

## **RURAL UNORGANISED MANUFACTURING INDUSTRIES IN ASSAM: SOME ASPECTS OF GROWTH, STRUCTURAL CHANGE AND PRODUCTIVITY**

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### **ABSTRACT**

*The present paper aims to analyse the performance of the rural unorganised manufacturing industries in Assam in the post-reform period. The analysis has brought out that the rural unorganised manufacturing industries in Assam have been undergoing considerable structural changes over time; the most domineering household-based enterprise segment, i.e., OAMEs, has been losing its share, in favour of the establishments. At the industry level, however, the preponderance of the agro-based group of industries such as food and beverages, textiles, and wood products remained untouched. Over time, the rural unorganised manufacturing industries have been deteriorating; output growth has been decelerating, while growth in the number of enterprises and employment has been negative during 1994-95/2010-11. The setback in the rural OAMEs has the onus of this deceleration; otherwise, the rural establishments witnessed a decent growth. Across industry groups, most of the industries have achieved a decent output growth at varying rates, whereas majority of the industries witnessed a considerable decline in the number of enterprises and employment. The consequences of such a pattern of job-loss growth are quite high growth in labour productivity and negative employment elasticity across industry groups. The paper emphasises the need for provisioning of training facilities leading to skill development, access to credit and market facilities, undisrupted power supply, technology support, agricultural growth, and strong linkages between unorganised and organised enterprises, among others, for the growth of rural unorganised manufacturing in the State.*

**Keywords:** *Unorganised Manufacturing, Growth, Employment Elasticity, Structural Change.*

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## Introduction

Rural industrialisation has long been viewed as the key for transformation of the rural economy. The growth of rural industrialisation is as much crucial for rural development as industrialisation is for development of the economy (Papola and Misra, 1980), especially from the point of view of employment generation, raising the income of rural households, and reducing poverty, unemployment and rural-urban inequality. Employment generation continues to remain as one of the major challenges to the Indian economy, especially during the post-reform period. Despite the spectacular economic growth achieved by the Indian economy during the reform period, employment situation since the 1990s has been encouraging, especially in the rural areas (Mehrotra et al., 2012; Chand et al., 2017).<sup>1</sup> Although the agricultural sector continues to employ the bulk of the rural workforce in India, because of the agricultural stagnation during the post-reform period and inability of the sector to generate productive employment and to provide a decent standard of living, there has been a shift in interest towards the non-farm sectors such as manufacturing, construction and services, as the potential candidate for employment generation. Nonetheless the skimpy share of manufacturing in rural employment in India, the rural manufacturing sector has been growing at an unprecedented rate in the post-reform period,<sup>2</sup> and hence, researchers have unanimously believed that the manufacturing

sector, especially the unorganised segment, has a greater capability of generating employment, especially in rural areas.

In India, likewise in most developing countries, practically the rural industries come under the purview of the unorganised/informal sector, comprising small private enterprises that fall outside the purview of the government regulations. The unorganised enterprises are those enterprises which have not registered with the official authorities under the Factories Act, 1948; statistically, the enterprises employing less than 10 workers with electricity and less than 20 workers without electricity are regarded as unorganised enterprises in India. The unorganised manufacturing enterprises almost completely sum up the total rural industrial sector in India, especially in terms of the number of enterprises (Chadha and Sahu, 2006). During 2010-11, about 99.2 per cent of the manufacturing enterprises and 77.6 per cent of manufacturing employment in rural India were in the unorganised segment. Given the vast size of the rural unorganised manufacturing segment, all issues related to rural industrialisation, employment and output growth, productivity, etc., are more meaningfully answered if the rural unorganised manufacturing sector is the focus.

## Context and Objectives

Assam continues to be an economically backward State of the Indian Union in spite of rich endowment of natural resources, especially natural oil, natural gas, water and

forests. The State is characterised not only by low per capita income and huge deficit of growth,<sup>3</sup> but industrial backwardness, low level of investment, employment, and livelihood avenues, etc. While the State's economy is a predominantly agrarian from the employment point of view and serviced from the point of view of economic growth,<sup>4</sup> the manufacturing sector in the State has always been underdeveloped and has any significant contribution neither in employment nor in the output. At the point of commencement of economic reform in the country, the manufacturing sector accounted for 4.4 per cent of total employment in Assam in 1993-94, which declined to 3.9 per cent in 2004-05 and then rose to 6 per cent in 2011-12 (Sahu and Kumar, 2017), whereas the sector contributed merely 8.2 per cent of Net State Domestic Product (NSDP) of Assam in 1993-94, which gradually increased to 9.2 per cent in 2004-05 and then drastically fell to 4.8 per cent in 2014-15 (RBI, 2017). Nonetheless, given the abundance of natural resources in the State for industrial exploitation, the manufacturing sector, particularly the unorganised industries, presumably has the prospects for sprouting up to take the advantage of the available local resources.

Likewise, the manufacturing sector in Assam is mainly confined to the unorganised manufacturing segment. The unorganised segment accounted for 26 per cent of total manufacturing NSDP in 1993-94, which

increased to 29 per cent in 2000-01 and to 54.6 per cent in 2014-15 (RBI, 2017). The share of the unorganised segment in total manufacturing enterprises in the State was 99.5 per cent during 1994-95/2005-06, whereas the unorganised segment accounted for around 83 per cent of total manufacturing employment during the same period (Saikia, 2015). The unorganised manufacturing sector in the State, further, is predominantly rural-based; rural areas accounted for about 87 per cent of enterprises, 82 per cent of employment, and 72 per cent of the output of unorganised manufacturing industries in the State during 2010-11 (Saikia and Barman, 2017).

Thus, the unorganised manufacturing sector not only plays a significant role in offsetting the paucity of organised industries in Assam but also creates huge employment opportunities, both in rural and urban areas. In spite of the huge significance of the sector in the State economy, it has not attracted much scholarly attention in the State. While both national and State-level studies on the sector have bypassed the State, there exist very few studies on the unorganised manufacturing sector in the State. However, most of these studies (for example, Das et al., 2010; Saikia, 2014, 2015; Dutta, 2015; Majumdar and Borbora, 2014; among others) have focused on the aggregate unorganised manufacturing sector. In a study, Saikia (2014) finds that the unorganised manufacturing in Assam witnessed deceleration in number of

enterprises and employment during 1994-95/2000-01, while growth rate accelerated during 2000-01/2005-06, which is quite a reversal of the pre and post-2000 trend for the country as a whole (as observed from Rani and Unni, 2004; Chadha and Sahu, 2006; Sahu, 2007; among others). Saikia and Barman (2017) observe that unorganised manufacturing industries in Assam witnessed further deceleration in the number of enterprises and employment during 2005-06/2010-11. The authors also observe that the performance of the unorganised manufacturing considerably varies in rural and urban areas, and the performance of the sector to a large extent depends on the performance of the rural unorganised manufacturing sector, given its larger size than its urban counterpart. While Saikia and Barman (2017) continued their analysis to show that growth rates significantly vary among the industry groups in the urban unorganised manufacturing sector, such kind of a disaggregated level of analysis is not available for the rural unorganised manufacturing sector. Therefore, in view of the deceleration of the unorganised manufacturing sector during 2005-06/2010-11 and the importance of the rural segment within the sector, it would be worthwhile to undertake a fresh investigation of the performance of the rural unorganised manufacturing sector at disaggregated industry level in Assam.

Broadly, this paper aims to analyse the long-term performance of the rural unorganised manufacturing sector in Assam in

terms of growth in the number of enterprises, employment and output, structural changes, employment elasticity, and labour productivity, both at aggregated and disaggregated levels, during the post-reform period (1994-95 to 2010-11). More specifically, the paper seeks to answer the following questions:

- a) What has been the performance of the rural unorganised manufacturing in Assam in the post-reform period? How has the growth rates varied across enterprise types and industry groups?
- b) What is the structure of the rural unorganised manufacturing sector in Assam by types of enterprises and by industry groups? Has there been any significant structural change in the post-reform period?
- c) What has been the employment elasticity and growth of labour productivity in the rural unorganised manufacturing in Assam?

## Definition, Data and Variables

### Definition:

There are several definitions and terminologies of the unorganised/informal sector in the literature. The National Commission for Enterprises in the Unorganised Sector (NCEUS), constituted by the Government of India, defines the unorganised sector as "all unincorporated private enterprises owned by individuals or households engaged in the sale and production of goods and services

operated on a proprietary or partnership basis and with less than ten total workers” (NCEUS, 2009). The National Sample Survey Organisation (NSSO), which is the principal agency for collecting data on unorganised manufacturing sector in India, defines the unorganised manufacturing enterprises as all manufacturing enterprises except— (i) those registered under sections 2m(i) and 2m(ii) of Factories Act, 1948 and Bidi and Cigar Workers (Conditions of Employment) Act, 1966 and (ii) those run by government (NSSO, 2007). The unorganised manufacturing enterprises are divided into three sub-categories: Own Account Manufacturing Enterprises (OAMEs), Non-Directory Manufacturing Establishments (NDMEs) and Directory Manufacturing Establishments (DMEs). OAMEs are enterprises run without a hired worker, NDMEs are establishments employing up to six workers, at least one of them being a hired worker employed on fairly regular basis, and DMEs are establishments employing six or more workers (but less than 10 with electricity and less than 20 without electricity), at least one of them being a hired worker on fairly regular basis.

The term “rural industry” doesn’t have a particular definition. Traditionally, the rural industries are considered to be synonymous with cottage and village industries (Islam, 1987). In the modern view, rural industries also include modern small-scale manufacturing enterprises using machines and tools located in rural areas. Dutta (2002) emphasises that size

and location of the industries are important considerations while defining rural industries; the industries should be of small-scale category and should be located in rural areas engaging rural people either as labourers or as entrepreneurs.

In the present study, the unorganised manufacturing enterprises located in the rural areas are taken as rural unorganised manufacturing industries.

### **Data Source and Aggregation**

The present study is based exclusively on the National Sample Survey (NSS) data on unorganised manufacturing enterprises. Data have been taken from the latest four NSS rounds on unorganised manufacturing enterprises, i.e., NSS 1994-95, 2000-01, 2005-06 and 2010-11 rounds. Data for the NSS 1994-95 and 2005-06 rounds have been derived from the unit level data at four-digit and five-digit level of National Industrial Classification (NIC) 1987 and 2004, respectively, while data have been collected at NIC two-digit level from the published NSS reports for 2000-01 and 2010-11.<sup>5</sup>

We have made some adjustments in the dataset. Firstly, the NSS 1994-95, 2000-01, and 2005-06 rounds have provided information with respect to three categories of enterprise, i.e., OAMEs, NDMEs and DMEs, but the NSS 2010-11 round clubbed the NDMEs and DMEs together under the “establishment” segment. Therefore, we have clubbed the NDMEs and

DMEs together for the previous three years so as to have a comparable disaggregation for the whole study period. Secondly, frequent changes in the industrial classification created a major problem in the consistency of the industry groups in the dataset. The NSS 1994-95 round provided information as per NIC 1987 classification, while the NSS 2000-01, 2005-06, and 2010-11 rounds provided information as per NIC 1998, 2004, and 2008 classifications, respectively. Therefore, we have first re-classified the NIC 1987 codes to NIC 2004 codes at NIC two-digit level following the concordance tables provided by the Central Statistical Organisation (CSO). The two-digit NIC 1998 codes are similar to the two-digit NIC 2004 codes, and therefore, no further re-classification has been required. Then we have re-classified the NIC 1998, 2004 and 2008

codes at two-digit level into 11 comparable broad industry groups for each time point (see Table 1). It is worthwhile to note that since we tally the NIC 1998, 2004 and 2008 codes at two-digit level, we are unable to cope with changes, if any, below the two-digit level. This is a limitation of the dataset used in this study.

Some compatibility issues among these NSS rounds have also cropped up due to inclusion and exclusion of certain activity groups in different rounds. For instance, “repair of capital goods” is included in NSS 1994-95 and 2010-11 rounds but excluded in 2000-01 and 2005-06 rounds, and “recycling” is included in 2000-01 and 2005-06 rounds but excluded in 1994-95 and 2010-11 rounds. Similarly, “cotton ginning, cleaning and bailing” is included in the 2000-01, 2005-06 and 2010-11 rounds

**Table 1: Re-Grouping of Industry Codes according to NIC 1998, 2004 and 2008 Classifications**

Industry Groups	NIC 1998	NIC 2004	NIC 2008
Food and beverages	15	15	10–11
Tobacco products	16	16	12
Textiles	17–18	17–18	13–14
Leather products	19	19	15
Wood products	20	20	16
Paper and printing	21–22	21–22	17–18
Chemical products	23–26	23–26	19–23
Metal products	27–28	27–28	24–25
Machinery and electrical	29–33	29–33	26–28, 33
Transport and equipment	34–35	34–35	29–30
Other manufacturing	36	36	31–32

Source: Authors’ compilation using the concordance tables provided by the CSO.

but excluded in 1994-95 round. Therefore, we have excluded these industry groups from our analysis. Thus, our final dataset consists of the two-digit NIC 2004 codes 15–36.

### Variables

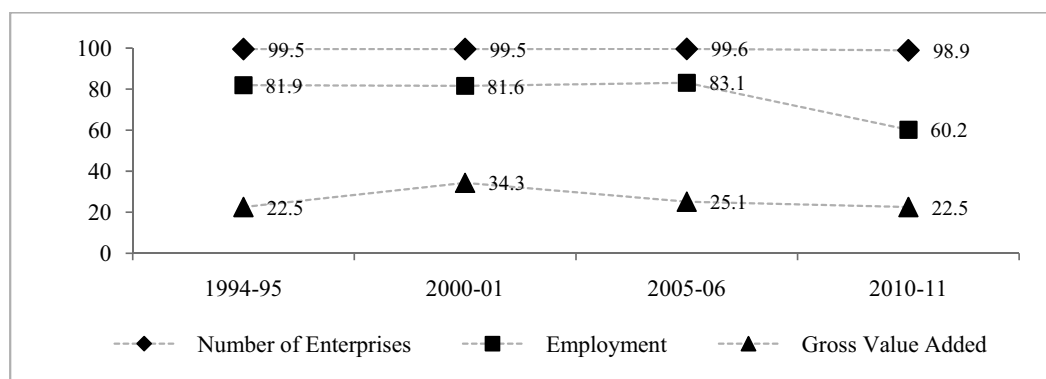
There are several indicators available for assessing the performance of the industrial sector. In this study, we have considered three variables, namely the number of enterprises, employment, and gross value added. Total persons engaged in the unorganised manufacturing enterprises are taken as employment, which includes primary workers, working proprietors, and supervisory staff engaging either full-time or part-time in the activity of the enterprise with or without receiving wages/salaries. Gross value added, used to represent output, refers to the additional value created by the process of production by an enterprise and is calculated as the difference between “total receipts” and “total operating expenses” during the reference period (NSSO, 2007). The nominal values of value added have been converted into real value added using the wholesale price index (2004-05=100) for manufactured products.

### Dominating Position of Rural Unorganised Manufacturing in Assam

The unorganised manufacturing sector occupies a place of great significance in the industrial sector in Assam. Figure 1 shows the relative position of the unorganised manufacturing enterprises in

the manufacturing sector in Assam. It is clear that the unorganised manufacturing sector approximately sums up the total manufacturing sector in the State, especially from the point of view number of enterprises. About 99.5 per cent of the manufacturing enterprises in the State were in the unorganised sector in 1994-95, which remained almost the same until 2005-06, and then slightly declined to 98.9 per cent in 2010-11. The share of the unorganised sector in the total manufacturing employment was 81.9 per cent in 1994-95, 83.1 per cent in 2005-06, and not less than 60 per cent in 2010-11. In contrast, the share of the unorganised sector in manufacturing value added has been rather low; 22.5 per cent in 1994-95, 34.3 per cent in 2000-01, 25.1 per cent in 2005-06, and 22.5 per cent in 2010-11. Interestingly, the share of the unorganised manufacturing declined during 2005-06/2010-11; the decline has been very sharp in terms of employment.

Table 2 shows the changes in the unorganised manufacturing in Assam in terms of the number of enterprises, employment and value added, separately for rural and urban areas during 1994-95/2010-11. The number of unorganised manufacturing enterprises and employment witnessed a steady growth during 1994-95/2005-06, and subsequently a sharp decline in 2010-11; the number of enterprises and employment rose from 266300 to 370600 and 553400 to 632400, respectively, during 1994-95 to 2005-06, and then declined to 218600 and 422000 respectively in 2010-11. However, the real gross value added of



Source: Estimated using data from NSSO (51<sup>st</sup>, 56<sup>th</sup>, 62<sup>nd</sup>, and 67<sup>th</sup> Rounds) and Annual Survey of Industries (1994-95, 2000-01, 2005-06, and 2010-11 Issues).

**Figure 1: Share (%) of the Unorganised Sector in the total Manufacturing Sector in Assam**

the sector has been growing throughout the period 1994-95/2010-11, albeit the pace has been tapered off over time.

A large proportion of the unorganised manufacturing enterprises in the State has continued to be located in the rural areas. More than 93 per cent of unorganised manufacturing enterprises were located in rural areas in 1994-95, 86.4 per cent in 2000-01, about 90 per cent in 2005-06, and 87 per cent in 2010-11. The same is true in respect of employment and value added. The share of rural areas in unorganised manufacturing employment was 91 per cent in 1994-95, 82.4 per cent in 2000-01, 84.7 per cent in 2005-06, and 81.5 per cent in 2010-11, whereas that in value added was 75, 73, 71.7, and 72.2 per cent, respectively. Thus, clearly, the rural areas continued to completely dominate the unorganised manufacturing in Assam in terms of each of the three variables. The dominance of the rural areas in terms of number of enterprises and employment is

consistent with the national level trends as found by many studies, for example, Chadha and Sahu (2006) and Sahu (2007), among others; whereas the dominance of the rural areas in respect of value added in the State is contrasting with the national level trends, where the urban areas have a larger share in value added (56 per cent in 2000-01).

The rural areas, over time, have been losing its share in terms of each of the three variables, in favour of the urban areas. This implies that the urban unorganised manufacturing sector has been expanding gradually in the State. This is quite a similar structural shift that has been observed at the national level (for instance, Chadha and Sahu, 2006; Sahu, 2007). Nevertheless, the relative size of rural unorganised manufacturing sector in Assam is much bigger than the national average,<sup>6</sup> and highest among the major States except Odisha and Jharkhand.



A look at the absolute numbers shows that the decline of rural unorganised manufacturing enterprises is happening not only in relative terms, but in absolute numbers of enterprises and employment as well. The number of enterprises and employment in rural areas first declined during 1994-95/2000-01, which was offset by a significant increase during 2000-01/2005-06. But the subsequent decline in number of enterprises and employment during 2005-06/2010-11 was so huge that the absolute figures for 2010-11 are lower than those for 1994-95. In contrast, the value added of the sector has been steadily increasing during 1994-95/2010-11, though its pace has been tapered off over time.

### Structural Changes in Rural Unorganised Manufacturing in Assam

The structure of the rural unorganised manufacturing sector in Assam is examined in terms of the composition of the sector by enterprise types and industry groups. Table 3 shows the structure of the sector by enterprise types in terms of the number of enterprises, employment, and value added. The OAMEs and the household-based tiniest enterprises constitute the major share of the rural unorganised manufacturing in the State. These enterprises accounted for about 89 per cent of enterprises in 1994-95, 93.2 per cent in 2000-01, 92 per cent in 2005-06, and not less than 75.5 per cent in 2010-11. Likewise, their share in employment was 84.6, 86.8, 82, and 56 per

**Table 2: Structure of Unorganised Manufacturing Sector in Assam by Rural-Urban Location**

Year	Number of Enterprises ('00)			Employment ('00)			Gross Value Added (Rs. millions)*		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
1994-95	2485	178	2663	5039	495	5534	3622	1215	4837
2000-01	2404	379	2783	4104	876	4980	7009	2588	9597
2005-06	3329	377	3706	5354	970	6324	9586	3776	13362
2010-11	1899	286	2185	3440	780	4220	12165	4675	16840
Share (%) of Rural and Urban Areas									
1994-95	93.3	6.7	100.0	91.1	8.9	100.0	74.9	25.1	100.0
2000-01	86.4	13.6	100.0	82.4	17.6	100.0	73.0	27.0	100.0
2005-06	89.8	10.2	100.0	84.7	15.3	100.0	71.7	28.3	100.0
2010-11	86.9	13.1	100.0	81.5	18.5	100.0	72.2	27.8	100.0

Notes: \* Values are at constant 2004-05 prices.

Source: Computed from the NSSO 51<sup>st</sup>, 56<sup>th</sup>, 62<sup>nd</sup> and 67<sup>th</sup> rounds.

cent, respectively, and that in value added was 69.9, 69.7, 67.5, and 56 per cent, respectively, during the same period of time. In contrast, the rural establishments accounted for a very meagre proportion of the rural unorganised manufacturing until recently, particularly in respect of the number of enterprises and employment. However, the share of rural OAMEs, which remained more or less constant (with marginal ups and down) during 1994-95/2005-06, has drastically declined in recent times, while the share of rural establishments has significantly increased - from 11 to 24.5 per cent in number of enterprises, 15.4 to 43.5 per cent in employment, and 30 to 44 per cent in value added during 1994-95/2010-11.

An interesting point that comes out clearly from Table 3 is that despite having more than three-fourth of the enterprises, the rural OAMEs accounted for just over half of the employment and value added in 2010-11, whereas a relatively smaller number of rural establishments accounted for about 44 per cent each of employment and value added. This indicates, as we would see in subsequent sections, the limited job creation capacity and lower level of productivity in rural OAMEs as these enterprises are basically tiny, household-based, self-employing type enterprises, which operate on a very smaller scale. In contrast, the establishments, particularly the DMEs, are the modern manufacturing enterprises, which operate on a relatively larger scale, use hired labour, power and machinery to a certain extent, and therefore, have a relatively higher

level of productivity.

Looking at the absolute numbers, it is at once clear that the entire decline in the number of rural unorganised manufacturing enterprises and employment has taken place only in the rural OAMEs; otherwise, the rural establishments witnessed a significant increase in number of enterprises and employment during 1994-95/2010-11 (with some decline in varying degrees during 2000-01/2005-06). Further, the decline in rural OAMEs has taken place only at one shot between 2005-06 and 2010-11, during which as many as 162700 rural OAMEs were closed and 244500 workers lost their job. Part of this decline in number of enterprises and employment in rural OAMEs could be due to upgradation of the OAMEs to establishments over time, which is evident from the significant increase in the number of enterprises and employment in the rural establishments; about 19700 new enterprises were started and 53100 new jobs were created in rural establishment segment during 2005-06/2010-11.

The industry-wise disaggregation, given in Table 4, shows that the rural unorganised manufacturing sector in Assam has been dominated by a group of agro-based industries such as food and beverages, textiles and wood products. These three industries together accounted for about 78 per cent of enterprises, 75 per cent of employment, and 66 per cent of value added in 1994-95, which subsequently increased to 84, 83, and

**Table 3: Structure of Rural Unorganised Manufacturing in Assam by Enterprise Types**

Year	Number of Enterprises ('00)			Employment ('00)			Gross Value Added (Rs. million)*		
	OAMEs	Estts.	All	OAMEs	Estts.	All	OAMEs	Estts.	All
1994-95	2210	275	2485	4261	778	5039	2534	1089	3622
2000-01	2241	163	2404	3564	540	4104	4883	2126	7009
2005-06	3061	268	3329	4389	965	5354	6467	3120	9586
2010-11	1434	465	1899	1944	1496	3440	6809	5356	12165
Share (%) of OAMEs and Establishments									
1994-95	88.9	11.1	100.0	84.6	15.4	100.0	69.9	30.1	100.0
2000-01	93.2	6.8	100.0	86.8	13.2	100.0	69.7	30.3	100.0
2005-06	91.9	8.1	100.0	82.0	18.0	100.0	67.5	32.5	100.0
2010-11	75.5	24.5	100.0	56.5	43.5	100.0	56.0	44.0	100.0

Notes: Estts.- Establishments; \* Values are at constant 2004-05 prices.

Source: Same as Table 2.

76 per cent, respectively, in 2010-11. Further, these industries along with the miscellaneous industry group, other manufacturing, together accounted for 92 per cent of enterprises, 89 per cent of employment, and 84 per cent of value added in 1994-95, and the share further increased to 97, 96, and 94 per cent, respectively, in 2010-11. Thus, the four largest industries almost completely sum up the entire rural unorganised manufacturing in the State. The share of metal-based industries such as metal products, machinery and electrical, and transport equipment has been quite meagre; and so is the share of chemical-based industries (which had a relatively larger share in respect of all the three variables in 1994-95, but fell drastically in 2010-11).

These findings indicate that there is a lack of diversification in the rural unorganised

manufacturing in Assam. This is further evident from the dominance of a single industry group. For example, the largest industry group - food and beverages - accounted for about 30 per cent of enterprises and 33 per cent of employment, while that in terms of value added, textiles has a share of 36 per cent during 2010-11. Similarly, the second largest industry group - textiles - accounted for about 28 per cent of enterprises and 30 per cent of employment, while that in terms of value added, food and beverages accounted for about 24 per cent share.

Over time, tobacco products and leather products, which had a very insignificant share in each of the three variables, have been disappeared from the rural areas in Assam in 2010-11. The shares of textiles and metal products increased in respect of each of the

Table 4: Share (%) of Major Industry Groups in Rural Unorganised Manufacturing in Assam

Industry Groups	Number of Enterprises					Employment				Gross Value Added			
	1994-95	2000-01	2005-06	2010-11		1994-95	2000-01	2005-06	2010-11	1994-95	2000-01	2005-06	2010-11
Food and beverages	34.9	33.4	31.0	29.9		35.2	35.7	34.9	32.8	42.9	30.5	35.4	24.2
Tobacco products	1.9	0.4	0.6	0.0		2.9	0.4	0.9	0.0	0.9	0.3	0.5	0.0
Textiles	22.0	22.7	35.9	28.3		18.6	18.7	28.9	29.5	11.5	15.9	20.7	35.7
Leather products	0.0	0.0	0.2	0.0		0.0	0.0	0.2	0.0	0.0	0.0	0.3	0.0
Wood products	21.1	23.9	19.0	25.6		21.4	25.2	17.6	20.5	11.7	26.0	17.6	15.7
Paper and printing	0.1	0.1	0.1	0.0		0.2	0.1	0.1	0.0	0.2	0.1	0.2	0.0
Chemical products	4.4	2.7	5.5	0.6		7.2	4.2	8.0	0.9	12.8	3.3	8.7	1.2
Metal products	1.3	1.9	1.1	1.9		1.3	2.8	1.8	3.2	2.0	5.5	2.3	5.0
Machinery and electrical	0.0	0.4	0.2	0.2		0.0	0.3	0.2	0.2	0.0	0.2	0.3	0.1
Transport and equipment	0.1	0.1	0.0	0.2		0.1	0.2	0.0	0.2	0.1	0.7	0.0	0.2
Other manufacturing	14.1	14.5	6.7	13.3		13.3	12.5	7.4	12.7	17.9	17.4	14.2	17.9
All industries	100	100	100	100		100	100	100	100	100	100	100	100

Source: Same as Table 2.

three variables over the period 1994-95/2010-11, whereas that of food and beverages and chemical products declined in respect of each of the three variables. The share of wood products increased in terms of the number of enterprises and value added, but declined in terms of employment, whereas the share of paper and printing, leather products, transport and equipment, machinery and electrical, and other manufacturing enterprises remained unchanged.

### **Growth in Rural Unorganised Manufacturing in Assam**

Growth in the number of enterprises, employment and output are important indicators of the performance of the industrial sector. This section examines the growth in the number of enterprises, employment and real value added in the rural unorganised manufacturing vis-à-vis its urban counterpart (Figure 2), across different categories of enterprises (Figure 3), and across major industry groups (Table 5 to Table 7).

### **Rural-Urban Growth Difference**

Figure 2 shows the growth rates of the number of enterprises, employment and real value added in the unorganised manufacturing in Assam by rural-urban location. It shows that there are marked rural-urban differences in the growth of the number of enterprises and employment, while the growth of real value added follows a similar trend, but with varying rates. For example, during 1994-95/2010-11, the rural unorganised manufacturing sector

witnessed a growth of -1.7 per cent in the number of enterprises and -2.4 per cent in employment, compared to significant growth of 3 and 2.9 per cent, respectively, by its urban counterpart. Looking at the growth rates over time, the number of enterprises witnessed a growth of -0.6 per cent in rural areas, compared to a spectacular growth of 13.5 per cent in urban areas during 1994-95/2000-01; an impressive growth of 6.7 per cent in rural areas, compared to stagnation in urban areas during 2000-01/2005-06; and very sharp deceleration in both rural and urban areas (-10.6 and -8.5 per cent, respectively) during 2005-06/2010-11. Likewise, the growth rate of employment in the rural unorganised manufacturing sector was -3.4 per cent during 1994-95/2000-01, 5.5 per cent during 2000-01/2005-06, and -8.5 per cent during 2005-06/2010-11, as against the growth rates of 10, 2, and -4.3 per cent, respectively, in its urban counterpart. The growth of number of enterprises and employment in the total of unorganised manufacturing in the State follow exactly the same trends as that of the rural unorganised manufacturing.

In contrast, the value added of the rural unorganised manufacturing has been steadily growing during 1994-95/2010-11, but it falls short of the growth rate in its urban counterpart. The growth rate of real value added in rural areas was 7.9 per cent during 1994-95/2010-11, compared to 8.8 per cent in urban areas and 8.1 per cent in the overall unorganised manufacturing. Over time, the

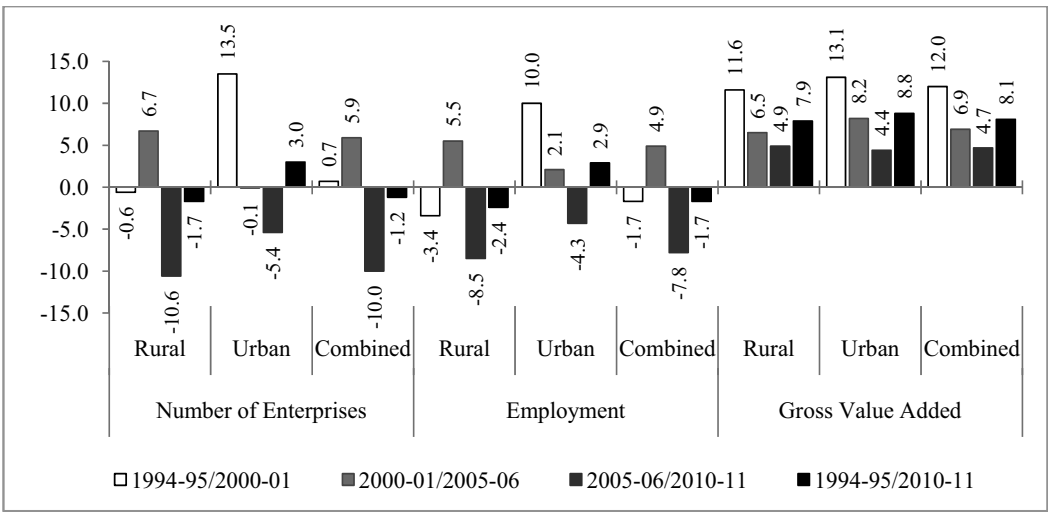
growth rate of real value added in both rural and urban areas has been deteriorating; the growth rate fell from 11.6 per cent during 1994-95/2000-01 to 6.5 per cent during 2000-01/2005-06, and to 4.9 per cent during 2005-06/2010-11 in rural areas, whereas that in the urban areas fell from 13.1 to 8.2 per cent and to 4.4 per cent, respectively.

**Growth across Enterprise Types**

Within the rural unorganised manufacturing sector, growth rates significantly vary between the OAME and establishment segments. Figure 3 shows the growth rates of number of enterprises, employment and real value added in rural OAMEs and establishments. The number of rural OAMEs registered a growth of -2.7

per cent during 1994-95/2010-11, while the number of rural establishments grew at 3.4 per cent. Much of the decline in the number of rural OAMEs took place during 2005-06/2010-11; otherwise, the number of rural OAMEs has been steadily increasing during 1994-95/2005-06. On the other hand, the growth rate of number of rural establishments was at -8.4 per cent during 1994-95/2000-01, but in the subsequent period, the number of rural establishments grew at double-digit rates of 10.5 and 11.6 per cent during 2000-01/2005-06 and 2005-06/2010-11, respectively.

The growth rate of employment in rural OAMEs was at -4.2 per cent during 1994-95/2010-11, while employment in rural establishments registered a decent



**Figure 2: Growth (% p.a.) of Unorganised Manufacturing in Assam by Rural-Urban Location**

Note: Growth rate is compound annual growth rate.

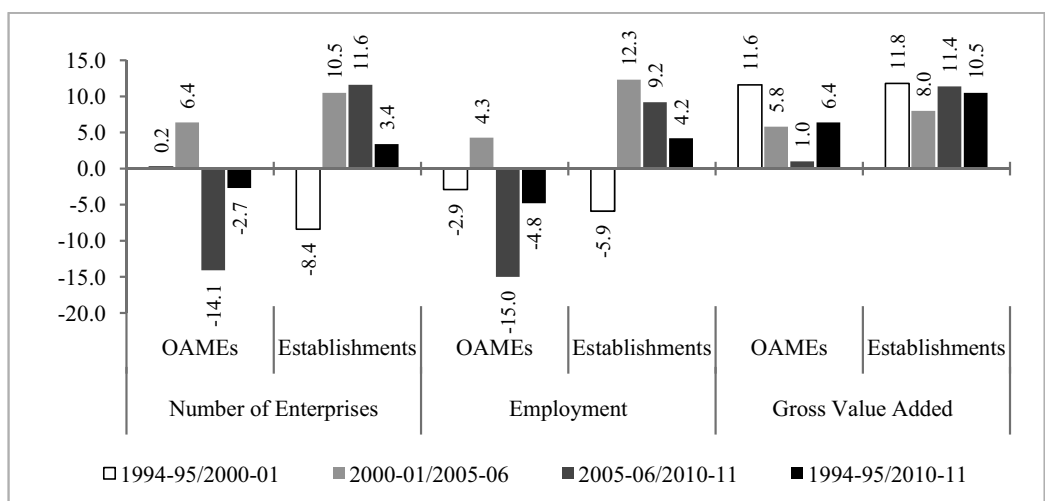
Source: Same as Table 2.

growth of 4.2 per cent. Both the OAMEs and establishments witnessed a negative growth in employment during 1994-95/2000-01 followed by a decent growth rate during 2000-01/2005-06, while the rural OAMEs witnessed a sharp decline (-15 per cent) and rural establishments registered an impressive employment growth (9.2 per cent) during 2005-06/2010-11. In contrast, the growth of real value added has been impressive in both OAMEs and establishments; 6.4 and 10.5 per cent, respectively, during 1994-95/2010-11. Two points are worth mentioning in respect of growth in value added in rural OAMEs and establishments. First, the growth rate of real value added in rural establishments has been higher by far than that in rural OAMEs, except during 1994-95/2000-01. Secondly, the growth

rate of real value added in rural OAMEs has been significantly failing over time; from 11.6 per cent during 1994-95/2000-01 to 5.8 per cent during 2000-01/2005-06, and then to one per cent during 2005-06/2010-11. On the other hand, the rural establishments witnessed a higher growth in real value added throughout the period 1994-95/2010-11.

### Growth across Rural Industry Groups

The growth in number of enterprises, employment and value added among 11 major rural unorganised manufacturing groups are given in Table 5, Table 6, and Table 7, respectively. It is evident that most of the industries have witnessed a decline in the number of enterprises and employment during 1994-95/2010-11 (Table 5 and Table 6);



**Figure 3: Growth (% p.a.) of Rural Unorganised Manufacturing in Assam by Enterprise Type**

Note: Growth rate is compound annual growth rate.

Source: Same as Table 2.

only machinery and electrical, metal products, and transport and equipment registered an increase in number of enterprises and these three along with textiles registered an increase in employment. Over time, most of the industries witnessed a decline in the number of enterprises and employment during 1994-95/2000-01 and 2005-06/2010-11, whereas most industries have achieved significant growth during 2000-01/2005-06. The decline during the period 2005-06/2010-11 has been very sharp in many industries, particularly tobacco products and leather products which

have been completely evaporated in 2010-11, and paper and printing (-45.5 per cent) and chemical products (-41 per cent).

In contrast, in respect of value added, all the industries except paper and printing, and chemical products have achieved significant growth during 1994-95/2010-11 (Table 7). During the sub-periods also, the number of industries achieving growth was more than those witnessing a decline. The fast-growing industries were machinery and electrical, textiles, metal products, and transport and equipment, whereas the industries registering

**Table 5: Growth (% p.a.) of Number of Enterprises in Rural Unorganised Manufacturing by Major Industry Groups in Assam**

Industry Groups	1994-95/ 2000-01	2000-01/ 2005-06	2005-06/ 2010-11	1994-95/ 2010-11
Food and beverages	-1.3	5.2	-11.2	-2.6
Tobacco products	-23.2	13.7	n/e	n/e
Textiles	0.0	16.9	-14.8	-0.1
Leather products	n/a	53.4	n/e	n/e
Wood products	1.5	1.9	-5.1	-0.5
Paper and printing	-10.3	11.8	-43.6	-16.9
Chemical products	-8.0	22.6	-42.8	-13.2
Metal products	5.6	-4.5	0.7	0.8
Machinery and electrical	76.0	-7.7	-8.3	17.3
Transport and equipment	-8.7	-18.6	39.3	0.5
Other manufacturing	-0.1	-8.7	2.7	-2.0
All Industries	-0.6	6.7	-10.6	-1.7

Notes: Growth rate is compound annual growth rate; n/a– Not applicable (due to zero value in the preceding year); n/e– Not estimated (due to zero value in the current year).

Source: Same as Table 2.



negative growth were tobacco products, leather products, paper and printing, and chemical products.

### Employment Elasticity in Rural Unorganised Manufacturing in Assam

Employment elasticity, defined as the ratio of employment growth rate to output growth rate, measures the sensitivity of employment growth to output growth. However, the relationship is not so simple and straightforward since employment growth is also influenced by factors other than output such as wage rate, technology, infrastructure development, etc. (Sahu and Kumar, 2017). Nonetheless, employment

elasticity is commonly used to trace the employment potentiality of a sector and to forecast future employment growth. Generally, a value of employment elasticity over 0.3 is preferable from the point of view of productive employment generation (Mehrotra et al., 2012).

Table 8 shows the employment elasticity in the rural unorganised manufacturing sector by enterprise types and also in urban and total of the unorganised manufacturing sector in Assam. The employment elasticity in the unorganised manufacturing sector in Assam witnessed an increase from -0.14 during 1994-95/2000-01 to 0.71 during 2000-

**Table 6: Growth (% p.a.) of Employment in Rural Unorganised Manufacturing by Major Industry Groups in Assam**

Industry Groups	1994-95/ 2000-01	2000-01/ 2005-06	2005-06/ 2010-11	1994-95/ 2010-11
Food and beverages	-3.2	5.0	-9.6	-2.8
Tobacco products	-30.3	24.2	n/e	n/e
Textiles	-3.3	15.1	-8.1	0.5
Leather products	n/a	51.4	n/e	n/e
Wood products	-0.6	-1.8	-5.7	-2.6
Paper and printing	-15.9	3.9	-45.5	-21.5
Chemical products	-11.7	20.2	-41.0	-14.3
Metal products	9.3	-3.2	2.9	3.3
Machinery and electrical	62.6	-6.3	-2.9	16.5
Transport and equipment	17.3	-30.9	46.7	6.6
Other manufacturing	-4.3	-5.1	2.0	-2.6
All industries	-3.4	5.5	-8.5	-2.4

Notes: Same as Table 5.

Source: Same as Table 2.

**Table 7: Growth (% p.a.) of Real Gross Value Added in Rural Unorganised Manufacturing by Major Industry Groups in Assam**

Industry Groups	1994-95/ 2000-01	2000-01/ 2005-06	2005-06/ 2010-11	1994-95/ 2010-11
Food and beverages	5.5	9.7	-2.9	4.1
Tobacco products	-5.5	13.9	n/e	n/e
Textiles	17.8	12.2	17.0	15.7
Leather products	n/a	68.3	n/e	n/e
Wood products	27.5	-1.5	2.5	9.9
Paper and printing	-2.0	19.1	-59.7	-21.1
Chemical products	-10.9	29.2	-29.1	-6.9
Metal products	32.7	-10.8	22.5	14.3
Machinery and electrical	83.3	10.5	-8.3	26.0
Transport and equipment	56.2	-33.0	30.5	13.3
Other manufacturing	11.1	2.2	10.0	7.9
All industries	11.6	6.5	4.9	7.9

Notes: Same as Table 5. Source: Same as Table 2.

01/2005-06 and then sharply declined to -1.64 during 2005-06/2010-11. In the rural areas, employment elasticity improved from -0.29 during 1994-95/2000-01 to 0.85 during 2000-01/2005-06 and then declined to -1.74 during 2005-06/2010-11, whereas that in the urban areas has been deteriorating throughout the period; from 0.76 to 0.25, and to -0.97 during the same time. The long-run employment elasticity (1994-95/2010-11) was at -0.21 in the total of unorganised manufacturing, -0.30 in rural areas, and 0.33 in urban areas. It is reasonable to say that employment elasticity in the total of unorganised manufacturing sector follows exactly the same trends as that of the rural unorganised manufacturing sector. This indicates that employment growth in the

unorganised manufacturing sector depends greatly on the employment growth in its rural segment. This is obvious because of the large employment size in the rural areas, which is almost 4.5 times the employment in its urban counterpart.

Within the rural unorganised manufacturing sector, employment elasticity was found to be higher in the rural establishments than its OAMEs counterpart; 0.4 in rural establishments compared to -0.75 in rural OAMEs during 1994-95/2010-11. Employment elasticity in the rural establishments witnessed significant increase from -0.5 during 1994-95/2000-01 to 1.54 during 2000-01/2005-06, and though the value

fell during 2005-06/2010-11 it still remained considerably high at 0.8. The rural OAMEs too witnessed a significant improvement in employment elasticity from -0.25 during 1994-95/2000-01 to 0.74 during 2000-01/2005-06, but then sharply fell to -14.5 during 2005-06/2010-11.

Across the major rural unorganised manufacturing groups, employment elasticity has been positive in all the industry groups except food and beverages, wood products, and other manufacturing industries during 1994-95/2010-11 (Table 9). Employment elasticity in chemical products and paper and printing was greater than unity, while in machinery and electrical and transport and equipment it was higher than 0.5 during 1994-95/2010-11. However, the high employment elasticity in chemical products, and paper and printing needs to be interpreted cautiously as we have already seen in the previous section (Table 6 and Table 7) that these industries have

been witnessing negative growth rates in both employment and real value added during 1994-95/2010-11, and that is why employment elasticity in these industries turned out to be positive.<sup>7</sup> As these industries have already been shrinking, the positive employment elasticity in these industries cannot be an indication of employment potential. Over time, the value of employment elasticity improved at a varying degree in as many as six industries (out of 11) during 2000-01/2005-06 when compared to 1994-95/2000-01, but witnessed considerable decline at varying degrees in most of the industries during 2005-06/2010-11. During 2005-06/2010-11, only transport and equipment, metal products, and other manufacturing have shown employment potential, while from the long-run perspective (1994-95/2010-11), machinery and electrical, transport and equipment, metal products, and to some extent textiles have shown employment potential in the rural unorganised manufacturing in Assam.

**Table 8: Employment Elasticity in Unorganised Manufacturing in Assam**

Time period	Rural			Urban (All)	Combined (All)
	OAMEs	Establishments	All		
1994-95/2000-01	-0.25*	-0.50*	-0.29*	0.76	-0.14*
2000-01/2005-06	0.74	1.54	0.85	0.25	0.71
2005-06/2010-11	-14.50*	0.80	-1.74*	-0.97*	-1.64*
1994-95/2010-11	-0.75*	0.40	-0.30*	0.33	-0.21*

Note: \* Growth of employment is negative.

Source: Same as Table 2.

**Table 9: Employment Elasticity in Rural Unorganised Manufacturing by Major Industry Groups in Assam**

Industry Groups	1994-95/ 2000-01	2000-01/ 2005-06	2005-06/ 2010-11	1994-95/ 2010-11
Food and beverages	-0.58*	0.52	3.35**	-0.69*
Tobacco products	5.53**	1.74	n/a	n/a
Textiles	-0.18*	1.24	-0.48*	0.03
Leather products	n/a	0.75	n/a	n/a
Wood products	-0.02*	1.22**	-2.26*	-0.27*
Paper and printing	7.81**	0.20	0.76**	1.02**
Chemical products	1.07**	0.69	1.41**	2.08**
Metal products	0.28	0.29**	0.13	0.23
Machinery and electrical	0.75	-0.60*	0.35**	0.63
Transport and equipment	0.31	0.94**	1.53	0.50
Other manufacturing	-0.39*	-2.34*	0.20	-0.34*
All Industries	-0.29*	0.85	-1.74*	-0.30*

Notes: n/a– Not applicable (due to zero value either in the preceding or current year); \* Growth rate of employment is negative; \*\* Growth rate of both employment and real value added are negative.

Source: Same as Table 2.

### Level and Growth of Labour Productivity

Whether the growth in output has led to any significant growth in labour productivity is an important issue to explore. Although labour productivity, defined as output per labour, is a partial factor productivity measure, given its importance for improvements in the standard of living and quality of life, its trend has been extensively examined by the researchers and policymakers (Kathuria et al., 2010). It is unanimously recognised by the researchers that the unorganised manufacturing enterprises in India suffer from

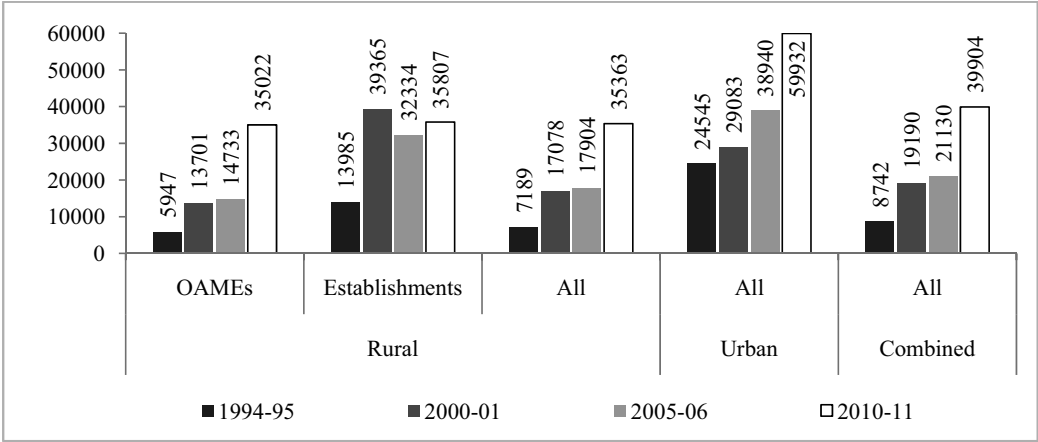
low level of productivity (Sahu, 2007; Bathla and Sharma, 2009; Kathuria et al., 2010; Goldar et al., 2011). In the context of Assam, Kathuria et al. (2010) find that labour productivity in the unorganised manufacturing sector in Assam was 9.4 times lower than that in its organised counterpart and 3.7 times lower than the national average of labour productivity in the unorganised manufacturing sector during 1994-95/2005-06. Saikia (2014, 2015) also report low level of labour productivity in the unorganised manufacturing in Assam during 1994-95/2005-06.

Figure 4 shows the labour productivity (value added per worker) levels in the unorganised manufacturing in Assam by rural-urban location. Marked rural-urban differences in labour productivity are discernable from Figure 4. The level of labour productivity in the rural areas was less than one-third of that in the urban areas in 1994-95, about two-third in 2000-01, just below one-half in 2005-06, and about two-third in 2010-11. The level of labour productivity per annum in the rural areas increased from Rs 7189 in 1994-95 to Rs 35363 in 2010-11, while that in the urban areas and the aggregate unorganised manufacturing increased from Rs 24545 to Rs 59932 and Rs 8742 to Rs 39904, respectively.

Within the rural unorganised manufacturing sector, labour productivity in the rural establishments has been more

than double of the rural OAMEs during 1994-95/2005-06; 2.4 times higher in 1994-95, 2.9 times in 2000-01, and 2.2 times in 2005-06. However, labour productivity in the rural OAMEs rose so rapidly during 2005-06/2010-11 that it becomes almost equal to that of the rural establishments in 2010-11.

Table 10 gives the average labour productivity levels among the 11 major rural unorganised manufacturing groups. The industry with the highest level of labour productivity in the rural unorganised manufacturing is transport and equipment, and its level is 7.5 times higher than tobacco products, the industry with the lowest level of labour productivity. To quote, the level of labour productivity in transport and equipment, metal products, other manufacturing, chemical products, and paper and printing are higher



**Figure 4: Labour Productivity Levels in Unorganised Manufacturing in Assam**

Note: Labour productivity levels (Rs/worker, per annum) are at constant 2004-05 prices.

Source: Same as Table 2.

than that in the aggregate rural unorganised manufacturing during 1994-95/2010-11. A comparison with the labour productivity in the urban areas shows that all the rural unorganised manufacturing groups except transport and equipment have a considerably lower level of labour productivity than their urban counterparts. This is clearly visible from the ratio of labour productivity in rural to urban areas, given in Table 10, which turned out to be fairly low in case of most of the industries.

Turning now to the trends in labour productivity (given in Figure 5), it is found that the labour productivity in the unorganised manufacturing sector in Assam grew at the

rate of 14 per cent during 1994-95/2000-01, 1.9 per cent during 2000-01/2005-06, 13.6 per cent during 2005-06/2010-11, and 10 per cent during the entire period 1994-95/2010-11. This is contradictory to the findings of Kathuria et al. (2010), who find a decline in the labour productivity in unorganised manufacturing in Assam during 1994-95/2005-06, but conforms to the findings of Saikia (2014, 2015) who finds that labour productivity in unorganised manufacturing sector in Assam increased at the rate of 5.17 per cent during the same period 1994-95/2005-06. Rural-urban breakup shows that the growth rate of labour productivity in the rural unorganised manufacturing

**Table 10: Industry-wise Labour Productivity in Rural Unorganised Manufacturing in Assam**

Industry Groups	Rs/worker (per annum)* (Average of 1994-95 to 2010-11)	Ratio of labour productivity in rural to urban areas
Food and beverages	16893	0.5
Tobacco products	6196	0.1
Textiles	18659	0.7
Leather products	8735	0.2
Wood products	16657	0.5
Paper and printing	20640	0.6
Chemical products	23533	0.9
Metal products	30558	0.4
Machinery and electrical	17635	0.6
Transport and equipment	46510	1.0
Other manufacturing	29395	0.7
All Industries	19384	0.5

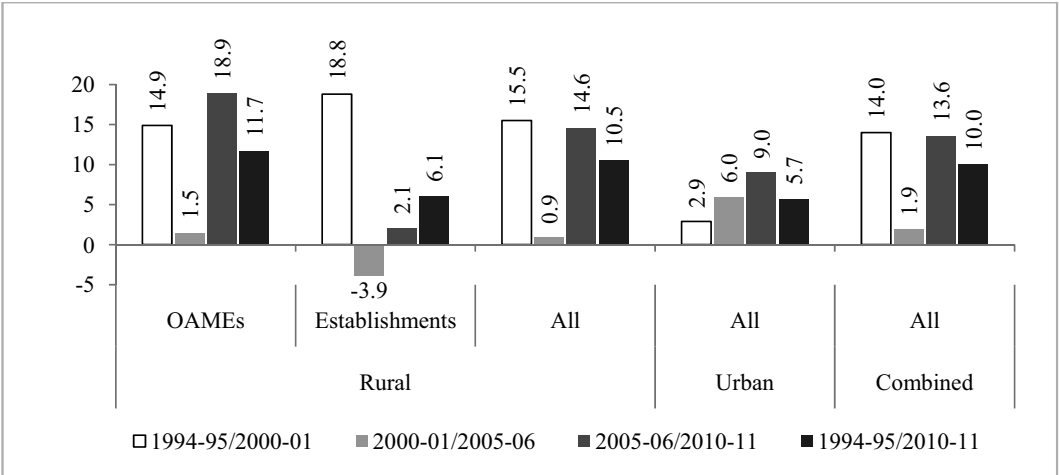
Notes: \* Values are at constant 2004-05 prices.

Source: Same as Table 2.

sector has been higher than that in its urban counterpart, except during 2000-01/2005-06. The growth rate of labour productivity in the rural areas was 15.5 per cent during 1994-95/2000-01, 0.9 per cent during 2000-01/2005-06, 14.6 per cent during 2005-06/2010-11, and 10.5 per cent during 1994-95/2010-11, whereas that in the urban areas was 2.9, 6, 9, and 5.7 per cent, respectively. Within the rural unorganised manufacturing sector, labour productivity has been increasing faster in the rural OAMEs than in rural establishments, except during 1994-95/2000-01. The growth rate of labour productivity in the rural OAMEs was 14.9 per cent during 1994-95/2000-01, 1.5 per cent during 2000-01/2005-06, 18.9 per cent during 2005-06/2010-11 and 11.7 per cent during the entire period 1994-95/2010-11, whereas that

in the rural establishments was 18.8, -3.9, 2.1 and 6.1 per cent, respectively.

Looking at the growth of labour productivity across the major rural unorganised manufacturing groups (given in Table 11), except tobacco products, leather products and paper and printing, all other industry groups have witnessed significant growth, at varying degrees, in labour productivity during 1994-95/2010-11; industries such as textiles, wood products, other manufacturing and metal products have recorded double-digit growth. However, the growth rate in labour productivity has been deteriorating over time; growth rate declined in as many as eight industries during 2000-01/2005-06 and seven industries during 2005-06/2010-11 compared to the growth rate during 1994-95/2000-01.



**Figure 5: Growth (% p.a.) in Labour Productivity in Unorganised Manufacturing in Assam**

Note: Growth rate is compound annual growth rate.

Source: Same as Table 2.

**Table 11: Industry-wise Growth (% p.a.) in Labour Productivity in Rural Unorganised Manufacturing in Assam**

<b>Industry Groups</b>	<b>1994-95/ 2000-01</b>	<b>2000-01/ 2005-06</b>	<b>2005-06/ 2010-11</b>	<b>1994-95/ 2010-11</b>
Food and beverages	8.9	4.5	7.4	7.0
Tobacco products	35.6	-8.3	n/e	n/e
Textiles	21.8	-2.5	27.3	15.2
Leather products	n/a	11.2	n/e	n/e
Wood products	28.3	0.3	8.7	12.8
Paper and printing	16.4	14.6	-26.0	0.6
Chemical products	0.9	7.5	20.1	8.7
Metal products	21.4	-7.9	19.1	10.7
Machinery and electrical	12.8	18.0	-5.6	8.2
Transport and equipment	33.2	-3.0	-11.1	6.3
Other manufacturing	16.1	7.7	7.8	10.8
All Industries	15.5	0.9	14.6	10.5

Notes: Growth rate is compound annual growth rate; n/a– Not applicable (due to zero value in the preceding year); n/e– Not estimated (due to zero value in the current year).

Source: Same as Table 2.

Thus, the growth of labour productivity is higher in the rural unorganised manufacturing sector compared to its urban counterpart and within the rural unorganised manufacturing sector in the rural OAMEs compared to rural establishments. However, this needs to be interpreted carefully because we have already noted that employment growth has been negative in the rural unorganised manufacturing sector and within the rural unorganised manufacturing sector in the OAMEs and most of the industry groups. Therefore, a large part of the increase in labour

productivity may be attributed to the decline in employment. However, there are also instances where high growth of labour productivity is accompanied with high employment growth; for example, transport and equipment, metal products, and machinery and electrical during 1994-95/2000-01, paper and printing, leather products, and chemical products during 2000-01/2005-06, and machinery and electrical, transport and equipment during 1994-95/2010-11. In these industries, growth in labour productivity is attributable to the output growth.

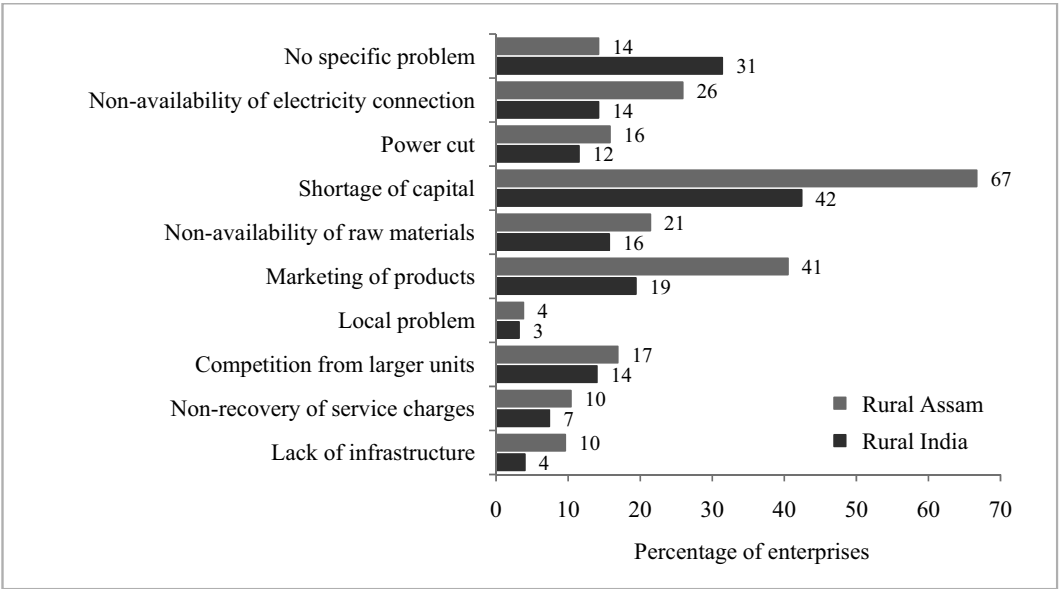


### Constraints faced by Rural Unorganised Manufacturing in Assam

What constraints the growth of rural unorganised manufacturing enterprises in Assam is an important issue that needs crucial examination. Several explanations may be provided to explain the deceleration of the rural unorganised manufacturing sector in the State. The foremost ones are the adversity of the overall economic environment in the State which are widely referred to the State's industrial backwardness, such as infrastructure-related bottlenecks like poor road networks, poor quality of power supply, limited credit supply, etc., poor marketing facilities, geographical isolation

from the mainland India, deficiency in local entrepreneurship, insurgency problem, poor governance, and shying away of the investors, etc. Explanations specific to the unorganised enterprises are the common constraints that these enterprises face. According to NCEUS (2009), they are limited (or no) access to capital, other productive assets, education/training, infrastructure services, access to and knowledge of markets, technical assistance, organisation and bargaining power, and competition from each other and larger units.

As per the NSS 2005-06 survey, about 86 per cent of rural unorganised manufacturing enterprises in Assam reported experiencing specific problems, which is far too larger than



**Figure 6: Problems faced by Unorganised Manufacturing Enterprises in Assam, 2005-06**

Source: Computed from NSSO (2007).

the national level figure of 69 per cent (Figure 6). The most severe problems faced by the unorganised manufacturers in the rural areas in Assam are shortage of capital (67 per cent of enterprises), followed by the problem of marketing of product (41 per cent) and non-availability of electricity connection (26 per cent). About 21 per cent of enterprises reported non-availability of raw materials, 17 per cent reported competition from larger units, 16 per cent reported power cut, 10 per cent reported lack of infrastructure and 10 per cent reported non-recovery of service charges as the major problems they faced in their day-to-day operation. Enterprise-wise, the problem of shortage of capital, power cuts and competition from larger units are more often reported by the rural establishments, whereas the problem of marketing of products, non-availability of raw materials, and non-recovery of service charges are more often reported by the rural OAMEs.

Most interestingly, the severity of each of these problems faced by the unorganised manufacturing enterprises in the rural areas in Assam is considerably higher than that in the rural areas of the country as a whole. This implies that the rural unorganised manufacturers in Assam faced more hurdles than their comparators in the other parts of the country, which is one of the reasons for the shyness of industrial start-ups in the State.

## Conclusion

The present paper analysed the performance of the rural unorganised manufacturing industries in Assam in the post-reform period. Analysis of data from the latest four NSS rounds on unorganised manufacturing covering the period 1994-95 to 2010-11 suggests that the unorganised manufacturing enterprises occupy a place of great significance in the industrial economy of Assam. Within the unorganised sector, the rural unorganised manufacturing sector, and within the rural unorganised manufacturing sector, the rural-OAMEs occupy an overwhelmingly dominant position, in terms of all the important indicators, i.e., number of enterprises, employment and output. However, the rural unorganised manufacturing industry in the State has been deteriorating over time; not only in relative terms but in absolute numbers also, particularly in respect of the number of enterprises and employment. The growth rate of real value added has been positive but continuously declining over the period 1994-95/2010-11, whereas the growth rate in the number of enterprises and employment has been negative, particularly during 2005-06/2010-11. The setback in the most domineering segment of the rural unorganised manufacturing, i.e. rural OAMEs, has the onus of this deceleration; otherwise, the rural establishments witnessed a decent growth. The consequences of such a pattern of job-loss growth are negative employment elasticity

and quite high growth in labour productivity, especially in the rural OAMEs, largely due to the negative growth in employment. At the industry level, most of the industries have achieved a decent growth at a varying rate in real value added, though the rate of growth has been waning over time, whereas majority of the industries have witnessed a considerable decline in the number of enterprises and employment.

Thus, it is plainly clear that the deceleration of the rural unorganised manufacturing in Assam in the post-reform period was largely spread among the domineering rural OAME segment, while the small-sized rural establishment segment has been steadily growing, especially in the post-2000 period. This is indeed a clear indication of restructuring of the rural unorganised manufacturing in favour of the non-household type enterprises, i.e. the establishments. This deceleration of rural OAMEs and expansion of rural establishments further indicate that the rural OAMEs, being the tinniest and self-employing type household-based enterprises, are vulnerable to the disadvantages of rural location, whereas the rural establishments being relatively bigger non-household type enterprises and run with hired labour, power, and machinery to certain extent, have no serious disadvantages of being located in rural areas.

The findings of the paper have important policy implications. Inasmuch as the rural

unorganised manufacturing enterprises occupy an overwhelmingly dominant position in the industrial economy in Assam, any policy towards industrial development in the State should consign utmost focus to the rural unorganised manufacturing, and within this sector, to the rural OAMEs in particular. The policy measures by the Central and State governments for industrial development in the State mainly take the forms of subsidies and concessions, such as transport subsidy, capital investment subsidy, interest subsidy, central comprehensive insurance scheme, etc. Although such incentives for ushering industrialisation have their merits, such measures always remain a political issue with unclear real benefits, and therefore, instead of offering such doles and subsidies, emphasis should be given, in particular by the State government, in strategic interventions for addressing the fundamental constraints faced by the industrial sector in the State. Policies relating to the provisioning of training facilities leading to skill development, easy access to credit and market facilities, uninterrupted power supply and technology support will not only be effective for the growth of the unorganised manufacturing enterprises in the State but it will also enhance the productivity of these enterprises. Emphasis should be given to the growth of the agriculture sector through enhancing productivity since the agro-based industries occupy a domineering position with more than 80 per cent of enterprises and employment in the rural unorganised

manufacturing sector in the State. Hence, without the growth of the agriculture sector, growth of unorganised manufacturing enterprises cannot be achieved. Efforts also need to be made to promote stronger linkages between the unorganised and organised

manufacturing enterprises, since it is an important source of economic efficiency and competitiveness, both for small and large enterprises, most markedly for the smaller one.

### Endnotes

- 1 The growth rate of rural employment declined from 2.16 per cent during 1972-73/1993-94 to 1.45 per cent during 1993-94/2004-05 and to -0.28 per cent during 2004-05/2011-12 (Chand et al., 2017).
- 2 The share of rural manufacturing in rural employment marginally increased from 7 to 8.6 per cent during 1993-94 to 2011-12, whereas the real value added of the sector grew at an unprecedented rate of 8.4 per cent during 1994–2005 and 15.9 per cent during 2005–2012 (Chand et al., 2017).
- 3 The Net State Domestic Product (NSDP) of Assam was just 1.4 per cent of Net Domestic Product (NDP) of India in 2011-12. In the same year, per capita NSDP of Assam (Rs 21741, at constant 2004-05 prices) was just a little over half of the per capita NDP of India (Rs 38433). During 2004-05/2011-12, the annual average growth rate of NSDP and per capita NSDP in Assam was 5.1 and 3.8 per cent, respectively, compared to 8.3 and 6.7 per cent annual average growth rate of India's NDP and per capita NDP, respectively (estimated from RBI, 2017).
- 4 The agriculture sector accounted for 54.3 per cent of employment and contributed to about 23 per cent of NSDP of Assam in 2011-12. The services sector, on the other hand, accounted for 32.3 per cent of employment and contributed 56.6 per cent of NSDP in 2011-12 (Sahu and Kumar, 2017; RBI, 2017).
- 5 NSS Report No. 477 (56/2.2/1), 478 (56/2.2/2), 479 (56/2.2/3) and 480 (56/2.2/4) for 2000-01 and NSS Report No. 546 (67/2.34/1) and 549 (67/2.34/2) for 2010-11.
- 6 At the national level, rural areas accounted for 59 per cent of enterprises, 53 per cent of employment, and 37 per cent of value added of the unorganised manufacturing industries during 2010-11.
- 7 Similarly, tobacco products, paper and printing, and chemical products during 1994-95/2000-01; wood products, metal products, and transport and equipment during 2000-01/2005-06; and machinery and electrical during 2005-06/2010-11 have positive employment elasticity due to negative growth rates in both employment and value added.

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