern part of the state and is known for its tea plantations and natural beauty.

III.2 Demography of Assam

The state has a population of 3.12 crore (as per the 2011 Census). The population density of the state is 397.83 per sq km, which is higher than the national average of 382 per sq km. The total work participation rate in the state is 38.36 per cent which is lower than the national average of 39.8 per cent. Of the total population, women comprise 49 per cent (Census, 2011). The sex ratio is 958 females per 1000 males. The state has a high literacy rate of 72.19 per cent, with 77.85 per cent male and 66.2 per cent female literacy rate.

Having a diverse population with many different ethnic groups and languages, the majority of the population is of Assamese origin, but there is also a significant population of Bengalis, Bodos, Karbis, and other ethnic groups.

III.3 Economy

The economy of Assam is primarily dependent on agriculture, with rice being the main crop. Other crops grown in the state include tea, jute, mustard, and pulses. Agriculture makes the highest contribution to its domestic sectors, accounting for more than a third of Assam's income and employing about 69 per cent of the workforce. Assam has the single largest tea-growing area in the world, constituting around one-seventh of the global tea production. The state accounts for over 50 per cent of the country's overall tea production.

Assam is also home to several industries, including oil and gas, tea processing, and plywood manufacturing. The state has significant natural resources, including oil, coal, limestone, and natural gas. It is also the third largest producer of crude oil in India after Rajasthan and Gujarat. Other minor minerals include magnetic quartzite, kaolin, sillimanites, iron ore, clay, feldspar, etc. Oil India Limited (OIL) is the second-largest Indian public-sector hydrocarbon exploration and production company, with its operational headquarters in Duliajan, Assam, India, under the administrative control of the Ministry of Petroleum and Natural Gas.

Tourism is also an important contributor to the state's economy, with many visitors attracted to the state's natural beauty, wildlife, and cultural heritage.

Assam has wildlife sanctuaries, the most prominent of which are two UNESCO World Heritage sites: the Kaziranga National Park and the Manas Wildlife Santuary. There are five other national parks in Assam, namely Dibru Saikhowa National Park, Nameri National Park, Orang National Park, Dehing Patkai National Park and Raimona National Park.

III.4 Climate

The climate of Assam is typically 'Tropical Monsoon Rainforest Climate', with high levels of humidity and heavy rainfall. People here enjoy a moderate climate all throughout the year, with warm summers and mild winters. Spring (March–April) and autumn (September–October) are usually pleasant with moderate rainfall and temperature.

III.5 Natural Resources

Assam is rich in natural resources. The natural resources of Assam may be classified under the following heads— mineral, forest, water, and agricultural resources. The state is one of the richest biodiversity zones in the world and consists of tropical rainforests, deciduous forests, riverine grasslands, bamboo orchards, and numerous wetland ecosystems.

Assam is famous for its abundant forest resources. A large part of Assam is covered by hills and forests. These hills and forests contain valuable trees in large quantities. The *Dipterocarpus macrocarpus* or locally known as the Hollong tree is recognized as the State Tree of Assam. Assam is remarkably rich in Orchid species and the Foxtail orchid *(Rhynchostylis retusa)* also known as the *Kopou Phul* is the State Flower of Assam. The recently established Kaziranga National Orchid and Biodiversity Park boasts more than 500 of the estimated 1,314 orchid species found in India. Assam, with its vast area under hills and forests, is home to a variety of medicinal herbs and plants. About 300 types of medicinal herbs and plants are found in abundance in the state with the Brahmaputra valley alone having 150 varieties of herbs and plants of commercial value.Assam has wildlife sanctuaries, the most prominent of which are two UNESCO World Heritage sites—the Kaziranga National Park and the Manas Wildlife Sanctuary. Kaziranga is home to the fast-disappearing Indian one-horned rhinoceros which has also been recognized as the State Animal of Assam. The State Bird of Assam is the white-winged wood duck.

Assam has abundant mineral resources coal, petroleum; limestone, and natural gas are the principal mineral resources. It is also the largest producer of crude oil in India. Other minor minerals include magnetic quartzite, kaolin, sillimanites, iron ore, clay, and feldspar, etc.

III.6 Culture

Assam is the meeting ground of diverse cultures. The people of the enchanting state of Assam are an inter-mixture of various racial stocks such as Mongoloid, Indo-Burmese, Indo-Iranian and Aryan. The Assamese culture is a rich and exotic tapestry of all these races evolved through a long assimilative process.

Diverse tribes like Bodo, Kachari, Karbi, Miri, Mishimi, Rabha, etc co-exist in Assam; most tribes have their own languages though Assamese is the principal language of the state. A majority of the Assamese are Vaishnavas (a sect of Hinduism). The Vaishnavas do not believe in idol worshiping and perform "Naamkirtana", where the glory of Lord Vishnu is recited.

Other religions, such as Buddhism, Christianity, Hinduism, Islam, etc. are also practiced in Assam. The state festival of Assam is the Bihu which is celebrated in three parts during a year with great pomp and grandeur by all Assamese, irrespective of caste, creed, or religion.

III.7 Challenges

Due to the land lock and the uneven terrain, the state in general faces some distinctive challenges. The transport bottlenecks and the challenging topography of the entire NER, including Assam, separats this space from easy access, even to the adjoining areas. Seasonal floods due to the mighty three thousand-mile-long Brahmaputra river, which moves along the length and breadth of this state, largely restrain the movement of the people and also limit the scope for navigation.

The presence of ethnic tensions and the fights for power and resources among the different ethnic groups, are a challenge to the state. Environmental issues are another concern, with deforestation, soil erosion, and pollution affecting the state's natural resources. Apart from this, unemployment, poverty, illegal immigration, and related violence are major problems in the state.

Crime against women in various parts of the state is another major challenge. According to the National Crime Records Bureau (NCRB) report of 2021, for five consecutive years Assam topped in rate of crime against women among all the states and union territories in India. However, in the National Crime Records Bureau (NCRB) report of 2022 the rate of crime against women saw a decrease in Assam, and the state was placed in the ninth place among other states and union territories of India.

IV

Enterprise Landscape and Schemes in Assam

IV.1 Introduction

The enterprise landscape in Assam reflects a unique blend of tradition and modernity. Assam, known for its rich cultural heritage and natural beauty, has witnessed a significant evolution in its economic and industrial sectors in recent years. The state's enterprise landscape encompasses a diverse array of industries, ranging from traditional sectors like tea and agriculture to emerging sectors such as information technology. With a focus on sustainable development and leveraging its abundant natural resources, Assam is positioning itself as a promising hub for business and investment. This transformation is not only contributing to the economic growth of the state but is also fostering innovation and creating employment opportunities, making the enterprise landscape in Assam a dynamic and evolving tapestry that mirrors the resilience and potential of the region.

The following sections shed light on the overall landscape of enterprises in Assam, encompassing aspects such as their size, sectoral distribution, contributions, and employment generation. This information is derived from secondary data sources, including the Annual Survey of Industries (ASI) and the National Sample Survey (NSS). In several instances, we attempt to compare different characteristics of Assam with those at the all-India level.

IV.2 Annual Survey of Industries (ASI) Data

The Annual Survey of Industries (ASI) accounts for industrial statistics of the registered organized manufacturing sector of the Indian economy. Factories registered under Sections 2m(i) and 2m(ii) of the Factories Act, 1948, are covered under it. From ASI 2015–16, "Section 2m(i) includes enterprises that employ from 10 or more workers with power to 20 or more workers with power and also Section 2m(ii), i.e., from 20 or more workers without power to 40 or more workers without power on any day of the preceding twelve months." The survey also covers bidi and cigar manufacturing establishments registered under the Bidi & Cigar Workers (Conditions of Employment) Act, 1966 with coverage as above. It also covers electricity undertakings engaged in generation, transmission and distribution of electricity, not registered with the Central Electricity Authority (CEA) (Annual Survey of Industries, 2018-19).

Coverage of ASI goes beyond the purview of the Sections 2m (i) and 2m (ii) of the Factories Act, 1948 and the Bidi & Cigar Workers (Conditions of Employment) Act, 1966. Units with 100 or more employees registered under any one of the seven Acts in the Business Register of Establishments (BRE) prepared and maintained by the State Governments are also included in the survey.

The primary unit of enumeration in the Annual Survey of Industries is a factory in the case of manufacturing industries, a workshop in the case of repair services, an undertaking or a licensee in the case of electricity, gas and water supply undertakings and an establishment in the case of bidi and cigar industries. The owner of two or more establishments located in the same state and pertaining to the same industry group and belonging to the census scheme is, however, covered under a single consolidated return.

IV.2.1 Number of Factories

Factories refer to the premises (a) whereon 10 or more workers are working, or were working on any day of the preceding 12 months, and in any part of

which a manufacturing process is being carried on with the aid of power, or is ordinarily so carried on; or (b) whereon 20 or more workers are working or were working on any day of the preceding 12 months, and in any part of which a manufacturing process is being carried on without the aid of power, or is ordinarily so carried on.

Table IV. 1: Number of factories and CAGR for Assam and All India between 2011–12 and 2019–20

Year	Assam	India
2011-12	3,019	2,17,554
2012-13	3,303	2,22,120
2013-14	3,518	2,24,576
2014-15	3,717	2,30,435
2015-16	3,890	2,33,116
2016-17	4,154	2,34,865
2017-18	4,538	2,37,684
2019-20	5,196	2,46,504
CAGR (%)	**7.02**	**1.57**

Source: Annual Survey of Industries, Government of India.

CAGR: Compound Annual Growth Rate

Table IV.1 reflects a notable industrial transformation in Assam between 2011–12 and 2019–20. Assam's factory count exhibited a consistent and robust expansion, surging from 3,019 to 5,196, with a remarkable Compound Annual Growth Rate (CAGR) of 7.02 per cent. This significantly outpaces the national average, where India's factory numbers increased at a comparatively modest CAGR of 1.57 per cent. The disparity in CAGR underscores the accelerated and sustained industrial growth specific to Assam, hinting at the region's potentially distinctive economic landscape and proactive development initiatives.

IV.2.2 Number of Workers Employed

Workers include all persons employed directly or through any agency, whether for wages or not and engaged in any manufacturing process or in cleaning any part of the machinery or premises used for manufacturing process or in any other kind of work incidental to or connected with the manufacturing process or the subject of the manufacturing process. Labour engaged in the repair and maintenance, or production of fixed assets for factory's own use, or employed for generating electricity, or producing coal, gas, etc., are included under workers.

Table IV. 2 : Number of workers and CAGR for Assam and All India between 2011–12 and 2019–20

Year	Assam	All India
2011-12	1,50,065	1,04,38,365
2012-13	1,40,896	1,00,51,626
2013-14	1,57,687	1,04,44,404
2014-15	1,63,348	1,07,55,288
2015-16	1,73,328	1,11,36,133
2016-17	1,81,098	1,16,62,947
2017-18	1,80,489	1,22,24,422
2019-20	2,19,176	1,30,58,156
CAGR (%)	**4.85**	**2.84**

Source: Annual Survey of Industries, Government of India

Over the years, workers in Assam have experienced consistent growth, reflecting a notable Compound Annual Growth Rate (CAGR) of 4.85 per cent. In parallel, India's workforce expanded with a comparatively lower CAGR of 2.84 per cent. The higher CAGR for Assam indicates a more rapid and sustained increase in its workforce, suggesting potentially effective regional economic policies and initiatives. These findings imply positive trends in employment opportunities within the state, contributing to its overall economic development.

IV.2.3 Output per Worker

Table IV.3 presents the Output per worker (in Rs Lakhs) for Assam and All India for the years 2011–12 to 2019–20, along with the Compound Annual Growth Rate (CAGR) for the same period. Output per Worker is a measure of economic productivity, indicating the value of goods and services produced by each worker.

Table IV. 3: Output per worker (Rs Lakhs) for Assam and All India between 2011–12 and 2019–20

Year	Assam	All India
2011-12	35.27	55.33
2012-13	35.38	59.95
2013-14	36.54	62.76
2014-15	37.81	64.00
2015-16	34.49	61.62
2016-17	34.75	62.30
2017-18	37.30	66.03
2019-20	35.35	68.79
CAGR (%)	**0.03**	**2.76**

Source: Annual Survey of Industries, Government of India.

While both Assam and All India experience growth in output per worker, the CAGR highlights the disparity in the pace of this growth. Assam lags behind with a minimal CAGR of 0.03 per cent, while All India demonstrates a more robust and steady growth with a CAGR of 2.76 per cent. This indicates variations in economic productivity between the two during the specified time frame.

IV.2.4 Net Value Added per Factory

Net value added is arrived at by deducting total input and depreciation from total output. It is additional value created by the process of production minus depreciation.

During both the periods, net value added grew at a significant rate; however, just aggregate net value added may not represent a clear picture. Hence, net value added per factory would provide better insights of the sector.

Table IV. 4 : Net value added per factory (Rs. Lakhs) for Assam and All India between 2011–12 and 2019–20

Year	Assam	All India
2011-12	216.89	384.60
2012-13	190.50	383.55
2013-14	227.90	398.68
2014-15	220.23	423.18
2015-16	255.72	460.06
2016-17	308.66	487.91
2017-18	300.77	517.36
2019-20	292.80	491.94
CAGR (%)	**3.82**	**3.12**

Source: Annual Survey of Industries, Government of India.

Starting with the values in 2011–12, Assam had a net value added per factory of 216.89 Rs. Lakhs, while All India's value was higher at 384.60 Rs. Lakhs. Over the subsequent years, both regions experienced growth in net value added per factory, with Assam's values generally increasing at a higher CAGR compared to All India.

The CAGR for Assam is 3.82 per cent, indicating a relatively robust and consistent growth in net value added per factory. On the other hand, All India's CAGR is slightly lower at 3.12 per cent, indicating a still positive but somewhat slower growth rate over the same period.

IV.3 National Sample Survey Office Data

The National Sample Survey Organization (NSSO) was set up by the Government of India in 1950 to collect socio-economic data while applying scientific sampling methods. NSSO has two surveys to date devoted exclusively to survey on economic and operational characteristics of unincorporated non-agricultural enterprises in manufacturing, trade, and other services sectors (excluding construction),

namely, the 67th and 73rd rounds conducted in June-July 2010–11 and June-July 2015–16. These surveys are the primary data source on various indicators of economic and operational characteristics of the mentioned type of enterprises. The survey was designed to estimate the value of key characteristics per enterprise like average number of workers, fixed assets, outstanding loans, total receipts, total operating expenses, and gross value added separately for 'Own Account Enterprises (OAEs)' and 'establishments'. Information on various operational characteristics like ownership, nature of operation, location, status of registration, etc., were also collected to have an insight into the economic scenario of the unincorporated non-agricultural enterprises manufacturing, trade, non-captive electricity generation and transmission and other service sectors (excluding construction) in the country (National Sample Survey Organization, 2019). The survey covered the following broad categories of

(a) Manufacturing enterprises excluding those registered under Sections 2m(i) and 2m(ii) of the Factories Act, 1948
(b) Manufacturing enterprises registered under Section 85 of the Factories Act, 1948
(c) Enterprises engaged in cotton ginning, cleaning and baling (code 01632 of NIC- 2008) excluding those registered under Factories Act, 1948
(d) Enterprises manufacturing beedi and cigar excluding those registered under beedi and cigar workers (conditions of employment) Act, 1966
(e) Non-captive electric power generation, transmission and distribution by units not registered with the Central Electricity Authority (CEA)
(f) Trading enterprises
(g) Other Service sector enterprises excluding construction.

Categories of enterprises under coverage in (a) to (g) above were

(a) Proprietary and partnership enterprises [excluding Limited Liability Partnership (LLP) enterprises]
(b) Trusts, Self-Help Groups (SHGs), Non-Profit Institutions (NPIs), etc.

The enterprises that were not a part of the coverage are (a) Enterprises which are incorporated, i.e., registered under Companies Act, 1956 (b) The electricity units registered with the Central Electricity Authority (CEA) (c) Government and public sector enterprises (d) Cooperatives. The survey covered the whole of the Indian Union except the villages in Andaman and Nicobar Islands, which remained extremely difficult to access due to restrictions imposed by local authorities.

A trading enterprise was taken to be an undertaking engaged in trade. Trade was defined to be an act of purchase of goods and their disposal by way of sale without any intermediate physical transformation of the goods. Both wholesale and retail trade (perennial, casual, or seasonal) were included. The activities of intermediaries who do not actually purchase or sell goods but only arrange their purchase and sale and earn remuneration by way of brokerage and commission were also be treated as trade.

A servicing enterprise or service sector enterprise was to be engaged in activities carried out for the benefit of a consuming unit and typically consisted of changes in the condition of consuming units realized by the activities of the servicing unit at the demand of the consuming unit.

Selected principal characteristics considered important from the perspective of policy formulation and decision support for the economy of Assam are presented in the section below.

IV.3.1 Number of Enterprises

Table IV.5 provides insights into the dynamics of enterprise growth in Assam and the entire country of India over the five-year period from 2010–11 to 2015–16. The focus is on rural and urban sectors, along with the overall total.

Table IV. 5 : Estimated number of enterprises and CAGR for the period 2010–11 to 2015–16

	Assam			All India		
	2010-11	**2015-16**	**CAGR**	**2010-11**	**2015-16**	**CAGR**
Rural	9,24,996	8,49,187	-1.70	3,08,91,094	3,24,89,670	1.01
Urban	2,26,070	3,64,938	10.05	2,67,82,213	3,09,02,305	2.90
Total	**11,51,066**	**12,14,125**	**1.07**	**5,76,73,307**	**6,33,91,975**	**1.91**

Source: National Sample Survey Office data, based on 67th (2010–11) and 73rd (2015–16) rounds.

In rural Assam, the number of enterprises witnessed a negative CAGR of -1.7 per cent. This indicates a contraction in rural enterprises during this period, suggesting potential challenges or shifts in economic activities within rural areas.

On the contrary, urban Assam experienced significant growth in the number of enterprises, with an impressive CAGR of 10.05 per cent, indicating a thriving urban business landscape. The substantial increase suggests a conducive environment for business development in urban areas, possibly fuelled by factors such as infrastructure development, increased consumer demand, or favourable government policies.

Looking at the overall scenario in Assam, including both rural and urban areas, the total number of enterprises grew, with a CAGR of 1.07 per cent. While the overall growth is positive, it is crucial to note that the expansion is primarily driven by the robust performance of urban enterprises, compensating for the decline in rural enterprises.

Comparing these trends to the national level, the table includes data for all of India. In rural India, the number of enterprises increased with a CAGR of 1.01 per cent. This signifies a moderate growth in rural enterprises at the national level.

In urban India, there was a substantial surge in the number of enterprises, depicting a CAGR of 2.9 per cent. This rapid urban enterprise growth on a national scale could be indicative of a broader trend of urbanization, industrialization, or increased entrepreneurship opportunities.

Enterprise growth in Assam and all of India reveals a complex and dynamic economic landscape. While there are challenges in rural areas, urban areas are experiencing significant growth, contributing to the overall positive trajectory at both regional and national levels. The factors influencing these trends could range from local economic policies to broader national-level developments shaping the business environment.

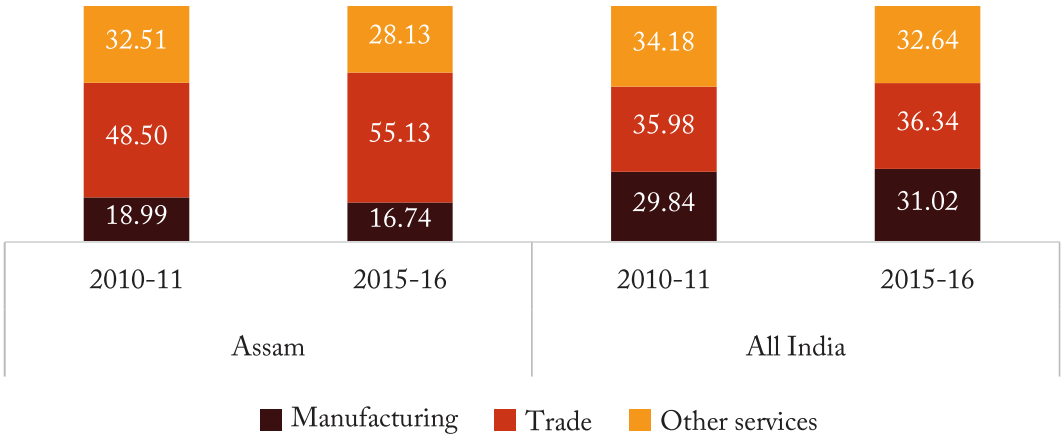
IV.3.2 Enterprises by Broad Category

Figure IV.1 illustrates the percentage distribution of enterprises across broad categories in Assam and at the national level (All India) from 2010–11 to 2015–16. The categories considered are Manufacturing, Trade, and Other Services, providing insights into the changing composition of businesses over the five-year period.

In Assam's manufacturing sector, the per cent distribution decreased from 18.99 per cent in 2010–11 to 16.74 per cent in 2015–16. This decrease might indicate challenges faced by the manufacturing sector in Assam, such as changes in market demand, technological disruptions, or regulatory factors.

Contrastingly, the trade sector in Assam witnessed a notable increase, rising from 48.50 per cent in 2010–11 to 55.13 per cent in 2015–16. This surge indicates a growing prominence of trade-related enterprises, possibly driven by increased economic activities, consumer demand, or favourable trade policies. The trade sector's expansion suggests a more significant role in the overall business ecosystem of Assam.

Figure IV. 1: Percentage distribution of enterprises based on broad activity category in Assam and All India for the period 2010–11 and 2015-16



Source: National Sample Survey Office data, based on 67th (2010–11) and 73rd (2015–16) rounds.

In the other services category, the per cent distribution in Assam decreased from 32.51 per cent in 2010–11 to 28.13 per cent in 2015–16. The reasons behind this shift could be diverse, including changes in consumer preferences, technological advancements, or shifts in the demand for specific services.

Comparing these trends to the national level, All India's manufacturing sector showed a marginal increase from 29.84 per cent in 2010–11 to 31.02 per cent in 2015–16. The trade sector remained relatively stable, with a slight increase from 35.98 per cent to 36.34 per cent. In the other services category, there was a small decrease from 34.18 per cent to 32.64 per cent.

Analysing the overall scenario, Assam experienced a sectoral shift with a decrease in the manufacturing and other services categories and an increase in trade. Meanwhile, at the national level, there was a slight increase in manufacturing, stability in trade, and a marginal decrease in other services.

IV.3.3 Number of Workers

All persons working within the premises of the enterprise who are on the enterprise's payroll as also the working owners and unpaid family members are defined as workers. Taking all workers together, the estimates on the number of workers for the two rounds are given in Table IV.6.

Table IV. 6: Estimated number of workers and CAGR for the period 2010–11 to 2015–16

	Assam			All India		
	2010-11	**2015-16**	**CAGR**	**2010-11**	**2015-16**	**CAGR**
Rural	1398000	1161797	-3.63	53182000	49867273	-1.28
Urban	447000	653766	7.90	54797000	61403553	2.30
Total	**1845000**	**1815563**	**-0.32**	**107979000**	**111270826**	**0.60**

Source: National Sample Survey Office data, based on 67th (2010–11) and 73rd (2015–16) rounds.

In rural Assam, the number of workers decreased with a negative CAGR of -3.63 per cent. This decline may indicate various factors such as migration to urban areas or alterations in the economic landscape of the region. Contrastingly, the urban workforce in Assam experienced a significant increase with a CAGR of 7.9 per cent during the same period. This rise in urban employment suggests a shift in economic activities, possibly driven by urbanization, industrialization, or the expansion of service sectors within the state.

When considering the total workforce in Assam (combining rural and urban), there was a marginal decrease with a small negative CAGR of -0.32 per cent. This overall decline might be attributed to the contrasting trends observed in rural and urban employment.

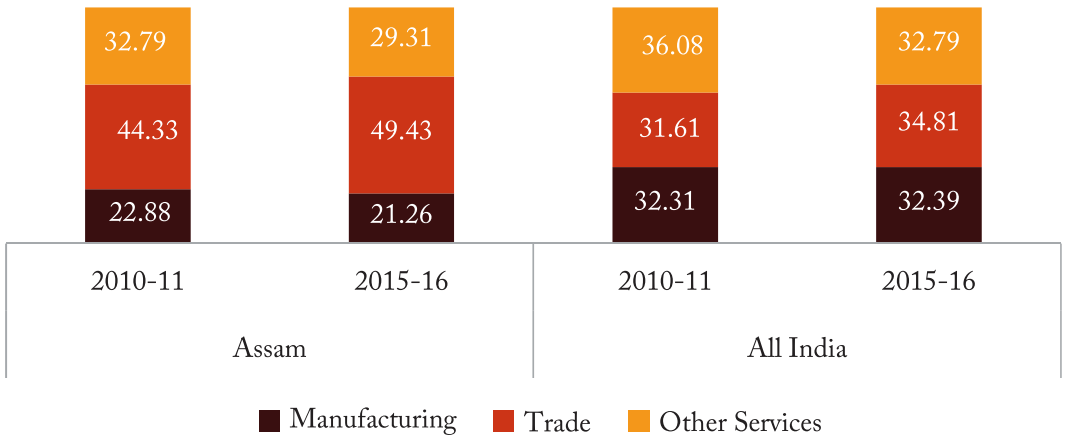
At the All India level, in rural areas across the country, the workforce diminished, indicating a negative CAGR of -1.28 per cent. In contrast, urban employment in India witnessed a positive trend, with the number of workers increasing, resulting a positive CAGR of 2.3 per cent. This growth aligns with the broader narrative of urbanization and the expansion of industries and services in the country.

The contrasting trends in rural and urban employment in Assam and India highlight the dynamic nature of the labour market during the specified period. The shifts observed may be indicative of changes in economic structures, technological advancements, or demographic patterns influencing the workforce landscape.

IV.3.4 Workers by Broad Category

In Assam in 2010–11, the majority of workers were engaged in trade, constituting 44.3 per cent of the workforce, followed by other services at 32.8 per cent, and manufacturing at 22.9 per cent. However, by 2015–16, there was a notable shift in this distribution. The percentage of workers in manufacturing decreased to 21.26 per cent, while trade and other services saw an increase to 49.43 per cent and a decrease to 29.31 per cent, respectively.

Figure IV. 2: Percentage distribution of workers based on broad activity category in Assam and All India for the period 2010–11 and 2015–16



Source: National Sample Survey Office data, based on 67th (2010–11) and 73rd (2015–16) rounds.

Comparing these trends with the national scenario, in All India in 2010–11, other services was the dominant sector, employing 36.1 per cent of the workforce, followed by manufacturing at 32.3 per cent, and trade at 31.6 per cent. By 2015–16, there were marginal changes. Manufacturing saw a slight increase to 32.39 per cent, trade also increased to 34.81 per cent, and other services decreased to 32.79 per cent.

The per cent distribution of workers in Assam and India between 2010–11 and 2015–16 points towards dynamic shifts in economic activities. The rise in trade in Assam and the stability in manufacturing at the national level suggest nuanced regional and national economic trajectories.

IV.3.5 Gross Value Added (GVA)

Table IV.7 provides insights into the estimated Gross Value Added (GVA) and their growth rates for Assam and All India during the period from 2010–11 to 2015–16, categorized into rural, urban, and overall figures.

Table IV. 7: Estimated GVA and CAGR for the period 2010–11 to 2015–16

	Assam			All India		
	2010-11 (Rs Crore)	2015-16 (Rs Crore)	CAGR	2010-11 (Rs Crore)	2015-16 (Rs Crore)	CAGR
Rural	6,765	8,997	5.87	1,98,055	3,44,872	11.73
Urban	3,756	8,018	16.38	4,30,302	8,07,437	13.41
All	**10,521**	**17,016**	**10.09**	**6,28,356**	**11,52,309**	**12.89**

Source: National Sample Survey Office data, based on 67th (2010–11) and 73rd (2015–16) rounds.

In rural Assam, the GVA increased with a CAGR of 5.87 per cent. This substantial growth indicates positive economic developments in rural areas during this period. In comparison, at the national level, rural GVA for All India saw an even more impressive CAGR of 11.73 per cent.

Turning to urban Assam, the GVA more than doubled, indicating an impressive CAGR of 16.38 per cent. This sharp increase suggests dynamic economic activities in urban areas, potentially driven by industrialization, services, or other urban-centric economic developments. On a national scale, urban GVA for All India also experienced substantial growth, with a CAGR of 13.41 per cent. This surge aligns with the broader narrative of urban economic expansion and increased economic activities in cities.

The table reveals substantial GVA growth for both Assam and All India, with rural and urban areas contributing significantly to the overall economic expansion.

IV.3.6 Gross Value Added per Enterprise

In rural Assam, during the years 2010–11, the Gross Value Added (GVA) per enterprise stood at Rs 73,000. By 2015–16, it had increased to Rs 106,000, reflecting a CAGR of 7.71 per cent. This growth suggests an improvement in the economic output generated per enterprise in rural areas over the specified period. At the national level, the rural GVA per enterprise for All India experienced a higher CAGR of 10.58 per cent, increasing from Rs 64,000 to Rs 106,000. This robust growth might be indicative of increased productivity and efficiency in rural enterprises across the country.

Table IV. 8: Estimated GVA per enterprise and their growth for the period 2010–11 to 2015–16

	Assam			All India		
	2010-11 (Rs)	2015-16 (Rs)	CAGR	2010-11 (Rs)	2015-16 (Rs)	CAGR
Rural	73000	106000	7.71	64000	106000	10.58
Urban	166000	220000	5.78	161000	261000	10.19
All	**91000**	**140000**	**8.90**	**109000**	**182000**	**10.81**

Source: National Sample Survey Office data, based on 67th (2010–11) and 73rd (2015–16) rounds.

For urban Assam, the GVA per enterprise increased from Rs 166,000 in 2010–11 to Rs 220,000 in 2015–16, with a CAGR of 5.78 per cent. At the national level, urban GVA per enterprise for All India also witnessed significant growth, increasing from Rs 161,000 to Rs 261,000, with a CAGR of 10.19 per cent. This substantial increase points towards improved productivity and economic output in urban enterprises on a broader scale.

The positive trends in GVA per enterprise in both Assam and All India between 2010–11 and 2015–16 indicate improvements in economic productivity and efficiency at both the regional and national levels, potentially influenced by factors such as technological advancements, policy measures, or changes in business practices.

IV.3.7 Gross Value Added per Enterprise by Broad Category

Table IV. 9: Estimated GVA per enterprise and CAGR based on broad activity category in Assam and all India for the period 2010–11 and 2015–16

	Assam			All India		
	2010-11	**2015-16**	**CAGR**	**2010-11**	**2015-16**	**CAGR**
Manufacturing	100184	152979	8.83	89890	136317	8.68
Trade	101562	136859	6.15	117427	194876	10.66
Other services	71611	139205	14.22	112979	210846	13.29
All	**91929**	**140217**	**8.81**	**107570**	**181903**	**11.08**

Source: National Sample Survey Office data, based on 67th (2010–11) and 73rd (2015–16) rounds.

Table IV.9 offers a comprehensive overview of Gross Value Added (GVA) per enterprise in Assam and All India, categorized by broad activity types for the years 2010–11 and 2015–16. GVA serves as a key indicator of the economic performance of different sectors, reflecting the value generated by each enterprise.

Commencing with the manufacturing sector, Assam experienced significant growth, showcasing a robust CAGR of 8.83 per cent. This growth slightly surpassed the national average, where the GVA for manufacturing increased at a CAGR of 8.68 per cent.

Transitioning to the trade sector, Assam also demonstrated substantial increase with a CAGR of 6.15 per cent. However, the growth in the trade sector was comparatively higher at the national level. This indicates a relatively swifter expansion of the trade sector nationally compared to Assam.

The category of other services witnessed remarkable growth in Assam, marking an impressive CAGR of 14.22 per cent. This growth outpaced the national rate, with the GVA for other services reflecting a CAGR of 13.29 per cent. The substantial growth in other services in both Assam and All India signifies the increasing importance and contribution of this sector to the overall economy.

IV.3.8 Gross Value Added per Worker

In the dynamic landscape of economic development, understanding the growth patterns in Gross Value Added (GVA) per worker is crucial. Table IV.10 provides a comprehensive view of this aspect for Assam and All India, highlighting the rural and urban sectors over the five-year period from 2010–11 to 2015–16.

Table IV. 10: Estimated GVA per worker and CAGR for the period 2010–11 to 2015–16

	Assam			All India		
	2010-11 (Rs)	2015-16 (Rs)	CAGR	2010-11 (Rs)	2015-16 (Rs)	CAGR
Rural	48000	77000	9.74	37000	69000	13.13
Urban	84000	123000	7.90	79000	132000	10.95
All	**57000**	**94000**	**10.51**	**58000**	**104000**	**12.31**

Source: National Sample Survey Office data, based on 67th (2010–11) and 73rd (2015–16) rounds.

In 2010–11, the estimated GVA per worker in rural Assam was Rs 48,000, and by 2015–16, it surged to Rs 77,000, representing an impressive CAGR of 9.74 per cent. The rural economy in Assam witnessed significant progress during this period, with increased productivity and value addition.

Comparatively, the rural sector at the national level saw more accelerated growth in GVA per worker. Starting at Rs 37,000 in 2010–11, it reached Rs 69,000 in 2015–16, exhibiting a higher CAGR of 13.13 per cent. This robust growth indicates widespread enhancement in rural economic activities across the country.

Moving to the urban landscape, Assam experienced steady growth from Rs 84,000 in 2010–11 to Rs 123,000 in 2015–16, with a CAGR of 7.90 per cent. The urban areas in the state contributed significantly to the overall economic progress, albeit at a slightly slower pace compared to their rural counterparts.

On the national scale, urban areas displayed a similar growth pattern. Starting at Rs 79,000 in 2010–11, the GVA per worker in urban All India rose to Rs 132,000 in 2015–16, reflecting a CAGR of 10.95 per cent. This emphasizes the robust economic activity and job creation in urban regions across the country.

Considering both rural and urban sectors, the overall GVA per worker in Assam witnessed a substantial increase from Rs 57,000 in 2010–11 to Rs 94,000 in 2015–16, with a commendable CAGR of 10.51 per cent. Meanwhile, at the national level, the All India GVA per worker grew from Rs 58,000 to Rs 104,000 during the same period, showcasing a slightly higher CAGR of 12.31 per cent. This collective growth reflects a positive trend in economic development, indicating that both Assam and All India made significant strides in enhancing productivity and value addition per worker over the analysed five-year span.

IV.3.9 Gross Value Added per Worker by Broad Category

Delving into the economic dynamics of Assam and All India, Table IV.11 outlines the Estimated GVA per worker and CAGR across broad activity categories during the period from 2010–11 to 2015–16. This breakdown provides a nuanced understanding of how various sectors contributed to the overall economic growth in both regions.

In 2010–11, the GVA per worker in the manufacturing sector of Assam stood at Rs 51,916, escalating to Rs 80,538 by 2015–16. This represents a commendable CAGR of 9.18 per cent. The manufacturing landscape in Assam witnessed notable advancements during this period, reflecting increased production and value creation.

Table IV. 11 : Estimated GVA per worker and CAGR based on broad activity category in Assam and All India for the period 2010–11 and 2015–16

	Assam			All India		
	2010-11	**2015-16**	**CAGR**	**2010-11**	**2015-16**	**CAGR**
Manufacturing	51916	80538	9.18	44347	74378	10.90
Trade	69345	102078	8.04	71412	115884	10.17
Other services	43969	89344	15.23	59010	119939	15.24
All	**57036**	**93769**	**10.45**	**58193**	**103741**	**12.26**

Source: National Sample Survey Office data, based on 67th (2010–11) and 73rd (2015–16) rounds.

At all India level, the manufacturing sector displayed a similar growth trend. Starting at Rs 44,347 in 2010–11, the GVA per worker reached Rs 74,378 in 2015–16, demonstrating a slightly higher CAGR of 10.90 per cent. This emphasizes the overall robustness of the manufacturing sector in contributing to economic expansion across the country.

The trade sector in Assam experienced substantial growth, with the GVA per worker rising from Rs 69,345 in 2010–11 to Rs 102,078 in 2015–16, resulting in an 8.04 per cent CAGR. This indicates a thriving trade environment, showcasing increased commercial activity and trade-related value addition in the state.

At the national level, the trade sector exhibited a parallel growth trajectory. Starting at Rs 71,412 in 2010–11, the GVA per worker in trade escalated to Rs 115,884 in 2015–16, reflecting a CAGR of 10.17 per cent. This underlines the significant role of the trade sector in fostering economic growth across India.

The category of other services in Assam witnessed remarkable growth, with the GVA per worker soaring from Rs 43,969 in 2010–11 to Rs 89,344 in 2015–16. This impressive growth was accompanied by a high CAGR of 15.23 per cent, indicating a surge in demand for diverse services and a thriving service-oriented economy.

Similarly, at the national level, other services experienced robust expansion. Beginning at Rs 59,010 in 2010–11, the GVA per worker reached Rs 119,939 in 2015–16, mirroring the high CAGR of 15.24 per cent. This suggests a widespread surge in demand for a variety of services across the country.

The growth in GVA per worker across manufacturing, trade, and other services categories for Assam and All India levels signals a multifaceted and robust economic expansion during the specified timeframe.

IV.4 Government Schemes

The growth of MSMEs is directly or indirectly dependent on government assistance through various schemes. Through these and other schemes, the government is actively working to create a conducive environment for the sustained growth of MSMEs in Assam. Both the Central and State governments play a crucial role in supporting enterprises in Assam. They have implemented various schemes aimed at fostering the development of MSMEs. Some of the major initiatives are as follows.

IV.4.1 Central Schemes

IV.4.1.a Industrial Growth Centre (IGC) Scheme, Ministry of Commerce & Industry

Ministry of Industry introduced a scheme in June 1988 to encourage industrialization of backward areas in the country. It was aimed that up to 100 growth centres would be set up throughout the country to act as focal points of industrialization.

IV.4.1.b ASIDE Scheme, Ministry of Commerce & Industry

The Department of Commerce, Government of India had formulated a scheme called Assistance to States for Developing Export Infrastructure and Allied Activities (ASIDE). This scheme was drawn up for infrastructure improvement for exports with a view, therefore, to optimize the utilization of resources and to achieve the objectives of export growth through a coordinated effort of the Central Government and the states. As per recommendations of the 14th finance commission ASIDE was replaced by the TIES scheme.

IV.4.1.c TIES Scheme

The New Scheme of Government of India, 'Trade Infrastructure for Export Scheme (TIES),' replaces the erstwhile Central Government's Assistance to States for Development of Export Infrastructure and Allied Activities (ASIDE) scheme to support funding of export infrastructure across states.

The TIES scheme is to assist in the creation of modern infrastructure for exporters across States, like setting up and upgradation of infrastructure projects with export linkages like Border Haats, Land customs stations, quality testing and certification labs, cold chains, trade promotion centres, dry ports, export warehousing and packaging, SEZs and ports/ airports cargo terminuses. The scheme lays thrust on last and first-mile connectivity projects related to export logistics.

IV.4.1.d EDF Scheme, Ministry of Commerce & Industry

Following the announcements made by the Prime Minister in respect of measures for the development of exports from the North-Eastern region in Shillong on January 21–22, 2000, an Export Development Fund (EDF) has been set up with the objective of using the resources for the development of exports from the region.

Following activities will be eligible for assistance from the Fund:-

I. Setting up of pioneering/pilot projects aimed at exports

II. Provision of equipment and machinery for the pioneering pilot projects aimed at exports

III. Creation of common facilities for facilitating exports

IV. Facility for testing and standardization as well as quality improvement of export products

V. Funding related to the exchange of trade delegations

VI. Any other activity as notified by the Department of Commerce having a bearing on export promotion in the North East.

The objective of the fund is to assist specific activities for promotion of exports from the North-Eastern region of the country. All activities, which have a linkage with the exports from the region and are designed to help exports, shall be eligible for assistance from the fund.

IV.4.1.e EPIP, Ministry of Commerce & Industry

EPIP stands for Export Promotion Industrial Park. It is a scheme implemented by the Ministry of Commerce & Industry, Government of India. EPIPs are industrial estates or parks that are specifically designed and developed to encourage exports and boost industrialization in the country. EPIP Amingaon is strategically located near Guwahati, the largest city in Assam, which provides easy connectivity to major transportation networks, including road, rail, and air. Some of the key features and facilities available at EPIP Amingaon include:

1. Industrial Sheds: The park provides well-designed and constructed industrial sheds or factory spaces that can be leased or rented by export-oriented units. These sheds are typically equipped with essential utilities and amenities required for manufacturing and production activities.

2. Common Facilities: EPIP Amingaon offers various common facilities and services to the units within the park. These may include testing laboratories, packaging centres, administrative offices, banking facilities, customs clearance centres, and exhibition halls. These shared facilities help reduce operational costs and improve efficiency.

3. Infrastructure: The park is equipped with modern infrastructure, including well-built roads, power supply, water supply, drainage systems, and communication facilities. These amenities are designed to meet the specific needs of export-oriented industries and facilitate smooth operations.
4. Government Support: Being an Export Promotion Industrial Park, EPIP Amingaon provides access to government support and incentives. These may include tax concessions, duty exemptions or reductions on imports and exports, simplified customs procedures, and participation in export promotion schemes and incentives offered by the government.

IV.4.1.f Cluster Development Programme, Ministry of MSME

It aims to promote and enhance the competitiveness of micro, small, and medium enterprises through the development of industrial clusters.

The primary objective of the Cluster Development Programme is to foster the growth and development of clusters, which are geographically concentrated groups of interconnected businesses, suppliers, and supporting institutions within a specific industry or sector. Here are some key features and components of the Cluster Development Programme:

1. Diagnostic Study: The programme begins with a diagnostic study to identify the strengths, weaknesses, opportunities, and threats (SWOT analysis) of the cluster. This helps in understanding the current status and potential areas for improvement.
2. Soft Intervention: Soft interventions include activities like awareness programs, skill development training, capacity building, technology upgradation, and market linkages. These initiatives aim to enhance the knowledge and skills of MSMEs within the cluster and improve their access to markets and technology.
3. Hard Intervention: Hard interventions involve providing physical infrastructure and common facilities to the cluster, such as testing laboratories, common production centres, design studios, and marketing support. These interventions focus on improving the overall infrastructure and ecosystem within the cluster.
3. Special Purpose Vehicle (SPV): The creation of a Special Purpose Vehicle is encouraged to manage and govern the cluster development activities effectively. The SPV typically consists of representatives from the participating MSMEs, industry associations, local government, and other relevant stakeholders.
4. Funding Support: The Ministry of MSME provides financial assistance for the implementation of the Cluster Development Programme. The support may include grants or subsidies for infrastructure development, capacity building, and other relevant activities.

IV.4.1.g Plastic Park Scheme, Ministry of Chemicals & Fertilizers, Department of Chemicals & Petrochemicals

This scheme aims to promote the development of dedicated industrial parks or clusters specifically for the plastics and petrochemicals sector. The objective of the Plastic Park Scheme is to provide a common infrastructure and ecosystem for the plastics industry, which includes manufacturers, processors, and supporting units. The scheme focuses on creating world-class infrastructure, promoting innovation and research, enhancing competitiveness, and facilitating the growth of the plastics and petrochemicals sector in India. Here are some key features and components of the setting up of Plastic Park Scheme:

1. Infrastructure Development: The scheme provides support for the development of physical infrastructure within the plastic parks. This includes facilities such as industrial sheds, warehouses, testing laboratories, common effluent treatment plants, utility services, roads, and other necessary amenities.
2. Common Facilities: The scheme encourages the establishment of common facilities within the plastic parks. These may include testing and quality control laboratories, design and product development centres, training and skill development facilities, research and

development centres, and waste management facilities.

3. Special Incentives: The Plastic Park Scheme offers special incentives and benefits to attract investments in the parks. These may include financial assistance, tax incentives, subsidies, and preferential treatment in accessing government schemes and programs.
4. Collaboration and Networking: The scheme promotes collaboration and networking among the units within the plastic parks. This enables knowledge sharing, technology transfer, and business linkages among the manufacturers, processors, and supporting units, thereby fostering a conducive environment for growth and innovation.
5. Environmental Sustainability: The scheme emphasizes environmental sustainability by encouraging the adoption of eco-friendly practices and technologies within the plastic parks. This includes promoting recycling, waste management, energy efficiency, and reducing the environmental impact of the plastics and petrochemicals industry.

IV.4.1.h Jute Technology Mission Scheme, Ministry of Textile

The Jute Technology Mission Scheme is an initiative implemented by the Ministry of Textiles, Government of India, aimed at promoting the development and modernization of the jute industry. The scheme focuses on enhancing the productivity, quality, and competitiveness of jute and jute-based products while also improving the socio-economic conditions of jute farmers and workers. Some key features and objectives of the Jute Technology Mission Scheme are:

1. Research and Development: The scheme supports research and development activities in the jute sector, including the development of new technologies, machinery, and processes for jute cultivation, processing, and value addition.
2. Modernization of Jute Mills: The scheme aims to upgrade and modernize existing jute mills by providing financial assistance for the adoption of advanced technologies, machinery, and equipment. This includes improving the efficiency of processing, enhancing product quality, and reducing environmental impact.
3. Capacity Building: The scheme emphasizes the training and skill development of jute farmers, workers, and entrepreneurs. It includes programs on best practices in jute cultivation, harvesting, processing, and value addition, as well as managerial and technical skills for jute industry professionals.
4. Market Promotion: The scheme focuses on the promotion and marketing of jute and jute-based products. This includes initiatives to raise awareness about the benefits and potential applications of jute, as well as supporting market research, product development, and export promotion activities.
5. Entrepreneurship Development: The scheme encourages the entrepreneurship and self-employment of jute industry stakeholders. It provides support for the establishment of new jute-based enterprises, including financial assistance, business incubation, and mentoring services.
6. Welfare of Jute Workers: The scheme also addresses the welfare and socio-economic conditions of jute farmers and workers. It includes initiatives for skill development, healthcare, housing, and social security benefits for the jute industry workforce.

IV.4.2 State Schemes

IV.4.2.a Biponi

The objective of this scheme is to support Micro & Small enterprises in participating in trade fairs, events within Assam, India and abroad, as well as helping marketing their products. The Biponi scheme focuses on mMarketing promotion at district level within Assam at important festive events, with stalls arranged for the same. Outside the state, national level exhibitions will be held, where participants will be invited on the basis of the quality of their products and their performance within Assam.

On the international level, for promoting "Brand Assam", a basket of products will be identified and displayed at international fairs and exhibitions suitable for marketing promotion. Adequate advertisement and publicity of the investment potential of the state including setting up of departmental stall in major fairs, printing of information brochure/booklet, publicity of participant's profile, etc. will be ensured and cost of same will borne from the scheme.

IV.4.2.b Boneej

Introduced in 2016, the basic objective of the Boneej scheme is to provide special grants for rural industrial enterprises in traditional and micro sector in Assam. Industries existing in rural areas of Assam which have been functional for 2 years or more are eligible for a Rs 25,000 grant where annual turnover is less than Rs 5 Lakhs. The amount of the grant has to be utilized by the industry for the procurement of machinery and/or raw materials, whatever the case may be.

IV.4.2.c Sarothi — The Start Up Assam

Getting loan or financial assistance from bank/ financial institutions for any new venture is a major problem in the state as banks/financial institutions are very reluctant to provide loan considering it as a risk for them. To remove this hurdle of equity / fund crunch, the State Government has proposed to launch a new scheme called Chief Minister's Start-up fund "Sarothi" with an initial amount of Rs 10 Crore during 2016–17. The basic objective of the scheme is to provide financial assistance in the form of loan with interest subvention through a designated bank covering the whole of Assam. The loan so availed by the beneficiaries will be supported by the State Government through interest subvention @ 5 per cent per annum.

The financial assistance has been proposed to be provided in the form of Interest subvention on loan (Term Loan +Cash Credit) @ 5 per cent per annum initially through Assam Gramin Vikash Bank (AGVB) to applicant industries. Later on, the Government may bring in more bank/s under the purview of the scheme. All innovative start-up industrial activities and new individual applicant shall be eligible to get the benefit under the scheme.

IV.4.2.d Udyog-Jyoti Scheme

The Industries and Commerce Department of the Government of Assam launched an initiative to motivate the youth to take up entrepreneurship and establish businesses. This scheme involves field visits to various industries, organisations, manufacturing units, etc. These visits help students get practical exposure to SMEs. As a result, they show interest and enthusiasm for starting an MSME venture.

IV.4.2.e Assam Bikash Yojana

The "Assam Bikash Yojana" is an employment generation schemes undertaken by the Government of Assam. Under the scheme the tourism department has taken up programmes like providing financial assistance to local educated unemployed youths so that the youths could engage themselves in tourism promotional activities like transport, wayside amenities, food kiosk, restaurants, dhabas, and cottages for accommodation, etc.

V

MSME Sector in Assam: Findings from the Survey

V.1 Introduction

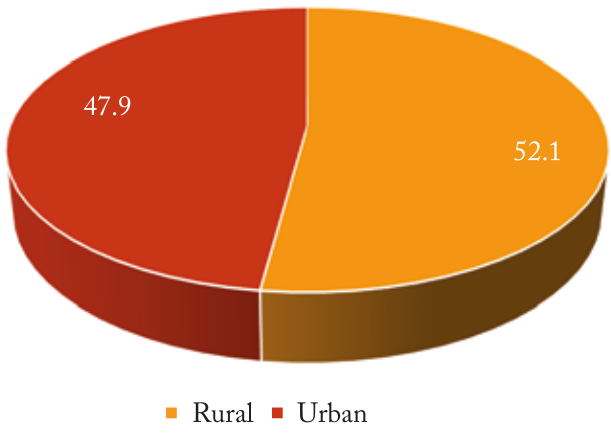
The Micro, Small and Medium Enterprises (MSME) sector in Assam stands as a testament to the state's economic resilience and entrepreneurial spirit. This sector has undergone significant transformation and is emerging as a vital contributor to the economy of Assam. This chapter delves into the heart of this dynamic sector, presenting insightful findings derived from a comprehensive survey conducted in the region. Through meticulous analysis and extensive research, this chapter aims to shed light on the challenges, opportunities, and growth trajectories within the MSME landscape in Assam.

The findings presented herein not only reflect the economic aspects but also serve as a foundation for policymakers, researchers and business leaders to make informed decisions that can bolster the growth and spread of the MSME sector in Assam.

V.2 Sample Number of MSMEs

Data was gathered from 1,214 MSMEs involved in manufacturing, assembling, processing, retail, or wholesale trade, as well as service activities across all the districts of Assam.

Figure V. 1: Percentage distribution of sample MSMEs by place of enterprise



Source: NCAER survey.

Approximately 52 percent of the sampled MSMEs were located in rural areas, while the remaining 48 per cent are in urban areas. Thus, the spread of the MSMEs is somewhat even, with a marginal bias in favour of rural areas.

V.3 Estimated Number of MSMEs

The survey estimated that there were approximately 20.27 lakh MSMEs in Assam during 2022–23. Among these, 20.15 lakh were classified as Micro enterprises, around 11,663 were identified as Small enterprises, and only 422 belonged to the Medium enterprise category. This data provides valuable insights into the distribution of MSMEs across different scales, offering a comprehensive overview of the business landscape in Assam during the specified period.

Table V. 1: Estimated number of enterprises by type of MSMEs

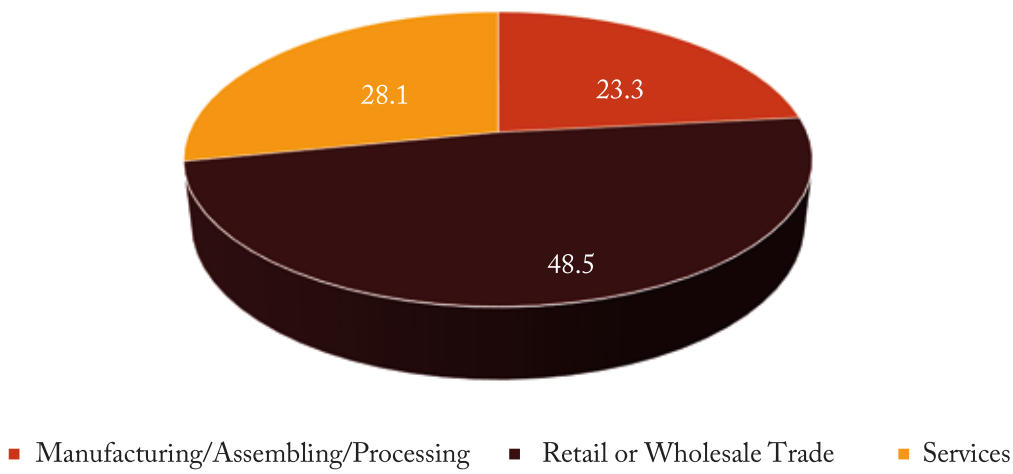
MSME Sector in Assam: Findings from the Survey	Number of MSMEs
Micro	20,15,598
Small	11,663
Medium	422
Total	**20,27,683**

Source: NCAER survey.

V.4 Nature of MSME Business

In the landscape of Assam's MSMEs, a comprehensive survey revealed the intricate details of their diverse ventures. As per survey estimation, Assam boasts approximately 20.27 lakh MSMEs, each contributing uniquely to the state's economic fabric.

Figure V. 2: Percentage distribution of MSMEs by nature of MSME business

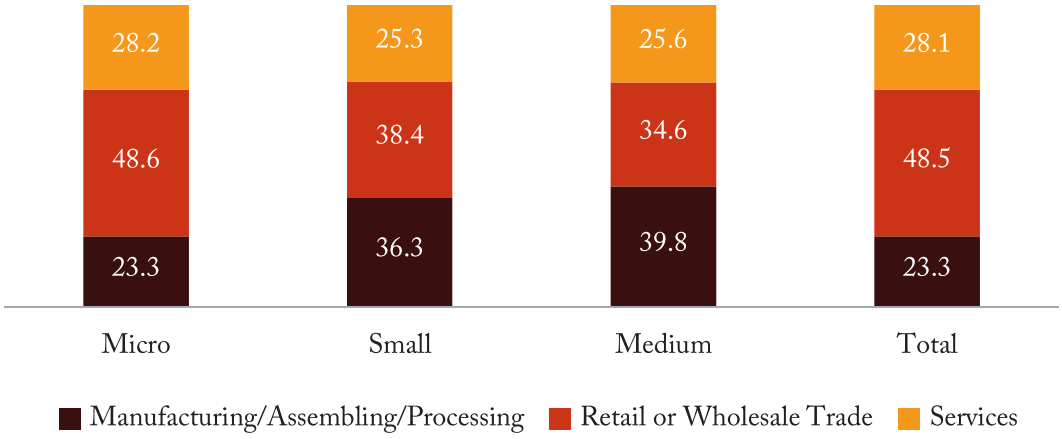


Source: NCAER survey.

A closer examination of these surveyed enterprises shed light on their varied pursuits. Nearly 49 per cent of these enterprises are in retail and wholesale trade, underscoring the preference of MSMEs in undertaking such commercial activities. approximately 28 per cent are dedicated to providing essential services, emphasizing the growing importance of service-oriented enterprises. Then about 23 per cent

of Assam's MSMEs are engaged in the domains of manufacturing/ assembling/processing, indicating the potential of the industrial sector in the State. The growth in the industrial sector will also boost the wholesale and retail business in the state. This intricate inter-linkages between different business spheres paints a vivid picture of Assam's MSME landscape, where trade, services, and manufacturing coalesce to drive economic growth.

Figure V. 3: Percentage distribution of nature of MSME business within type of MSMEs



Source: NCAER survey.

Micro enterprise **–**

In the business landscape, micro-enterprises constitute the backbone of entrepreneurial spirit. Such enterprises predominantly find their niche in 'retail or wholesale trade' with 48.6 per cent distribution. These small-scale ventures are the lifeblood of local markets, ensuring the availability of diverse goods and services. With nearly half of enterprises, their contribution to employment is also commendable. Services related enterprises at 28.2 per cent and manufacturing/ assembling/processing businesses at around 23.3 per cent followed closely, underlining the state's commitment to both consumer-oriented services and production.

Small enterprises **–**

As we ascend the ladder to small enterprises, a strategic shift unfolds. Though the number of retail or wholesale trade still dominates at 38.4 percent, the number of manufacturing/assembling/processing enterprises increases to 36.3 per cent. It indicated that small enterprises are finding viability in such businesses. More than a quarter at 25.3 per cent of the small enterprises are engaged in the services sector, reflecting reflecting a growing tertiary sector.

Medium enterprise **–**

Moving a notch up, manufacturing/assembling / processing enterprises constituted almost 40 percent of the medium enterprises, indicating that larger enterprises are engaging more in such activities as compared to micro and small enterprises. The number of enterprises engaged in 'Retail or wholesale trade' activities is at 34.6 per cent and services activities stand at 25.6 per cent. Thus, while retail or wholesale activities forms another important share, services activities accounted for a quarter of medium enterprises.

Thus, retail or wholesale activities is more dominant in micro enterprises whose share becomes smaller in small enterprises and much smaller share in medium enterprises. Per contra, when it comes to manufacturing/assembling/processing activities, it is the opposite. Such activities are more dominant in medium enterprises and have the least share in micro enterprises. Further, services related activities account

for an equal share in small and medium enterprises, with a larger share in micro enterprises.

V.5 Type of Ownership

In Assam, approximately 84.6 per cent of MSMEs operated as individual proprietorships, about 10.7 per cent are run as partnerships within the same household, while a smaller fraction at 3.14 per cent operated as partnerships between members who are not all from the same household.

Table V. 2 : Percentage distribution of type of ownership

	Individual Proprietorship	Partnership with members of the same household	Partnership between members not all from the same household	Private limited company	Co-operative Society	Self Help Group	Others
Micro	84.74	10.68	3.13	0.45	0.16	0.71	0.13
Small	66.16	19.03	4.23	10.07	0.00	0.00	0.51
Medium	47.39	28.20	7.11	16.35	0.00	0.00	0.95
Total	**84.63**	**10.73**	**3.14**	**0.51**	**0.16**	**0.71**	**0.13**

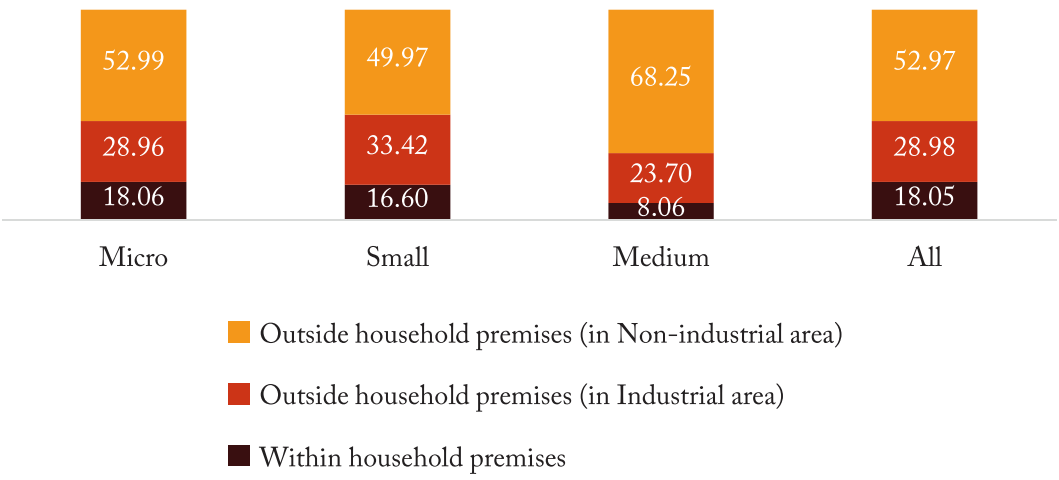
Source: NCAER survey.

These statistics underscore the prevalence of individual proprietorships in the State of Assam, highlighting the significant roles played by single entrepreneurs in the MSME sector. Furthermore, the data also indicates a noteworthy trend where a considerable portion of partnerships occurs within family units, showcasing the blend of familial and entrepreneurial connections within the local business landscape.

V.6 Location of Enterprise

The location of an enterprise plays a crucial role in its operation. NCAER survey indicates that overall around 53 per cent of enterprises are situated outside household premises in non-industrial areas. However, variation do exist. About 68.25 percent of the medium enterprises, 49.97 percent of the small enterprises and 52.99 percent of micro enterprises prefer to locate outside household premises in non-industrial areas.

Figure V. 4: Percentage distribution of location of enterprises by type of MSMEs



Source: NCAER survey.

In contrast, about 29 per cent are located outside households within industrial areas. Here too variation exists. While only 23.70 percent of the medium enterprises prefer to locate outside households within industrial, it is much larger for micro enterprises at 28.96 percent and at 33.42 percent for small enterprises.

A mere 18.5 per cent of enterprises operate within household premises, dominated by micro enterprises at 18.06 percent, followed by small enterprises at 16.60 percent, and 8.06 percent for medium enterprises.

These findings highlighted the fact that more than 80 percent of the MSMEs are located in industrial and non-industrial arears outside the households. The significance of location of the enterprises suggest that a majority of businesses prefer to thrive outside residential settings, with a notable distinction between industrial and non-industrial zones.

V.7 Nature of Operation

The operations of almost all MSMEs in Assam are characterized as perennial, accounting for an overwhelming 99.14 per cent. In contrast, only a negligible portion of MSMEs, comprising 0.85 per cent are involved in seasonal activities, and a mere 0.06 per cent are engaged in casual operations.

Table V. 3 : Percentage distribution of nature of operation by type of MSMEs

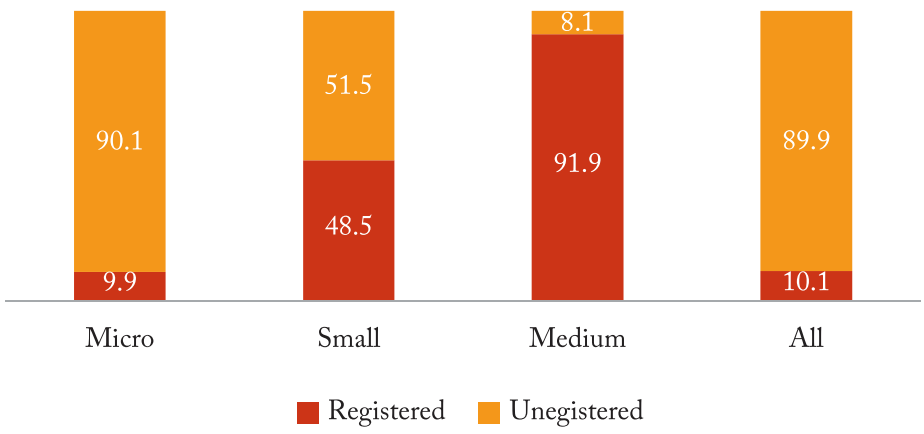
	Perennial	Seasonal	Casual	Total
Micro	99.14	0.81	0.05	100
Small	90.64	8.43	0.93	100
Medium	100.00	0.00	0.00	100
All	**99.09**	**0.85**	**0.06**	**100**

Source: NCAER survey.

V.8 Udyam or Udyog Aadhar Registration

Udyog Aadhar or Udyam Registration, a government of India initiative, facilitates the registration of Micro, Small, and Medium-sized enterprises under the Ministry of Micro, Small, and Medium Enterprises (MSME), Government of India. This registration offers numerous benefits to businesses, including easier access to credit, subsidies, incentives, and priority sector lending.

Figure V. 5: Percentage distribution of Udyam or Udyog Aadhar registration by type of MSMEs



Source: NCAER survey.

It is noteworthy that overall only 10.1 per cent of MSMEs are currently registered under Udyog Aadhar or Udyam Registration. This percentage is significantly low, especially among micro-enterprises, where the registration rate stands at a mere 9.9 per cent. In comparison, small enterprises show a registration rate of 48.5 per cent, and medium-sized enterprises exhibit a substantially higher rate at 91.9 per cent.

This data emphasizes a critical gap in registration, particularly within the micro-enterprise sector. Despite the evident advantages, a large proportion of businesses, especially smaller ones, have yet to leverage the benefits offered by Udyog Aadhar or Udyam Registration. Encouraging higher registration rates, especially among micro-enterprises, is vital to ensuring that these businesses can access the support and opportunities provided by the government's initiatives for the MSME sector.

V.9 Authority of Registration

According to the survey, nearly half of the MSMEs, approximately 48 per cent, have not registered with any authority. About 44 per cent of the MSMEs fall under the "Shops and Commercial Establishment Act," while a minor 3.7 per cent falls under the "Central Excise/Sales Tax Act." Additionally, only around 1 per cent are registered under "KVIC/KVIB/DIC/Coir Board: Handloom/Handicrafts." The authority of registration for businesses in other categories is exceedingly minimal.

Table V. 4 : Percentage distribution of authority of registration

Authority of Registration	Percentage
Not Registered	48.4678
Shops and Commercial Establishment Act	44.4400
Central Excise/Sales Tax Act	3.6925
KVIC/KVIB/DIC/Coir Board: Handloom/Handicrafts	1.1053
Others	0.7949
Section 2m(i) or 2m(ii) of Factories Act, 1948	0.5979
Societies Registration Act	0.3166
Act related to Building & Constructions	0.2357
Companies Act, 1956	0.1890
Directorate of Industries	0.1186
Co-operative Societies Act	0.0361
Central Silk Board	0.0054
Jute Commission	0.0001
Total	**100**

Source: NCAER survey.

This data underlines a significant gap in the formal registration of MSMEs, with a substantial portion operating without any registration. The majority of those registered have opted for basic registrations under the "Shops and Commercial Establishment Act," highlighting the need for increased awareness

and incentives for MSMEs to register under more specific and beneficial schemes. Encouraging more businesses to formalize their operations under specialized categories could potentially enhance the sector's credibility and open avenues for specific government support programs.

V.10 Estimated Number of Workers

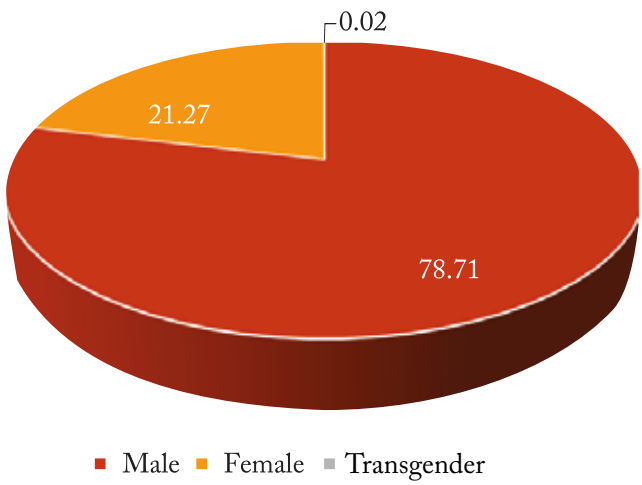
The survey findings regarding the employment distribution in Assam's MSME sectors provide valuable insights into the employment landscape and potential of the sector. By employing approximately 36.07 lakh workers, MSMEs play a pivotal role in generating employment opportunities. The balanced distribution of these workers, with 18.99 lakhs (52.64 %) in rural areas and 17.08 lakhs (47.35 %) in urban areas, signifies a harmonious synergy between urban and rural economies in so far as the sector is concerned.

In rural areas, employment is the MSME sector can act as a catalyst for agricultural communities, providing alternative livelihoods, supplementing the incomes of households and reducing dependency on agriculture. This diversification strengthens the economic resilience of rural regions, offering a buffer against the uncertainties of agricultural output. In urban areas, MSMEs make significant contributions to the urban workforce, promoting industrialization and urbanization. This balanced employment distribution helps curb rural-to-urban migration and supports balanced regional development.

V.10.1 Workers by Gender

The Survey revealed a gender disparity within the MSME sector, indicating that approximately 79 per cent of the workforce is male, with only about 21 per cent being female. The representation of transgender individuals in this sector is minimal. These findings highlight the importance of addressing gender imbalances in the workplace and promoting inclusivity.

Figure V. 6: Percentage distribution of workers by gender



Source: NCAER survey.

V.10.2 Workers by Type of MSMEs

Out of the total 36.07 lakh workers, a staggering 34.08 lakh (around 94%) are employed in micro enterprises, highlighting the predominant role of these micro-scale businesses in Assam's economy. In contrast, a meagre 1.9 lakh workers are engaged in small enterprises, and further smaller share of 0.10 lakh workers are employment in the medium enterprises Hence, micro enterprises make up 99 percent of the MSME's, and employ 94 percent of the MSME workforce.

Table V. 5 : Estimated number of workers by type of MSMEs

Type of MSME	Total Number of Workers (In lakhs)
Micro	34.08
Small	1.89
Medium	0.10
Total	**36.07**

Source: NCAER survey.

The above table illustrates the distribution of employment among the MSMEs in Assam. The table highlights the immense significance of micro enterprises as an employment generator in the MSME sectors. The overwhelming majority of micro enterprises could be an indicator of the fact that the people of Assam possess self-reliance in earning a living for themselves.

The limited employment opportunities in small and medium enterprises highlight potential areas for targeted growth and support. By encouraging the expansion of small and medium enterprises, Assam can diversify its economic landscape, create more jobs, and enhance the overall productivity of its workforce.

Table V. 6: Average number of workers by type of MSMEs

Type of MSME	Average Number of Workers
Micro	1.69
Small	16.20
Medium	24.66
Total	**1.78**

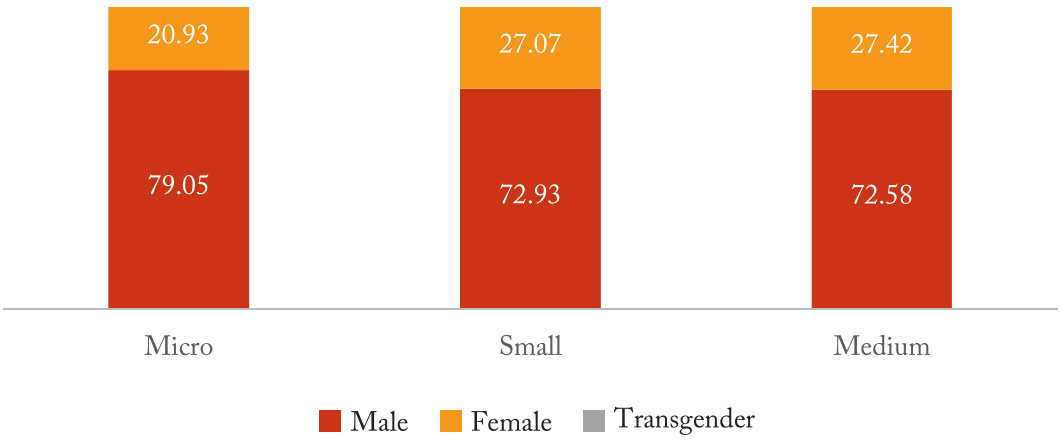
Source: NCAER survey.

Table V.6 shows the average number of workers in different types of MSMEs, highlighting clear differences in employment patterns. Micro enterprises, which form the foundation of the MSME sector, employ an average of just 1.69 workers, reflecting their small scale and limited resources. Small enterprises employ an average of 16.20 workers, showing their ability to grow and create more jobs. Medium enterprises, which are often close to becoming large businesses, employ an average of 24.66 workers, playing a key role in connecting small businesses to larger industries. The overall average workforce size across all MSMEs is reported as 1.78 workers, emphasizing the dominance of micro enterprises in the sector.

V.10.3 Workers by Gender across Type of MSMEs

Figure V.7 illustrates the percentage distribution of workers by gender across various types of MSMEs. In micro enterprises, approximately 79 per cent of the workforce comprises males, while females constitute around 21 per cent. Moving on to small and medium enterprises, the distribution is not too different, with males accounting for a larger share about 73 per cent and females for about 27 per cent.

Figure V. 7: Percentage distribution of workers by gender across type of MSMEs



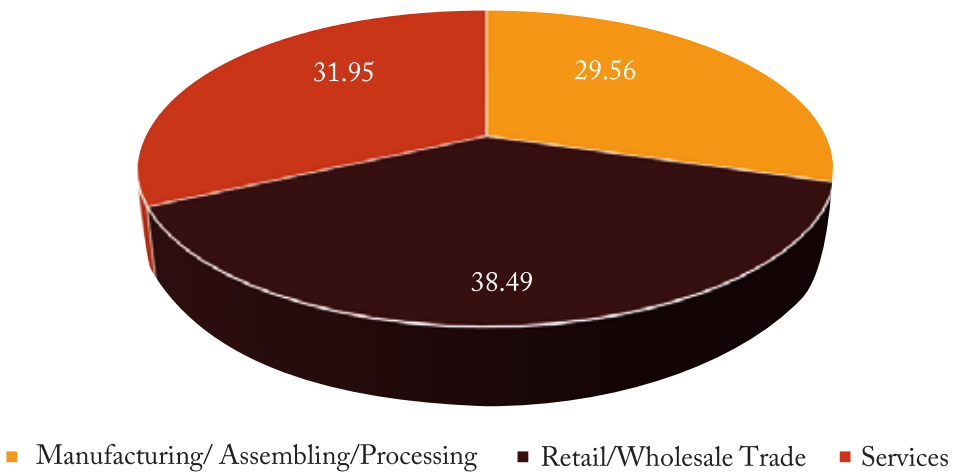
Source: NCAER survey.

This data highlights that males accounted for more than 70 percent of the workers in the MSME sector, exhibiting a wide gender gap. Understanding these disparities is crucial for implementing targeted initiatives aimed at promoting gender diversity and equality in the workplace.

V.10.4 Workers by Nature of MSME Business

In Assam's MSME sector, the workforce is mainly spread across different industries. There is some variation with regard to the distribution of workers across business activities. Notably, retail or wholesale trade businesses have emerged as the leading employer, absorbing approximately 39 per cent of the workforce.

Figure V. 8: Percentage distribution of workers by nature of MSME business



Source: NCAER survey.

The services sector employs around 32 per cent of the workforce. This diverse category encompasses a wide array of services, such as IT, hospitality, healthcare. It signifies Assam's emergence as a service-oriented economy, emphasizing the importance of human capital and specialized skills in the state's economic landscape.

Closely, the manufacturing / assembling / processing sector employs around 29 per cent of the MSME workforce. This sector's potential contribution underscores the growing capacity of the manufacturing/assembling/processing sector in providing employment opportunities.

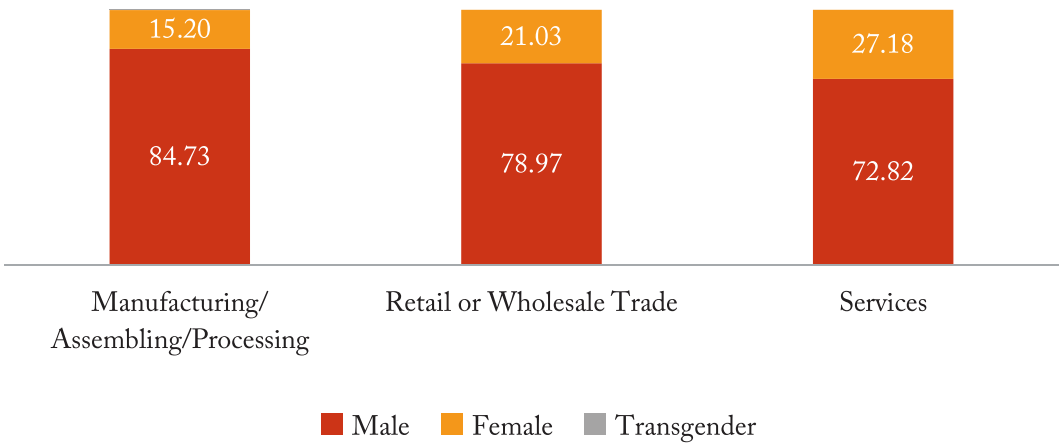
This almost balanced distribution among retail or wholesale, manufacturing/assembling/processing, and services sectors indicates a unique employment structure within the MSME landscape in the State. It reflects a symbiotic relationship between production, distribution, and service provision, fostering a holistic economic ecosystem. Moreover, this diversification not only offers a range of employment opportunities but also promotes skill diversification among the workforce, making Assam's economy resilient and adaptable to changing market demands.

Furthermore, the interconnection between these sectors is crucial. Manufacturing/assembling/processing businesses rely on retail and wholesale networks to distribute their products, while the services sector often complements both retail/wholesale and manufacturing/assembling/processing sector by providing essential support services. This interconnectedness highlights the interdependence and collaborative nature of Assam's MSME sectors, emphasizing the need for comprehensive policies that support the growth of all these sectors in tandem.

V.10.5 Workers by Gender across Nature of MSME Business

It is crucial to examine the gender distribution of workers across different types of MSME businesses. In the manufacturing/assembling/processing sector, males and females are distributed in the ratio of 85 per cent to 15 per cent respectively. Moving to retail or wholesale trade business, the involvement of female workers increased to approximately 21 per cent but still much lower than male workers at 79 per cent. When it comes to services sector, the participation of females is 27 per cent. It is much higher as compared to the manufacturing/assembling/processing and retail or wholesale trade sectors. Be this as it may, male workers still dominate constituting about 73 per cent of the workforce in the services sector.

Figure V. 9: Percentage distribution of workers by gender across nature of MSME business



Source: NCAER survey.

This data highlights a progressive shift in the gender dynamics within different MSME sectors, indicating a positive trend towards greater gender diversity, especially in the service industry. This trend is indicative of evolving societal norms and opportunities for women in the workforce, leading to a more balanced and inclusive work environment across various businesses.

V.11 Gross Value Added (GVA)

Gross Value Added (GVA) serves as a crucial economic indicator, it quantifies the contributions of diverse segments to the economy. GVA is a measure of the economic value generated by businesses after deducting the cost of goods and services used in the production process. This section delves into the role played by MSMEs in the state's economy by shedding light on key metrics such as GVA per enterprise and GVA per worker across various types of MSMEs.

V.11.1 MSMEs Contribution to Total Gross Value Added

The MSME sector made a significant contribution of Rs 148578.84 crore to the State's Gross Value Added (GVA), accounting for 33.29 per cent of the total GVA for the financial 2022–23. This achievement signifies the vital role played by MSMEs in the state's economic growth. Their impact reverberates across various sectors, creating job opportunities and fostering innovation. As MSMEs continue to thrive, they not only strengthen the economy but also empower local communities by providing avenues for entrepreneurship and self-sustainability. The substantial contribution of MSMEs to the state's GVA reflects their resilience and dedication, making them the backbone of the region's economic prosperity.

V.11.2 Gross Value Added by Type of MSMEs

In Assam, the MSME sector plays a crucial role in the state's economic landscape. Around 92 per cent of the GVA generated by MSMEs comes from micro enterprises. This significant contribution is not surprising, given that micro enterprises make up almost 99 per cent of the total number of MSMEs in Assam. These small-scale businesses are often run and managed by local entrepreneurs and artisans and thrive across various sectors from handicrafts to agro-processing.

Table V. 7: Percentage share of GVA generated by type of MSMEs

Type of MSME	Percentage share of GVA
Micro	92.31
Small	7.18
Medium	0.50
All	**100.0**

Source: NCAER survey.

In contrast, small enterprises account for a modest 7 per cent of the total GVA in the MSME sector. These businesses, though larger than micro enterprises, are yet to reach the scale in terms of number of units and employment, though the potential exists. Medium enterprises, despite their potential, contribute only half of a per cent to the overall GVA of MEME sector. This stark contrast highlights the dominance of micro enterprises in the MSME landscape in the State of Assam.

The success of micro enterprises can be attributed to the entrepreneurial spirit of the people of Assam, coupled with the state's rich cultural heritage and traditional craftsmanship. These businesses not only drive economic growth but also preserve local traditions and crafts, making them an integral part of Assam's cultural identity. As the state continues to support and nurture its MSME sector, the focus on empowering micro enterprises becomes essential, ensuring sustainable economic development and preserving the unique heritage of Assam.

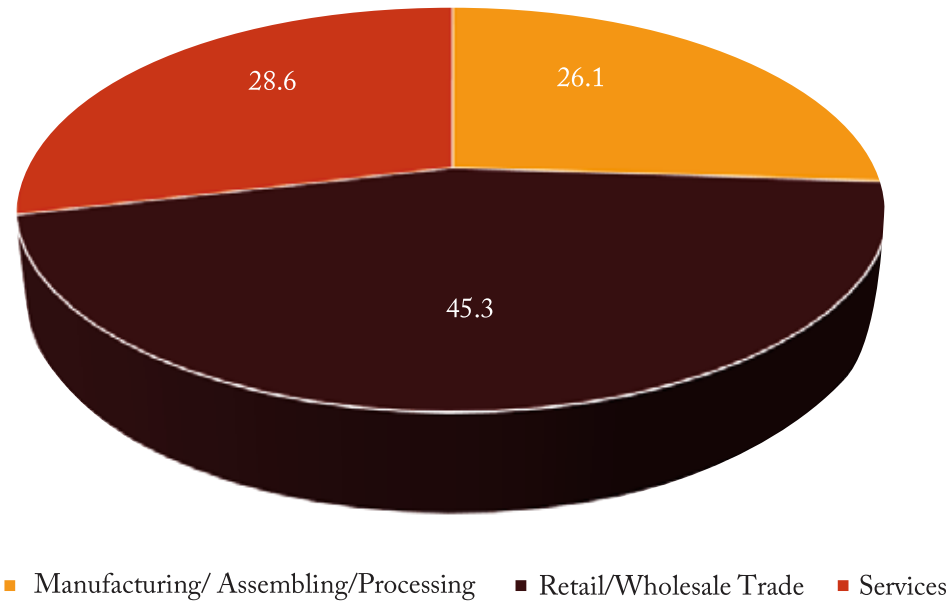
V.11.3 Gross Value Added by Nature of MSME Business

In Assam, around 45 per cent of the Gross Value Added (GVA) in the MSME sector is generated by the retail or wholesale trade industry, making it the leading contributor. Following closely is the services

sector, accounting for 28.6 per cent of the GVA, and the manufacturing/assembling/processing sector, contributing 26.1 per cent.

This significant contribution by the retail and wholesale trade industry reflects the vibrant marketplace that caters to diverse consumer needs. It acts as the backbone of the economy, connecting producers and consumers seamlessly. The robust growth in this sector not only boosts the local economy but also creates numerous job opportunities, supporting livelihoods across various communities.

Figure V. 10: Percentage share of GVA generated by nature of MSME business



Source: NCAER survey.

Additionally, the services sector plays a critical role in enhancing the overall MSME's GVA. With its diverse offerings such as tourism and hospitality, healthcare, and information technology, it provides essential support to businesses and individuals alike.

Furthermore, the manufacturing/assembling/processing sector, though slightly trailing behind, remains a vital component of the MSME landscape. It encompasses various industries, including handloom and textiles, bamboo and cane, handicrafts and cottage and wood product contributing significantly to the MSME's industrial output. The innovation and production capabilities of this sector would drive economic progress, ensuring a steady supply of goods for consumers and businesses.

In essence, the symbiotic relationship between these sectors creates a robust ecosystem that fuels economic development. The dynamic interplay between retail and wholesale trade, service sector, and manufacturing/assembling/processing forms the cornerstone of the MSME sector, promoting innovation, employment, and economic prosperity.

V.11.4 Gross Value Added per Enterprise by Type of MSMEs

The Survey data for the financial year 2022–23 provided valuable insights into the Gross Value Added (GVA) per enterprise within the MSME sector in Assam.

Table V. 8: GVA per enterprise by type of MSMEs

Type of MSME	GVA per enterprise per annum (In Rs Lakh)
Micro	6.8
Small	91.5
Medium	176.4
Total	**7.3**

Source: NCAER survey.

On average, the GVA per enterprise is estimated to be around 7.3 lakhs. Further analysis of the data reveals the specific contributions of different enterprise categories. Micro enterprises, despite their size, make significant contributions, with an estimated GVA per enterprise of 6.8 lakhs. In contrast, small and medium enterprises emerge as key players in the economy, boasting GVA per enterprise figures of 91.5 lakhs and 176.4 lakhs respectively.

V.11.5 Gross Value Added per Worker by Type of MSME

Gross Value Added (GVA) per worker stands as a vital economic indicator, serving as a barometer of the efficiency and productivity of the labour force. This metric not only reflects the nation's economic performance but also offers insights into its growth potential. In the context of MSME's in Assam, the average GVA per worker is estimated to be around Rs 4.12 lakhs.

Table V. 9: GVA per worker by type of MSMEs

Type of MSME	GVA per worker per annum (Rs Lakh)
Micro	4.02
Small	5.65
Medium	7.16
Total	**4.12**

Source: NCAER survey.

Delving deeper into the data, it is seen that GVA per worker varies across enterprise sizes. Micro enterprises have the lowest GVA per worker at Rs 4.02 lakhs, while small enterprises have a slightly higher GVA per worker at Rs 5.65 lakhs. In contrast, medium enterprises have the highest GVA per worker at Rs 7.16 lakhs.

V.11.6 Gross Value Added per Enterprise by Nature of MSME Business

The GVA per enterprise provides insights into the financial performance and productivity of different sectors within the MSME industry.

Table V. 10: GVA per enterprise by nature of MSME business

Nature of MSME business	GVA per enterprise per annum (Rs. Lakh)
Manufacturing/Assembling/Processing	8.2
Retail or Wholesale Trade	6.8
Services	7.5
Total	**7.3**

Source: NCAER survey.

The estimates show that that manufacturing/ assembling/processing enterprises within the MSME sector in Assam exhibited the highest GVA per enterprise at Rs 8.2 lakhs per annum. This indicates that manufacturing/assembling/processing businesses, which involve the production of goods, are highly productive and financially lucrative in the region.

Following closely are service enterprises, contributing Rs 7.5 Lakhs per enterprise.

Additionally, retail or wholesale trade enterprises are observed to have a GVA per enterprise of 6.8 Lakhs as well. This suggests that businesses involved in retail or wholesale trade, which are essential components of the supply chain, are also financially strong contributors to Assam's economy.

V.11.7 Gross Value Added per Worker by Nature of MSME Business

On an average, the GVA per worker per annum in the MSME sector stood at Rs. 4.12 lakh. It is interesting to note that retail or wholesale trade enterprises has the highest GVA per worker per annum at Rs 4.85 lakhs. This high GVA per worker indicates the efficiency and profitability of retail and wholesale businesses in the state.

Table V. 11: GVA per worker by nature of MSME business

Nature of MSME business	GVA per worker per annum (Rs. Lakh)
Manufacturing/ Assembling/Processing	3.63
Retail or Wholesale Trade	4.85
Services	3.69
Total	**4.12**

Source: NCAER survey.

Service enterprises follow closely with a GVA per worker of Rs 3.69 lakhs, showcasing the value generated by each worker in this sector. Manufacturing/ Assembling/Processing enterprises, although having the highest GVA per enterprise, have a slightly lower GVA per worker at Rs 3.63 lakhs, indicating that while these businesses are financially strong at the enterprise level, the value generated per worker is comparatively lower than the retail and service sectors.

V.12 Net Value Added (NVA)

Net value added (NVA) is a measure to assess the economic contribution of an industry, sector, or company to the overall economy. NVA is GVA net of Consumption of Fixed Capital. This means that loss in capital value or of fixed assets overtime due to normal wear and tear is deducted from the gross income to arrive at net income. It is calculated as:

Net Value Added=Gross Value Added (GVA)–Depreciation

To arrive at the estimated NVA for MSME sector, it is assumed that the GVA to NVA ratio for each of the category of MSME sector (that is, Manufacturing, Trade and Services) is the same as that for the corresponding categories as presented in the GSDP and NSDP statements of Assam 2022–23.

In the financial year 2022–23, the Net Value Added (NVA) for Micro, Small, and Medium Enterprises (MSME) in Assam was estimated to be around Rs 1,33,136 crore.

V.12.1 Net Value Added per Enterprise by Nature of MSME Business

Table V.12 illustrates the average financial performance in terms of Net Value Added for various types of MSME businesses, emphasizing the significant economic contributions these enterprises make within their respective sectors. On average, enterprises engaged in MSME activities generate an estimated Net Value Added (NVA) of Rs. 6.6 lakh rupees per annum.

Table V. 12: NVA per enterprise by nature of MSME business

Nature of MSME business	NVA per enterprise per annum (Rs Lakh)
Manufacturing/ Assembling/Processing	7.3
Retail or Wholesale Trade	6.4
Services	6.3
Total	**6.6**

Source: NCAER survey.

Specifically, in the manufacturing/assembling/processing sector, the per-enterprise per annum estimated net value added is the highest at Rs. 7.3 lakhs, followed by the retail or wholesale trade sector at Rs. 6.4 lakhs. This sector serves as a bridge between manufacturers and consumers, ensuring the smooth flow of goods and services, and enhancing market accessibility for a wide range of products.

Following closely, the services sector per-enterprise per annum estimated net value added is at Rs. 6.3 lakhs.

V.12.2 Net Value Added per Worker by Nature of MSME Business

The overall net value added (NVA) per worker in the MSME sector is estimated at Rs 3.69 lakhs per annum. Among various industries, the highest NVA per worker is observed in the retail or wholesale trade sector at Rs 4.5 lakhs, followed by the manufacturing/assembling/processing sectors at Rs. 3.26 lakhs and the service sector at Rs. 3.12 lakhs.

Table V. 13: NVA per worker by nature of MSME business

Nature of your MSME business	NVA per worker per annum (Rs Lakh)
Manufacturing/Assembling/Processing	3.26
Retail or Wholesale Trade	4.50
Services	3.12
Total	**3.69**

Source: NCAER survey.

This data underscores the economic significance of the MSME sector, illustrating the varying levels of productivity and value addition across different industries. The thriving "Retail or Wholesale Trade" sector stands out as a beacon of success, contributing significantly to the overall NVA per worker. Meanwhile, both the manufacturing/assembling/processing industry and the service sector also play vital roles, although with slightly lower NVA figures in comparison to the retail/wholesale sector.

V.13 Obstacles Faced by MSMEs

Creating a seamless business environment without or with least obstacles is crucial for a thriving MSME sector. The obstacles can include issues like lack or inadequate infrastructure, lack of skilled and productive workforce, as well as external factors such as labour regulations and market accessibility.

V.13.1 Obstacles Faced by Micro Enterprises

Among the micro-enterprises, financial constraints emerged as the predominant hurdle, with approximately 61 per cent of enterprises expressing this as a concern. Following closely behind, around 60 percent of enterprises identified electricity

infrastructure as a major obstacle. Roughly 34 per cent of micro enterprises highlighted marketing as a concern for their operations.

Table V. 14: Obstacles faced by micro enterprises

Type of Obstacles	Percentage Distribution
Finance	61.25
Infrastructure - Electricity	60.27
Marketing Issue	33.64
Infrastructure - Road	22.52
Infrastructure -Transport	14.41
Skilled Manpower	13.56
Lack of Digital Skill	10.82
Donation to Social Cultural Organisation	8.85
Raw Material Sourcing Difficulties	8.30
Tax Issue - Compliances	6.49
Input Tax	6.31
Access to Modern Technology	4.94
Monitoring by Multiple Government Agencies	3.25
Management Issue	0.81
Flood Problem	0.66
Labour Regulations	0.62
Parking Problem	0.47

Source: NCAER survey.

Another concern in the area of infrastructure is-related to road and transport with approximately 23 per cent of enterprises cites it as a concern, while 14 per cent of the enterprises identify transportation as an obstacle.

V.13.2 Obstacles Faced by Small Enterprises

As per the data, electricity infrastructure is being cited by most enterprises as a prominent obstacle by approximately 58.9 per cent of small enterprises. Following closely, the need for skilled manpower emerges as a significant concern with 43.14 per cent of enterprises expressing this as a challenge.

Further, road infrastructure is identified by about 28.33 per cent of small enterprises as an obstacle, underlining the importance of efficient transportation networks. Interestingly, finance, a critical element for any business, is being cited by 26.68 per cent of small enterprises as an obstacle.

Table V. 15: Obstacles faced by small enterprises

Type of Obstacles	Percentage Distribution
Infrastructure - Electricity	58.90
Skilled Manpower	43.14
Infrastructure - Road	28.33
Finance	26.68
Marketing Issue	24.18
Raw Material Sourcing Difficulties	21.56
Infrastructure -Transport	17.71
Tax Issue - Compliances	12.30
Monitoring by Multiple Government Agencies	10.60
Lack of Digital Skill	9.53
Input Tax	3.76
Labour Regulations	3.24
Access to Modern Technology	2.94
Parking Problem	1.11
Donation to Social Cultural Organisation	1.01
Management Issue	0.71
Flood Problem	0.00

Source: NCAER survey.

Marketing issues, raw material sourcing difficulties, and transportation infrastructure also feature prominently, impacting 24.18 per cent, 21.56 per cent, and 17.71 per cent of small enterprises, respectively. This complex web of challenges underscores the need for strategic planning and support mechanisms to empower small enterprises in overcoming these obstacles and foster sustained growth.

V.13.3 Obstacles Faced by Medium Enterprises

Electricity infrastructure poses a substantial challenge for medium enterprises where around 68 per cent of the medium enterprises cited it as a concern. This issue underscores the critical need for a reliable and robust electricity grid to support the growth and sustainability of medium-sized businesses.

Further, the demand for skilled manpower persists as a significant challenge for medium enterprises, though to a lesser extent at 29.38 per cent compared to small enterprises. This highlights the importance of fostering a skilled workforce to drive the success of medium enterprises.

Table V. 16: Obstacles faced by medium enterprises

Type of Obstacles	Percentage Distribution
Infrastructure - Electricity	67.77
Skilled Manpower	29.38
Labour Regulations	22.04
Infrastructure - Road	18.72
Monitoring by Multiple Government Agencies	18.25
Access to Modern Technology	17.77
Finance	15.40
Management Issue	13.74
Raw Material Sourcing Difficulties	12.09
Lack of Digital Skill	11.85
Tax Issue - Compliances	7.58
Infrastructure -Transport	6.40
Marketing Issue	4.98
Input Tax	4.03
Donation to Social Cultural Organisation	2.37
Parking Problem	1.42
Flood Problem	0.00

Source: NCAER survey.

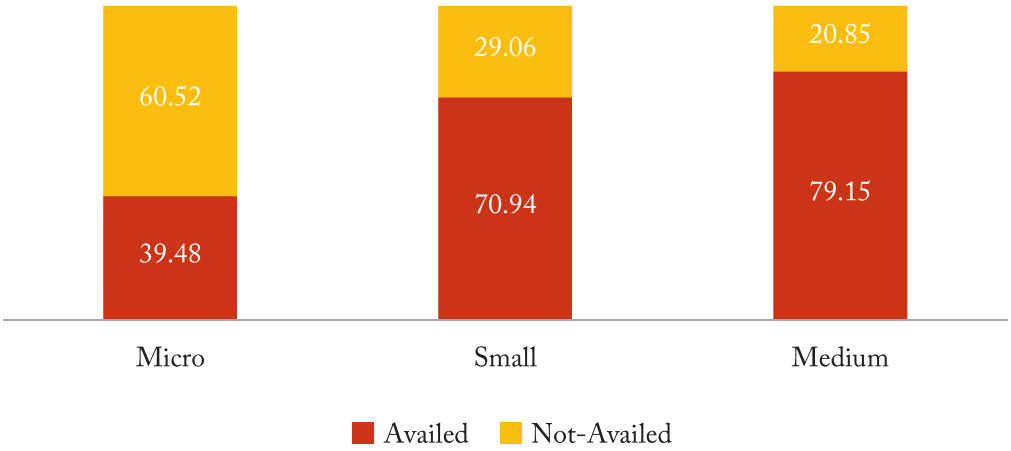
Furthermore, medium-sized businesses grapple with challenges related to labour regulations, where 22.04 per cent of the medium enterprises cited it as their concern. This underscores the necessity of addressing compliance issues specific to this category.

Road infrastructure issues is being cited by 18.72 per cent of the medium enterprises, signifying the need for an improved road networks to ensure the efficient transportation of raw materials and finished products.

V.14 Credit Availed by MSMEs

In the dynamic landscape of business, access to credit stands as a pivotal pillar for the growth and sustainability of the MSMEs. Recognizing the need for financial fuel to propel their ambitions, MSMEs embarked on a journey to avail credit for their growth and sustainability. Availing credit for MSMEs is more than a mere financial transaction; it is a strategic move that requires careful consideration of the business landscape, future aspirations, and risk management. The NCAER study revealed that only 39.48 per cent of the micro-enterprises availed credit in one form or the other, while a substantial 60.52 per cent of such enterprises did not avail credit.

Figure V. 11: Credit availed by different type of MSMEs (Percentage Distribution)



Source: NCAER survey.

The narrative shifts when it comes to small enterprises, where around 71 per cent of them embraced credit facilities. Conversely, about 29 per cent of the small enterprises charted their course without availing credit.

Coming to medium enterprises it is seen that 79 per cent of them availed credit. This is understandable that medium enterprises operate at a much larger scale and are more complex in their operation which require larger investments as compared to micro and small enterprises.

V.15 Ease of Doing Business and Competitiveness Index

In today's world, nations strive to create an environment that fosters economic growth, attracts investments, and enhances competitiveness. Two key metrics that play a pivotal role in assessing the country's business environment are the Ease of Doing Business (EoDB) index and the Competitive Index (CI). The intersection of these indices offers valuable insights into the overall economic health and attractiveness of a nation for businesses.

V.15.1 Ease of Doing Business Index

The EoDB index, typically published by international organisations like the World Bank, assesses the regulatory environment and ease with which businesses can operate within a given country. It encompasses factors such as starting a business, dealing with various permits and licenses, availing electricity connectivity, registering property, and other dimensions that directly impact the ease with which businesses can establish and operate.

The World Bank in 2003 introduced the EoDB to indicate the positive and negative aspects of the economic environment of a country. The analysis then contributes to the knowledge of the business environment of the area which can aid in taking steps to minimize the obstacles and maximize on the positive aspects. The analysis of EoDB guides investors on the viability of their investments, how the host country guides investments according to area specific requirements.

At the basic level, the World Bank's EoDB index offers a measure of institutional quality to shed light on a country's performance in promoting business conditions. The method aims to quantify the ease with which everyday business operates in the country, from 'starting a business' to 'paying taxes', and 'trading across border'. The index holds a central place in World Bank's own research and recommendations for policymakers. The index plays an important role in analytical and predictive models employed by international investors and their aid agencies (Doshi, Kelly, & Simmons, 2019) (Merry, 2011). Doshi, Kelly and Simmons (2019) state that index has considerable influence on investors decision making process, and investors express higher confidence in countries with

higher EODB scores and ranking despite certain bad macro factors like unemployment, inflation, and the like.

V.15.2 Global Competitiveness Index

Competitive Index (CI), often represented by indices like the Global Competitiveness Index (GCI), assesses a nation's overall competitiveness based on a broader set of factors. These factors may include infrastructure, innovation capability, macroeconomic stability, health, education, and technological readiness. The Competitive Index provides a comprehensive view of a country's capacity to generate sustainable economic growth and prosperity.

The World Economic Forum have studied the competitiveness of nations since 1979, and its *Global Competitiveness Reports* have examined factors that enable sustained economic growth and development. The reports serve as a benchmark for policymakers to identify obstacles to being competitive in the international business platform. In 2004 World Economic Forum introduced GCI to provide a comprehensive idea on national competitiveness by covering bases for both macroeconomic and microeconomic issues. The GCI Report 2007–08 describes "competitiveness as the set of institutions, polices, factors that determine the level of productivity of a country". Thus, level of productivity determines higher levels of income for the citizens, higher rates of return on investments made by investors. Thus, a more competitive economy has higher likelihood of growing faster over the medium to long term time span.

V.15.3 Methodology for Assam

To gain a comprehensive understanding of the business environment for the MSMEs across all districts of Assam, a survey schedule was devised to capture specific parameters related to EoDB index and GCI. The NCAER study covered approximately 26 parameters for the EoDB index. These parameters encompass aspects such as the ease of starting a business, procurement of land, labour, raw materials, and electricity, understanding the tax structure, obtaining an internet connection for digital operations, securing construction permits, import-export processes, and compliance with environmental laws.

For the GCI, 23 parameters were used which include the institutional environment, incidence of crime, infrastructure facilities, accessibility of electricity, water, internet, and credit, as well as the skill level in the labour force and the overall market scenario.

In this study, a Likert scale analysis was employed to assess the degree of agreement with each parameter, ranging from 1 (Strongly Disagree) to 5 (Strongly Agree), separately for the EODB index and GC index. Subsequently, the Relative Importance Index (RII) is calculated based on the survey responses, allowing for the ranking of the importance of each parameter. A higher RII value for a specific parameter indicates its greater significance in relation to the business conditions in the region, thereby reflecting the conducive nature of business in the area. This comprehensive approach ensures a nuanced evaluation of the business environment in Assam, considering both EODB index and GCI perspectives. RII is calculated by the following formula.

$$\text{Relative Importance Index} = \frac{\sum\omega}{AN} = \frac{5n_5+4n_4+3n_3+2n_2+1n_1}{5N}$$

Where is the respondent's weighting of each factor which range from 1 to 5.

n_5 represents the frequency of Strongly Agree, n_4 represents the frequency of Agree, n_3 represents the frequency of Indifferent, n_2 represents the frequency of Disagree, and n_1 represents the frequency of Strongly Disagree. Thus, the highest weight is 5 which is A, and the total number of respondents is denoted by N.

The RII value has been separately calculated for each district for both the Ease of Doing Business (EODB) comprising 26 parameters and the Global Competitiveness Index (GCI) comprising 23 parameters. Subsequently, the composite RII for each district has been determined using the following formula:

Composite RII = Average RII * 100

Table V. 17 : Ease of Doing Business and District Competitiveness Index for MSMEs in Assam

Ease of Doing Business			District Competitiveness		
Rank	**Districts**	**Composite RII**	**Rank**	**Districts**	**Composite RII**
1	Nagaon	73.07	1	Nagaon	75.12
2	Kamrup Metropolitan	67.74	2	Kamrup Metropolitan	68.62
3	Barpeta	65.07	3	Sivasagar	67.92
4	Sivasagar	64.59	4	Jorhat	67.20
5	Jorhat	64.58	5	Dibrugarh	66.96
6	Dibrugarh	64.15	6	Udalguri	66.41
7	Darrang	62.06	7	Charaideo	65.56
8	Cachar	61.58	8	Barpeta	65.41
9	Kamrup	61.44	9	Kamrup	64.73
10	Udalguri	61.35	10	Golaghat	64.58
11	Golaghat	60.49	11	Sonitpur	64.39
12	Goalpara	60.02	12	Majuli	64.07
13	Tinsukia	59.35	13	Darrang	63.71
14	Bongaigaon	59.05	14	Cachar	63.65
15	Sonitpur	58.29	15	Nalbari	62.22
16	Chirang	57.75	16	Goalpara	62.17
17	West Karbi Anglong	57.34	17	Dhemaji	61.86
18	Charaideo	56.54	18	Tinsukia	60.72
19	Majuli	56.51	19	Morigaon	60.23
20	Nalbari	56.43	20	Lakhimpur	60.14
21	Dhemaji	54.15	21	Bongaigaon	60.05
22	Lakhimpur	53.97	22	Chirang	59.53
23	Morigaon	53.42	23	Karimganj	58.91
24	South Salmara	52.66	24	West Karbi Anglong	56.15
25	Kokrajhar	52.46	25	Baksa	54.83
26	Karimganj	51.64	26	Hailakandi	54.81
27	Dhubri	49.58	27	Dima Hasao	53.25
28	Hailakandi	49.00	28	Dhubri	52.46
29	Baksa	46.32	29	South Salmara	51.10
30	Dima Hasao	42.04	30	Kokrajhar	50.80
31	Karbi Anglong	39.00	31	Karbi Anglong	48.62

Source: NCAER calculations.

The Ease of Doing Business index for MSMEs in Assam reflects the regulatory environment and business-friendliness across different districts, while the District Competitiveness Index provides insights into the relative competitiveness of districts in terms of economic activities specific to micro, small, and medium enterprises.

Nagaon District emerged as the top district in both the Ease of Doing Business and District Competitiveness for MSMEs, signifying a conducive environment for the growth of the micro, small and medium enterprises. Kamrup Metropolitan and Sivasagar District also secured high positions in both indices, indicating that these districts not only facilitate easy business operations but also possess a competitive edge in the MSME sector. It is interesting to note that the rankings revealed a pattern where districts with favourable conditions for ease of doing business also tend to be more competitive in the MSME landscape. Thus, it exhibits the critical role of regulatory policies and business-friendly initiatives in fostering a competitive environment for smaller enterprises.

The rankings highlighted the significance of specific districts in fostering an environment conducive to MSME growth. For instance, Jorhat, and Dibrugarh consistently rank high in both indices, suggesting that these districts not only facilitate smooth business operations but also offer a competitive edge to MSMEs.

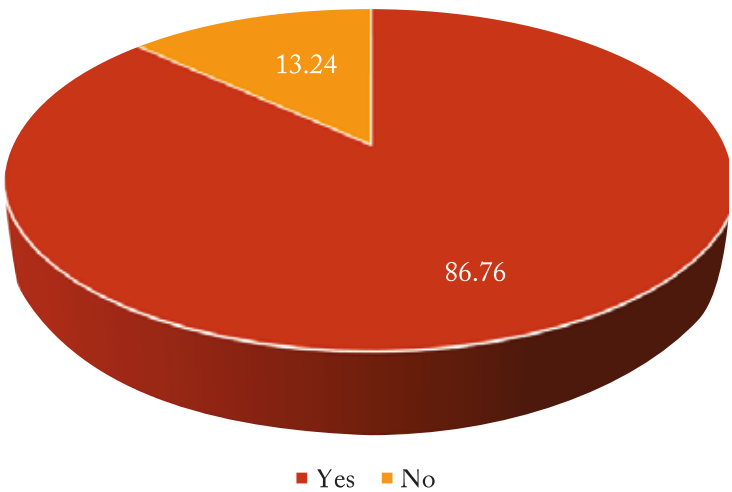
In contrast, districts such as Karbi Anglong, Dima Hasao, and Dhubri find themselves at the lower end of both rankings, indicating challenges in both ease of doing business and overall competitiveness for MSMEs.

This correlation emphasizes the interconnectedness of regulatory support and overall competitiveness, indicating that policies promoting ease of doing business significantly contribute to the competitiveness of MSMEs in the respective districts of Assam.

V.16 Adoption of Digital Transaction by MSMEs

Adoption of digital transaction by MSMEs in Assam is seen as a crucial step to stay relevant and competitive in the rapidly evolving business landscape. In recent years, there has been a noticeable trend toward embracing digital financial tools and platforms among MSMEs in the State. This transformation is driven by various factors, including the increasing digitization of financial services, government initiatives promoting a cashless economy, and the need for businesses to stay competitive in an evolving market. Recognizing the advantages of digital transactions, a growing number of MSMEs are now transitioning to electronic payment systems, online banking, and digital financial platforms.

Figure V. 12: Adoption of digital transaction by MSMEs in Assam (%)



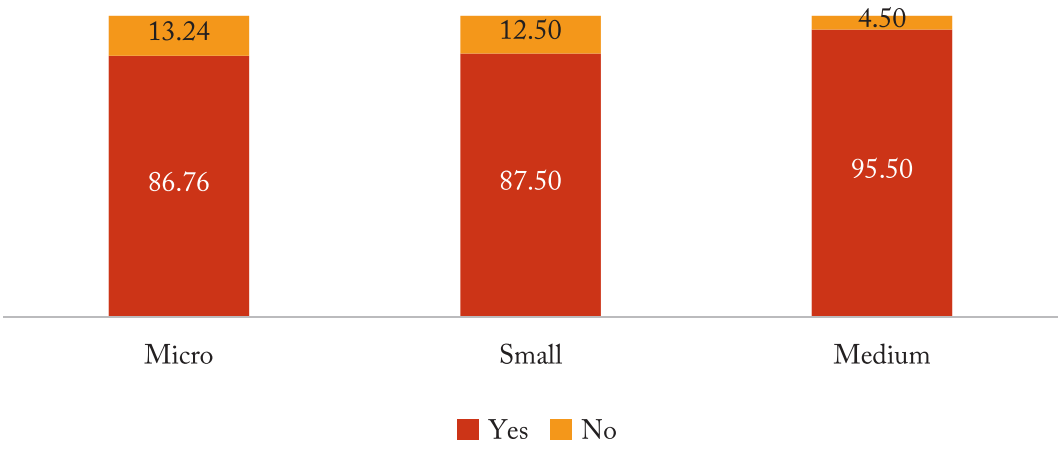
Source: NCAER survey.

According to survey data, a significant majority of MSMEs in the state of Assam have embraced digital transaction in one form or the other. Specifically, it states that around 87 per cent of MSMEs in Assam have already adopted digital transactions. This suggests that a large proportion of MSMEs in Assam have shifted from traditional methods of conducting transactions, such as cash or cheques, to digital alternatives. The high adoption rate of digital transaction modes among MSMEs in Assam may be indicative of the growing trend towards a cashless economy and the increasing importance of technology in facilitating business transactions. It can also imply that MSMEs in the state recognize the benefits of digital transactions, such as efficiency, convenience, and potentially lower costs associated with handling physical currency.

V.16.1 Adoption of Digital Transaction by Type of MSMEs

Figure V.13 illustrates the adoption of digital transactions among MSMEs categorized by size. Across all categories, the majority of MSMEs have embraced digital transactions.

Figure V. 13: Adoption of digital transaction by type of MSMEs in Assam (%)



Source: NCAER survey.

Specifically, in the micro enterprise category, a substantial 86.76 per cent have integrated digital transactions into their business operations, while only 13.24 per cent have yet to make the transition. Similarly, in the small enterprise segment, 87.5 per cent have adopted digital transactions, indicating a slightly higher uptake compared to micro enterprises. Notably, the medium enterprises showcase the highest adoption rate, with an impressive 95.50 per cent utilizing digital transactions. This signifies a clear trend of increasing digitalization as enterprises scale up in size. However, it's important to note that a small percentage, 4.50 per cent, of medium enterprises still rely on traditional transaction methods.

V.16.2 Usage of Digital Transaction

Table V.18 provides valuable insights into the digital transaction landscape across different categories of MSMEs. It illustrates the average percentage of transactions made digitally within each type of MSME.

Table V. 18: Average percentage of transactions made digitally

Type of MSMEs	Average percentage of transactions made digitally
Micro	31.30
Small	51.47
Medium	76.57
All	**31.42**

Source: NCAER survey.

Remarkably, the data indicates a substantial variation in the adoption of digital transactions among these categories. Micro enterprises demonstrate the lowest average percentage at 31.3 percent, suggesting a relatively lower integration of digital payment methods within this segment. Small enterprises, on the other hand, exhibit a higher adoption rate of 51.47 percent, signalling a greater willingness or capacity to engage in digital transactions. The medium enterprises category stands out with an impressive 76.57 percent average, showcasing a strong inclination towards digital channels for financial activities. Importantly, the overall average across all MSMEs is 31.42 percent, underscoring the diversity in digital transaction adoption within the broader MSME sector. Thus the data from the survey highlights that the micro enterprises do not engage in digital transactions as much as small and medium enterprises, which creates the need to look at probable hindrances and cause of such differences, and then promote policies to address the issue as required.

VI

Looking Ahead and Recommendations

As we delve into the realm of micro, small, and medium enterprises (MSMEs) in Assam, it is crucial to reflect on the revelations of a recent survey that has illuminated the intricate fabric of this essential sector. This survey unfolds a narrative surpassing mere statistic; it is a story marked by resilience, challenges, and, above all, potential. The objective of this chapter is to amalgamate the insights extracted from the survey, offer recommendations, and delineate a roadmap for the future trajectory of MSMEs in Assam.

The survey findings reveal that there are more than 20.27 lakh MSMEs contributing significantly to the economy of Assam. From bustling bazaars to manufacturing hubs, these enterprises are not just businesses; they are the heartbeat of local economies, providing livelihoods and fostering growth. The survey unveils the diverse tapestry of Assam's MSMEs, with nearly half engaged in the pulse of local markets through 'Retail or Wholesale Trade'. Essential services follow closely, constituting approximately 28 per cent, while 23 percent contribute to the domains of 'Manufacturing/Assembling/Processing'.

Interestingly, the survey shows that approximately 84.63 per cent of MSMEs operate as individual proprietorships which showcase that the people of Assam possess self-reliance in earning a living for themselves. Majority of the districts in Assam also possess a competitive business environment, which suggests that removing the barriers to ease of doing business for the micro, small and medium enterprises in Assam can further enhance the entrepreneurial spirit in the economy. However, only 10 per cent of the MSMEs are currently registered under Udyog Aadhar or Udyam Registration, hinting at latent potential for formalization and the need for streamlined registration processes. The MSMEs in Assam are not just economic contributors but vital generators of employment, employing over 36.07 lakh workers. However, a notable gender disparity persists, with approximately 79 per cent of the workforce being male. Addressing this gender gap is not just a social imperative but a strategic move to unlock the untapped potential of female talent within the MSME sector.

The financial landscape reveals that the MSME sector contributed a significant Rs 148578.84 crore to the State's Gross Value Added (GVA), accounting for 33.29 per cent of the total GVA for the financial year 2022–23. On average, each enterprise contributes around 7.3 lakhs to the state GVA, showcasing the sector's substantial economic weight. In this digital age, it is heartening to note that around 87 per cent of MSMEs in Assam have embraced digital transactions. However, micro-enterprises lag in digital integration, standing at 31.3 per cent, emphasizing the need for targeted initiatives to bridge this gap. Small enterprises exhibit a more favourable inclination at 51.47 per cent, while medium enterprises lead the charge with an impressive 76.57 per cent adoption rate. This digital leap is not just a convenience but a strategic move to enhance efficiency, transparency, and market reach.

The survey brings to light the hurdles faced by MSMEs, ranging from financial constraints to electricity infrastructure challenges. Micro-enterprises, constituting the backbone of local markets, showcase resilience by not seeking credit to navigate financial challenges. Small and medium enterprises, on the other hand, eagerly embrace credit opportunities, recognizing it as a catalyst for growth.

Nagaon emerges as a beacon of hope, leading the districts in both the Ease of Doing Business and District Competitiveness for MSMEs. In contrast,

districts such as Karbi-Anglong, Dima Hasao, and Dhubri face challenges, signalling the need for targeted interventions to enhance competitiveness.

Recommendations

- **Access to Finance:** Evaluate the feasibility of creating a dedicated financing mechanism for MSMEs, taking into account the distinct financial requirements and risk profiles of these enterprises.
- **Skill Development:** Work with industry stakeholders to conduct a thorough skill mapping exercise and use the findings to design focused skill development programs that match the changing needs of MSMEs. Collaborate closely with local industries in Assam to learn which skills are important. Make sure the programs fit the needs of Assam's MSMEs and include traditional skills.
- **Market Linkages:** Find and use online platforms to help MSME businesses in Assam connect with buyers, both in the country and abroad. Make sure these platforms are easy to use and available to everyone. Check if it is possible to create digital marketplaces specifically for Assam's products and services. This way, local businesses can reach customers in the region and across the country. An organisation like North Eastern Regional Agricultural Marketing Corporation Ltd can be created to facilitate the marketing of MSME products.
- **Technology Adoption:** Look into ways to encourage MSME businesses in Assam to use technology. This can include offering rewards, financial support, and training programs to help them adapt to the digital age. Create plans that show how MSME businesses in Assam can adopt technology, considering the state's industries. Encourage the use of technologies that make businesses more productive and competitive. For this purpose, the Government of Assam (GoA) can enter into an MoU with various technology centres under the Ministry of MSME, GoI.
- **Establish a State-level MSME Task Force:** Establish a state-level task force with representatives from government, industries, and small businesses. This team will monitor, solve problems, and adapt policies to support the needs of MSMEs effectively.
- **Customized Financial Products:** Make special money options for MSME businesses that fit their needs. Instead of needing a lot of traditional guarantees, these options could include loans without needing collateral, reduced interest rates, and the possibility of getting money from investors. Work with banks to create and tell MSME about these special money choices
- **Government-Industry Partnerships:** Make sure the government and industry groups work closely together to create helpful policies for MSME businesses. Have regular meetings to talk, assess policies together, and consult with each other to make sure government plans match what MSME businesses in Assam really need. It is important for the government and local industry groups to team up and create policies that truly support the needs of MSME businesses in Assam.
- **Digital Literacy Programs:** Support MSME businesses in Assam by providing training to improve their digital skills. Develop special programs with workshops and resources to teach these skills effectively. This is crucial because proficiency in using digital skill is vital for the success of MSME businesses in the current business environment.
- **Improved Access to Finance through Microfinance Institutions:** This involves making it easier for small businesses to get money. Microfinance institutions are organisations that provide financial services to small entrepreneurs who might not have access to traditional banking. By improving access to finance, these businesses can secure loans or other financial support to start or expand their operations.
- **Capacity-building Initiatives to Enhance Marketing Skills among Entrepreneurs:** This

focuses on helping business owners become better at promoting and selling their products or services. Participation of MSME entrepreneurs in *mela*s, exhibitions should be encouraged. Capacity-building initiatives include training programs, workshops, or resources that aim to enhance the marketing skills of entrepreneurs. By improving these skills, small businesses can reach more customers, increase sales, and grow their enterprises.

- **Efforts to Improve Overall Economic Conditions and Infrastructure in Assam:** This broader approach involves working on the general economic environment and basic structures in Assam. By investing in infrastructure like roads, electricity, and telecommunications, the overall conditions for businesses can improve. Additionally, efforts to boost the economy, such as creating a business-friendly environment and supporting industries, can positively impact the growth and sustainability of micro-enterprises in the region.

Looking ahead, the path forward for Assam's MSMEs lies in a strategic blend of innovation, collaboration, and policy support. Leveraging digital technologies can amplify market reach and operational efficiency, bridging gaps and fostering a more connected business environment. Collaborative initiatives, both within the MSME community and with larger corporations, can unlock synergies that propel growth.

Appendix

Appendix I: Estimation Procedure

The estimation of the number of MSMEs in Assam was carried out using first visit 0f PLFS-2021 (July)-22 (June). In PLFS, data collection is conducted at the individual member level. However, to estimate the number of MSMEs from individual-level data, only two activity statuses have been considered: Own Account Worker (OAW) and Employer. It is reasonable to assume that the sum of OAW and Employer categories would yield the same number of enterprises in Assam.

The procedure involved several steps are given below

1. **Exclusion of Non-MSME Enterprises:** Data associated with NIC 2-digit codes 01 (Crop and animal production, hunting and related service activities), 02 (Forestry and logging), 03 (Fishing and aquaculture), 97 (Activities of households as employers of domestic personnel), 98 (Undifferentiated goods- and services-producing activities of private households for own use), 99 (Activities of extraterritorial organisations and bodies) were excluded from the analysis, as these codes do not fall under the MSME category.
2. **Workplace Criteria:** The data set includes only those OAW/Employers whose workplaces are situated in the following areas:
    a) Structure attached to own dwelling unit,
    b) Open area adjacent to own dwelling unit,
    c) Detached structure adjacent to own dwelling unit,
    d) Own enterprise/unit/office/shop but away from own dwelling,
    e) Street with fixed location,
    f) Construction site
3. **District-wise Workforce Estimation:** Utilizing unit-level data across various enterprise types, district-wise counts of OAWs and Employers were estimated. This focused on enterprises categorized as proprietorship and partnership.
4. **Owner Categorisation:** The district-wise count of OAW and Employers was categorized into two groups: those with a single owner and those with multiple owners.
5. **Adjustment for Multiple Owners:** For enterprises with multiple owners, the count was divided by the average number of owners per enterprise in that district. This ensured a unique count of enterprises.
6. **Integration of Results:** The district-wise count of single-owner enterprises was combined with the adjusted count from step 5. This yielded the district-wise unique count of MSMEs in Assam, specifically based on principal activity status.

To extend the estimation to subsidiary activity status, similar steps were meticulously followed. By amalgamating both principal and subsidiary activity statuses, a comprehensive district-wise count of MSMEs in Assam was obtained. This dual approach ensures a holistic estimation, encompassing both primary and subsidiary activities.

Appendix II: Limitation of the Study

The study systematically excluded enterprises located in dwelling units and those lacking a fixed workplace from the sample. This exclusion might skew the findings by overlooking a segment of the population engaged in economic activities. Enterprises operating from dwelling units or lacking a fixed workplace could not be captured due to the inherent difficulty in including these two categories. Consequently, the generalisability of the findings may be limited due to this exclusionary criterion.

Furthermore, the study encountered limitations in generating district-wise estimates due to inadequate sampling at the district level. As a result, it was not feasible to provide district-wise estimates.

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NATIONAL COUNCIL OF APPLIED ECONOMIC RESEARCH
NCAER India Centre, 11 Indraprastha Estate, New Delhi – 110002
Contact Number: 011-61202698
Email: info@ncaer.org