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# Organised and Unorganised Employment in the Non-agriculture Sectors in the 2000s


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Abstract

*Conventional growth theory suggests a simple positive relationship between output and employment growth. However, an empirical analysis of the last decade suggests that employment growth may or may not be accompanied by output growth, depending upon the growth in productivity. Accordingly, this paper classifies the organised and unorganised non-agricultural sectors and identifies the sub-sectors that have been employment-generating (both productive as well as productivity declining), jobless and job-losing, depending upon their rates of growth of employment and gross value added. The use of varying definitions of organised and unorganised sectors, especially in the case of the services sector, by different data sources is a serious issue that plagues such kind of analysis. This paper highlights all these issues along with the jobless growth phenomenon experienced during the past decade in order to assess their policy implications.*

## Introduction

The most important strategy for achieving inclusive growth in the Eleventh Plan has been to generate productive employment, accompanied by decent working conditions on quite a large scale to provide employment to the growing labour force. The Eleventh Plan aimed at generating 58 million work opportunities in 21 high-growth sectors, with the objective of achieving a decline in the unemployment rate to 4.83 per cent by the terminal year of the Plan. However, the 66th Round of the National Sample Survey Organisation (NSSO) (2009-10) on employment–unemployment shows that two million work opportunities were created between 2004-05 and 2009-10, and that the unemployment rate was 6.6 per cent in 2009-10. Clearly, the challenge for creating employment opportunities in the Twelfth Plan is going to be enormous.

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With economic growth, it is reasonable to assume a growth in employment. An equally important consideration is the sector in which this growth in employment is occurring. One of the structural transformations that any developing economy must undergo is a decline in the share of agriculture in output and in employment, and a corresponding increase in the share of industry and services. In India, this structural transformation has been taking place, but the movement of labour out of agriculture into industry and services has been relatively slow. The share of industry and services in output has increased sharply within the last 20 years but their share of employment still remains low, and stood at 21.5 per cent and 25.3 per cent, respectively in 2009-10. Their corresponding contributions to the Gross Domestic Product (GDP) during the same year were as follows: industry – 28.1 per cent (manufacturing 15.9 per cent, non-manufacturing 12.2 per cent), and services – 57.3 per cent in 2009-10. Therefore, increasing employment outside of agriculture must be a desirable goal in itself. With this objective in view, we empirically examine what has happened to employment in the organised and unorganised manufacturing industry, organised and unorganised non-manufacturing industry, and in organised and unorganised services through an analysis of their output and employment growth, and employment elasticities.

Employment elasticity (EE) implies the percentage change in employment growth for a percentage change in the growth of output. However, the EE should be interpreted carefully (Kannan and Raveendran, 2009). Preferably, it should lie in the range of 0.3 to 0.7, which would result in the creation of productive employment opportunities to absorb the annual addition to the labour force and to improve the 'quality' of employment by a real wage rise (SAARC, 2006; Rangarajan, 2006).

In Section 2, we discuss some conceptual issues, and also present the trends pertaining to the size of the organised and unorganised segments of non-agricultural employment in the 2000s. In Section 3 of this paper, we define each of the four categories under which the empirical analysis carried out for this paper has been discussed which are: organised manufacturing and unorganised manufacturing, organised services and unorganised services. This section also describes the sources of data used for each of the four categories as well as of the respective time periods. Section 4 includes a detailed analysis of non-agricultural employment by sub-sectors with manufacturing, non-manufacturing industries and services in the 2000s. The focus of the analysis is on identifying sectors which have generated employment, sectors which have experienced jobless growth or job losses even though Gross Value Added (GVA) has increased

in those sectors, and thirdly, the sectors which have experienced a decline in both GVA and employment. This explanation has been provided in this section for all types of organised and unorganised employment outside of agriculture. In particular, the EE is estimated for all sectors, which accounts for more than 1 per cent of the output and/or employment. This analytical explanation would be relevant for policy-makers because employment-generating sectors would need to be promoted through government policy. At the same time, the sectors experiencing GVA growth but jobless growth or job losses would need two types of policy responses: expansion of the safety net, and government support for re-training and re-structuring. Section 5 lays down a framework to place employment generation and production at the heart of a revival stage in the case of an economic crisis. The final section summarises the main findings and policy recommendations.

**Some Conceptual Issues**

The generation of productive employment requires the transfer of surplus labour from low-productivity agriculture to industry or services. In order to achieve this objective, two kinds of transitions are needed: first, the movement of unskilled labour from agriculture to unorganised industry or unorganised services; and second, the movement of labour from informal employment in the unorganised sectors to either formal employment in the organised sectors (preferably), or at least informal employment in the organised sectors.[1] When an agricultural labourer migrates to urban areas in search of work and finds employment, though it may be *casual work in unorganised services or industry*, he does so because urban wage rates are better even in the unorganised sector than those prevailing in agriculture (or there may be an absence of work opportunities in agriculture in his district or state).

Our analysis of the data, as well as that by the National Commission for Enterprises in the Unorganised Sector (NCEUS) suggest that the very first type of transitions (from agriculture to unorganised sector informal employment) is growing most rapidly in relative terms. In other words, the phenomenon of decent work and of productive work does seem to be growing.

[1]NCEUS (2008) makes the distinction between formal and informal employment, on the one hand, and organised/unorganised enterprises on the other. Casual or ad hoc employment in organised enterprises would amount to informal employment in the organised sector. In fact, NCEUS estimates indicated that 37.8 per cent of the total organised sector employment was informal in 1999-2000, which increased to 46.6 per cent by 2004-05. The corresponding figure for 2009-10, as reported by Mehrotra, *et al*. (2012) stood at 57.8 per cent. This indicates rising informalisation of organised sector employment in the Indian economy.

We noticed that several sectors in both organised and unorganised manufacturing, as well as organised and unorganised services have shown an EE of output which is greater than 1. This implies that with GVA growth in these sectors, employment has risen so fast that the EE is greater than 1; when the EE is greater than 1, employment has grown but labour productivity has not. In an ideal world, this outcome is not the most desirable one since employment increase must only be an increase in productive employment. However, in an economy which is suffering from an unemployment rate of 6.6 per cent by the Current Daily Status (CDS) definition (2009-10), an increase in employment may not always increase labour productivity. The movement of labour out of agriculture to a higher productivity-generating industry and services is in itself a gain in terms of equity and efficiency in the economy, even though the productivity gain in the case of the workers hired after the EE goes over, this may not be termed as productive employment of these workers, and hence they constitute a loss in potential efficiency (Mehrotra et al., 2012).

## 1. Size and Share of Employment in the Organised and Unorganised Non-agricultural Sectors

Examining employment trends for three points of time (1990-2000, 2004-05 and 2009-10) indicates that agriculture witnessed an absolute increase in employment during the first half of the decade from 238 million in 1999-2000 to nearly 259 million in 2004-05. This increase in agriculture, at face value, cannot be seen to be a positive development, if the expected structural transformation with growth would be manifested in a shift in labour from agriculture to non-agricultural employment. However, if the increase in employment in agriculture during the first half of the decade is accounted for by a diversification into allied economic activities like fishery, dairying, poultry, sericulture, horticulture and floriculture, it is indeed a welcome development. However, during the latter half of the decade, there was a decline in absolute numbers employed in agriculture from 259 million to 245 million. The problem remains that total agricultural employment at the end of the decade was still higher than at the beginning of the decade. This means that the process of structural change in employment that one would expect with a period of very rapid, in fact, unprecedented growth in output in the economy outside of agriculture, is not occurring. Employment in agriculture is primarily in the unorganised sector (Mehrotra et al., 2012).

The share of organised sector employment was around 14 per cent in both the periods, 1999-2000 and 2004-05. However, during the second half of the decade, it rose to 16 per cent,

that is, unorganised sector employment declined from 86 per cent in 1999-2000 and 2004-05 to 84 per cent in 2009-10. The organised and unorganised sectors have been defined as per the NCEUS definition (Table 1).[2]

The share of employment in the organised and unorganised segments of the non-agricultural sectors reveals interesting insights. There was a consistent absolute increase in employment in the organised non-agricultural sectors from 8 million during the first half of the decade to 14 million during the second half. The greater pace of increase in the organised sector workforce during the years 2004-05 and 2009-10 is also reflected in the rising share of the organised sector in the total non-agricultural employment, despite a decline in 2004-05 (Table 1).

**Table 1**

**Organised and Unorganised Sector Employment**

| Sectors | Total Employment | Employment In Non-agriculture |
|---|---|---|
| **2009-10** | | |
| Unorganised | 387.3 (84.2) | 145.3 (67.4) |
| Organised | 72.9 (15.8) | 70.1 (32.6) |
| Total | 460.2 (100) | 215.4 (100) |
| **2004-05** | | |
| Unorganised | 394.9 (86.3) | 142.1 (71.6) |
| Organised | 62.6 (13.7) | 56.4 (28.4) |
| Total | 457.5 (100) | 198.5 (100) |
| **1999-2000** | | |
| Unorganised | 342.6 (86.4) | 110.4 (69.4) |
| Organised | 54.1 (13.6) | 48.7 (30.6) |
| Total | 396.7 (100) | 159.1 (100) |

Note: Figures in parentheses are percentage shares.
Source: Computed from NSS 66th Round for 2009-10, and NCEUS, 2007, for 2004-05.

Thus, while the organised sector's share in employment is increasing, this is only due to an increase in informal employment in that sector. Formal employment in the organised sector is not increasing. This shows that employers are increasingly hiring workers on contractual terms due to stringent labour laws and other concerns (Mehrotra et al., 2012).

[2] "The unorganised sector consists of all incorporated 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."

**Definitions and Data Sources**

The analysis discusses the non-agricultural sectors—industry and services—in sections that examine employment and output in six sub-sectors: organised manufacturing and unorganised manufacturing; organised non-manufacturing and unorganised non-manufacturing; and finally, organised services and unorganised services. However, as was noted by the NCEUS, in India, there is no universally accepted definition of the unorganised sector. The organized-unorganised dichotomy is often used in a similar context as that of formal-informal, registered-unregistered or modern-traditional. For the purpose of analysis, it is crucial to look into the definitions used by the different data collection agencies.

The data collected by the Annual Survey of Industries (ASI) for the factory sector for the years 1999-2000, 2004-05 and 2008-09, have been used in this paper for undertaking an analysis of the organised manufacturing sector. The ASI covers all industrial units (called factories) registered under the Sections 2(m)(i) and 2(m)(ii) of the Factories Act, 1948. In addition to Sections 2(m) (i) and 2(m)(ii) of the Factories Act, 1948, *bidi* and cigar units employing 10 or more workers with power and 20 or more workers without power, and registered under the Bidi and Cigar Workers (Conditions of Employment) Act, 1966 are also covered in the ASI. However, establishments under the control of the Defence Ministry, oil storage and distribution units, restaurants and cafés, and technical training institutions not producing anything for sale or exchange are outside the coverage of the ASI.

The unorganised manufacturing sector, for which data are drawn from the NSS 56$^{th}$ (2000-01) and 62$^{nd}$ (2005-06) rounds, is defined as follows:

"(i) All manufacturing enterprises except those registered under Sections 2m(i) and 2m(ii) of Factories Act, 1948 and *Bidi* and Cigar Workers (Conditions of Employment) Act, 1966.

(ii) All manufacturing enterprises except those run by Government (Central Government, State Governments, Local Bodies)/Public Sector Enterprises."

By this definition, all those private sector manufacturing enterprises which engage less than 10 workers with power or less than 20 workers without power are in the unorganised manufacturing sector. Thus, an analysis of organised and unorganised manufacturing in terms of definitions is complimentary and, therefore, comparable.

The NCEUS defines 'organised' and 'unorganised' on the basis of various factors including enterprise type, number of workers and social benefits. All enterprises under the domain of the Government/public sector, public/private ltd. company; co-operatives, trusts, etc. are organised. The enterprise type is organised if it is proprietary (male and female); entails a partnership with members from the same household or members from different households; and employer's households (that is, private households employing maid-servants, watchmen, cooks, etc.) coupled with the number of workers, which should be 10 or more. If the enterprise type is not known (missing or other than mentioned above) and employs 10 or more workers, it is considered as organised. When both the organised type and number of workers are not known, then if the enterprise provides social benefits to its workers, it is organised. The residual sectors are considered as unorganised.

The National Accounts Statistics, compiled by the Central Statistical Organisation (CSO), categorises sectors as registered and unregistered wherein all public sector units are considered organised while private sector enterprises which are registered under some Act, for example, the Factories Act, Sales Tax Act or the state's Shops and Establishment Act are all organised. The rest of the private sector enterprises are considered as unorganised.

While the criterion for the organised sector is very well defined for manufacturing, this is not the case for the services sector. The problem arises because services enterprises are not subjects to an act similar to the Factories Act. Only those services enterprises that engage in some sort of manufacturing activity are required to register under the Factories Act. While analysing the NSS 63rd Round data for the unorganised services sector, Dehejia and Panagariya (2011) state that:

> Most private sector services enterprises, whether small or large, are officially in the unorganised sector. For instance, large private sector banks such as the ICICI Bank and HDFC Bank and software export giants such as the Infosys, Wipro and Satyam are officially in the unorganised sector" (pp. 17, 2nd para 2).

However, it may be pointed out that the CSO's definition of the unorganised services sector is different from the above definition applied by the NSS. According to the CSO/NAS, in the three institutional sectors, the organised services sector is constituted by public and private corporate sectors, while the household sector is recognised as unorganised (Shetty, 2007). This suggests that there is no consensus over what constitutes the unorganised sector in India, in

general, and the services sector, in particular. Given the importance of the unorganised segment, in terms of both GDP and employment, there is a dire need to resolve this conceptual issue, which has policy implications for employment generation. Along with this ambiguity in definition, there is also a difficulty in obtaining data for the organised segment of the services sector. There is enough literature highlighting the concerns about adequacy, reliability, accuracy and timely availability of database for the heterogeneous services sector.

In addition, there are concerns regarding the compilation of national accounts for services enterprises. In the case of organised services segments (public sector providers of services, and in some services, corporate sector units), the contribution to GDP is traced through the budget documents and annually published accounts. In National Accounts terminology, services segments other than those directly estimated (as above) are treated as 'unorganised'.

For the purpose of this paper, the estimates for organised services (and non-manufacturing industry) have been obtained from the CSO for GVA and from the NSS employment-unemployment rounds for employment data for the years 1999-2000 and 2004-05. However, the NSS 57$^{th}$ (2001-02) and 63$^{rd}$ (2006-07) Rounds have been used to extract data for both GVA and employment in the unorganised services sector. These rounds defined unorganised service sectors as all services enterprises except for those run by the Government (Central, state and local bodies)/public sector enterprises and those registered under Sections 2m(i) and 2m(ii) of the Factory's Act, 1948, and the Bidi and Cigar Workers (Condition of Employment) Act, 1966. Table 2 summarises the time frame, data sources as well as definitions used in the paper.

**Table 2**

**Data Sources and Definitions**

| Sector | Segment | Source of Data and Definition |
|---|---|---|
| Manufacturing | Organised | Annual Survey of Industries 1999-2000, 2004-05, 2008-09 |
| | Unorganised | Unorganised Manufacturing Sector in India, National Sample Survey, 2000-01, 2005-06 |
| Non-manufacturing | Organised | Employment-Unemployment Situation in India, National Sample Survey, 1999-2000, 2004-05; NCEUS definition |
| | Unorganised | |
| Services | Organised | Employment-Unemployment Situation in India, National Sample Survey, 1999-2000, 2004-05; NCEUS definition |
| | Unorganised | Unorganised Service Sector in India 2001-02, Service Sector in India 2005-06 |

The estimates of organised and unorganised sector employment in manufacturing and services vary between enterprises as against household surveys. This may be because of two

reasons. One is that the subsidiary employment of the worker in other enterprises/sectors would not be known to the employer, but would be captured during a survey of workers/households. For instance, estimates of organised manufacturing sector's employment by ASI 2004-05 (which is based on a survey of enterprises only) are 8.7 million as compared to the NSS Employment-Unemployment Survey's estimates (which are based on household surveys) of 16 million.

Also, there may be certain sectors, especially in services, which may not be captured in enterprise surveys due to the lack of clarity in defining or difficulty in surveying (for example, in the trade sector), but are captured through surveys of workers/households. For example, the estimates of employment in unorganised services from NSS enterprise surveys are 28 million, while those from household surveys are 81 million. Thus, while addressing worker-related issues, the policy-maker should keep in mind this distinction and the broader definition of employment and the organised as well as unorganised sectors.

## 6. Analysing the Relationship between Employment and Output by Sector in the Indian Economy during the 2000s

The fact that an economy, even when it experiences a higher growth rate in the capitalist segment, is saddled with a high unemployment rate, goes against both the grain of conventional growth theory as well as of the basic presumption underlying policy-making (Patnaik, 2011). Patnaik suggests that in India, which is faced with increasing unemployment in the midst of accelerating economic growth, "the standard response has been that such 'exclusion' will disappear if the growth rate can be further accelerated" (p. 172). In the conventional growth theory, the relationship between output and employment growth is quite clear. If we assume fixed coefficients which change over time through technological progress, and no deficiency of aggregate demand, then the rate of growth of employment is determined as the difference between the rate of growth of output, which depends upon the savings and capital-output ratios, and the rate of growth of labour productivity, which depends upon the pace of technical progress. In other words, conventional growth theory assumes that a rise in the rate of growth, unless accompanied by a still greater rise in the rate of growth of labour productivity, would necessarily raise the rate of growth of employment.

Patnaik further suggests that there is a perception that in a situation where the unemployment rate exceeds a certain threshold level, real wages remain low and close to the subsistence level. As a result, all gains in labour productivity accrue to the capitalists. With wages tied to subsistence and productivity rising, the share of surplus in output rises, and with it,

the savings ratio in the economy also rises. Since the capital-output ratio can be taken to be constant, the rise in the savings ratio raises the growth rate. This, in turn, raises the growth rate of employment. And since the growth rate of the workforce is given, this continuous increase in the share of surplus and, therefore, in the growth rate of output and employment, would eventually lower the unemployment rate until tightness develops in the labour market and wages start rising above the subsistence level.

Patnaik then goes on to show that in India, while growth is increasing, unemployment is not falling. Moreover, unlike what the theory predicts, between the late 1980s and the present, there has been an absolute decline in the real wage rate of organised industrial workers. Hence, far from tightening with rapid economic growth, the labour market has remained slack.

We have laid out Patnaik's argument at some length, since the policy-maker's implied position is stated, as also the factual critique of it. The reality, as we argue below, is more complicated than either what Patnaik argues or the implied position of the majority of policy-makers in the Government. Unemployment was increasing until 2004-05, but it has fallen since then. The fall in unemployment is nowhere close to a level that a tightness might develop in the labour market, but faster growth during the latter half of the 2000s has brought unemployment down. However, the unemployment rate in 2009-10, at 6.6 per cent, was still at the 1993-94 level (at 6.06 per cent). Also, there has been a consistent rise in real wages, at an increasingly faster rate, which is one of the reasons why the unemployment rate has not declined much (World Bank, 2012).

Secondly, there are sectors which, with growing GVA, have experienced an increase in employment. There are other sectors, which, with growing GVA, have demonstrated either jobless growth, or an actual decline in employment. Thirdly, labour productivity is increasing in a large number of sectors, along with an increase in total employment in those sectors. Our argument is that government policy must take a differentiated view of sectors that are behaving in different ways. Unless government policy is nuanced enough to take into account these complexities, it is unlikely that during the Twelfth Plan, the increase in employment would be accompanied by an overall productivity increase when the GVA rises.

## 1. Our Classification of Sectors within Industry and Services

Often, some amount of generalisation is attached to the research dealing with the employment challenges across different sectors (Goldar, 2011a and 2011b; Nagaraj, 2011). It is thus imperative to carry out an in-depth analysis of employment generation and output growth, that is, an analysis of employment intensity of output for different sectors of the economy if policy-makers and academics want a real handle on how employment is responding to output growth.

The principle used in this paper to classify sectors is whether they are generating employment or not. Broadly, the sectors in this section have been classified into three categories—employment-generating sectors, jobless growth and job-losing sectors, and declining sectors—to describe the fall of employment and of GVA. We find that in the first two types of sectors, the GVA growth may or may not be accompanied by employment growth.

*The First Category*: The employment-generating category of sectors has, of course, generated employment but these sectors have been further divided into various categories of sectors that are discussed below.

As stated in Section II, employment generation is a desirable goal but it must be ensured that the generation of both productive employment and unproductive employment (see the distinction between the two in sub-section 1 under Section II) is not treated equally. Depending on rates of growth of GVA and employment, the sectors are clubbed together as those which have shown an increase in productive employment, and those where employment has increased but which have experienced a decline in labour productivity over the corresponding period. These two sets of sectors are associated with an EE of less than 1 and greater than 1, respectively. Thus, from the point of view of employment generation, the Government should encourage the *promotion* of these sectors, especially those that have demonstrated growth in productive employment.

*The Second Category*: Job-losing sectors, wherein the GVA and employment growth move in the opposite direction, are those which have experienced positive rates of growth of GVA but negative employment growth (that is, laying off of workers). This is why these sectors have negative EE. This phenomenon can be due to two reasons. One, there may be technological upgradation or improvement in technical efficiency; and two, there may be substitution of capital for labour. Both these situations would lead to capital-intensive growth.

Next, we have sectors which have witnessed jobless growth, that is, the sectors that have not shown much rise in employment relative to high GVA growth.

*The Third Category*: Finally, there are declining sectors, which are losing significance over time in the sense that they have been registering negative growth of both employment as well as GVA. Thus, these sectors require safety nets. In other words, the Government needs to provide *protection* to the workers in these sectors (Table 3).

**Table 3**

**Classification of Non-agricultural Sectors**

**by Growth of Gross Value Added and Employment**

| Category | Share in sector's GVA and/or Employment | | GVA Growth | Employ-ment Growth | Employment Elasticity (EE) |
|---|---|---|---|---|---|
| | Period 1 | Period 2 | | | |
| **Category I** | | | | | |
| Labour-intensive Growth (Productive Employment) | High (> 1 per cent) | High (> 1 per cent) | High (<8 per cent) | High (> 3 per cent) | Positive but depends on relative growth rates (and <1) |
| Labour-intensive Growth (with Labour Productivity Decline) | | | High | Greater than GVA growth | Greater than 1 |
| **Category II** | | | | | |
| Job-losing Sectors | High (> 1 per cent) | High (> 1 per cent) | High | Negative | Negative |
| Jobless Growth Sectors | High (> 1 per cent) | High (> 1 per cent) | High (> employ-ment growth) | Low/no change | Positive but low (<0.3) |
| Category III | | | | | |
| Declining Sectors | High (> 1 per cent) | Decline (share in P1>P2) | Negative | Negative | Positive but depends on relative growth rates |

Using this classification as an analytical device, we have systematically analysed manufacturing (organised and unorganised), non-manufacturing industry (organised and unorganised), and services (organised and unorganised) in the rest of this section. The data sources and definitions have already been discussed in Section III.

**2. Manufacturing**

The recent NSS round data (2009-10) has exposed the collapse of jobs during the second half of the 2000s, when India achieved unprecedented growth in GDP. Only about two million jobs were created during the period 2004-05 to 2009-10. In fact, the manufacturing sector

experienced job-losing growth during the aforementioned period. In manufacturing, there was an absolute increase in employment during the first half of the decade from 44 million to nearly 56 million in 2004-05. This increase by nearly 12 million in manufacturing during the first half of the decade was, however, offset by a decline by five million during the second half of the decade. In this regard, it is critical to study the employment situation in both organised and unorganised employment during the decade of the 2000s.

***(i) Organised Manufacturing***

The reforms in the 1990s were particularly targeted towards the manufacturing sector as it offers greater prospects for capital accumulation, technical change and linkages, and hence job creation, especially for the semi-skilled and poorly educated segment of the labour force coming out of agriculture (Sen, 2009, as cited in Kathuria, et al., 2010).

The Indian experience has often been described as one wherein the growth rate of output has a larger effect on labour productivity such that rather than foster an increase in the growth rate of employment, it instead ends up lowering the growth rate of employment (Patnaik, 2011).

Kathuria et al. (2010) reveal that during the period between 2000-01 and 2004-05, labour productivity increased for the organised manufacturing sector, but both labour productivity and capital intensity growth slowed down in the unorganised sector. This is in line with the earlier argument that a high growth rate of output has increased labour productivity by such significant magnitude as to lower the employment growth rate considerably.

However, our empirical analysis over the period 1999-2000 to 2008-09 (split into two-time periods of 1999-2000 to 2004-05 and 2004-05 to 2008-09) shows that there is no universal link between the rates of growth of output and employment (captured through the EE). While total organised manufacturing witnessed jobless growth (a GVA growth of over 5 per cent as compared to an employment growth of less than 1 per cent) over the period 1999-2000 to 2004-05, it emerged as a productive employment-generating sector over the period 2004-05 to 2008-09. While around 3 lakh workers were added during the first half of the decade, more than 21 lakh workers found employment in the organised manufacturing sector during the period 2004-05 to 2008-09 (see tables 4 and 5) based on the ASI definition of organised manufacturing.[3]

[3]Mehrotra et al. (2012) agree that while organised manufacturing employment, as defined by the ASI, might have risen sharply in the second half of the 2000s, by the broader definition of organised manufacturing used by the NSS, organised manufacturing employment hardly rose at all over the same period.

Among the factory sub-sectors, sectors 1.1 to 1.4, including casting of metals (75,000 workers), structural metal products (62,000 workers), glass and glass products (3,40,000 workers) and optical instruments and photographic equipments (97,000 workers)—have been productive employment-generating sectors during the period 1999-2000 to 2004-05. These four sectors accounted for 11 per cent of the total organised manufacturing employment and output in 2004-05 (Table 4).

**Table 4**

**Employment and Absolute Increase in Employment (in the '000s) in the Employment-generating Sectors, 1999-2000 to 2004-2005**

| ***Sector Code*** | ***Sectors*** | ***Employment*** | ***Absolute increase in Employment*** |
|---|---|---|---|
| | *Productive Employment Sectors* | 2004-2005 | 1999-2000 to 2004-2005 |
| 1.1 | Casting of metals | 160.3 | 75.0 |
| 1.2 | Structural metal products, tanks, reservoirs and steam generators | 139.2 | 62.0 |
| 1.3 | Glass and glass products | 381.3 | 341.1 |
| 1.4 | Optical instruments and photographic equipment | 100.9 | 97.0 |
| *Labour Productivity Declining Sectors* | | | |
| 1.5 | Production, processing and preservation of meat, fish, fruit, vegetables, oils and fats | 135.1 | 18.3 |
| 1.6 | Other textiles | 90.5 | 23.0 |
| 1.7 | Wearing apparel, except fur apparel | 386.6 | 136.7 |
| 1.8 | Basic chemicals | 379.1 | 218.2 |
| 1.9 | Man-made fibres | 88.8 | 67.6 |
| 1.10 | Rubber products | 139.9 | 41.6 |
| 1.11 | Knitted and crocheted fabrics and articles | 136.6 | 87.6 |
| 1.12 | Television and radio transmitters and apparatus for line telephony and line telegraphy | 177.7 | 175.8 |
| 1.13 | Railway and tramway locomotives and rolling stock | 91.0 | 69.7 |

Source: ASI, 1999-2000 and 2004-05

However, others sectors (sectors 1.5 to 1.13 in Table 3) also witnessed an increase in employment but with a decline in labour productivity (with an EE greater than 1) over the period 1999-2000 to 2004-05. However, there was a complete reversal of fortunes during the latter half of the decade for some of these sectors. Among these, many sectors (including sectors 6.1, 6.3, 6.7, 6.12, 6.13, and 6.14 in Table 8) turned out to be declining sectors in the sense that they

experienced negative growth rates of output and employment during the period 2004-05 to 2008-09, that is, a complete reversal of their performance seen during the earlier period.

Along with total manufacturing, other sectors which witnessed jobless growth were sectors 2.2, 2.3, and 2.4, while sectors 2.5 and 2 were job-losing sectors, with both groups of sectors together accounting for more than 50,000 job losses during the period 1999-2000 to 2004-05 (Table 5).

**Table 5**

**Employment and Absolute Increase in Employment (in '000s) in Jobless and Job-losing Sectors, 1999-2000 to 2004-2005**

| Sector Code | Sectors | Employment | Absolute Increase in Employment |
|---|---|---|---|
| | | 2004-2005 | 1999-2000 to 2004-2005 |
| *Jobless Growth* | | | |
| 2.1 | Manufacturing | 6599.3 | 318.6 |
| 2.2 | Tobacco products | 449.9 | 0.6 |
| 2.3 | Paper and paper products | 138.1 | 0.7 |
| 2.4 | Refined petroleum products | 34.9 | 3.8 |
| *Job-losing Sectors* | | | |
| 2.5 | Non-metallic mineral products n.e.c. | 295.0 | -25.0 |
| 2.6 | Parts and accessories for motor vehicles and their engines | 100.8 | -26.9 |

Source: ASI, 1999-2000 and 2004-05

During the period 1999-2000 to 2004-05, 11 sectors (including sectors 3.1 to 3.11 in Table 6) were found to be *declining* sectors with negative growth rates of GVA and employment. Around 11,91,000 workers lost jobs in these sectors. Among these, sectors pertaining to other food products; and spinning, weaving and finishing of textiles continued to experience negative growth rates of output and employment even during the period 2004-05 to 2008-09 (Table 6).

There were 20 sectors (including sectors 4.1 to 4.20 in Table 7) that emerged as the *keys to the growth* of organised manufacturing employment during the period 2004-05 to 2008-09. Out of the above 11 sectors, which had registered a decline in employment during the period 1999-2004, four sectors (including sectors 4.3, 4.10, 4.13 and 4.16) experienced a turnaround and emerged as employment-generating sectors during the period 2004-05 to 2008-09. Together these 20 sectors contributed to an increase of around 50,20,000 workers (5 million).

**Table 6**

**Employment and Absolute Increase in Employment (in '000s) in the Declining Sectors, 1999-2000 to 2004-2005**

| Sector Code | Sectors | Employment | Absolute Increase in Employment, |
|---|---|---|---|
| | | 2004-2005 | 1999-2000 to 2004-2005 |
| *Declining Sectors* | | | |
| 3.1 | Other food products | 533.5 | -36.2 |
| 3.2 | Spinning, weaving and finishing of textiles | 849.4 | -118.5 |
| 3.3 | Other chemical products | 21.0 | -349.3 |
| 3.4 | Plastic products | 41.3 | -64.1 |
| 3.5 | Basic iron and steel | 78.8 | -252.2 |
| 3.6 | Other fabricated metal products; metal working service activities | 21.6 | -108.7 |
| 3.7 | General purpose machinery | 50.7 | -78.6 |
| 3.8 | Special purpose machinery | 38.7 | -100.1 |
| 3.9 | Electric motors, generators and transformers | 33.8 | -19.7 |
| 3.10 | Insulated wire and cable | 19.7 | -9.5 |
| 3.11 | Motor vehicles | 1.2 | -54.5 |

Source: ASI, 1999-2000 and 2004-05

**Table 7**

**Employment and Absolute Increase in Employment (in '000s) in the Employment-generating Sectors, 2004-05 to 2008-09**

| Sector Code | Sectors | Employment | Absolute Increase in Employment |
|---|---|---|---|
| | **Productive Employment Sectors** | 2008-2009 | 2004-2005 to 2008-2009 |
| | *Manufacturing* | 8776.7 | 2177.4 |
| 4.1 | Beverages | 126.1 | 53.0 |
| 4.2 | Man-made fibres | 182.8 | 94.0 |
| 4.3 | Basic iron and steel | 158.3 | 79.5 |
| 4.4 | Basic precious and non-ferrous metals | 242.3 | 158.8 |
| 4.5 | Structural metal products, tanks, reservoirs and steam generators | 238.0 | 98.7 |
| 4.6 | Dressing and dyeing of fur; manufacture of articles of fur | 265.3 | 264.3 |
| 4.7 | Tanning and dressing of leather, manufacture of luggage handbags, saddlers and harnesses | 617.3 | 575.4 |
| 4.8 | Saw milling and plaining of wood | 94.4 | 86.3 |

| | | | |
|---|---|---|---|
| 4.9 | Products of wood, cork, straw and plaiting materials | 429.6 | 399.7 |
| 4.10 | Other fabricated metal products; metal working service activities | 116.5 | 94.8 |
| 4.11 | Domestic appliances n.e.c. | 589.8 | 565.8 |
| 4.12 | Office, accounting and computing machinery | 466.9 | 453.0 |
| 4.13 | Electric motors, generators and transformers | 64.2 | 30.4 |
| 4.14 | Bodies (coach work) for motor vehicles; manufacture of trailers and semi-trailers | 114.6 | 113.9 |
| *Labour Productivity Declining Sectors* | | | |
| 4.15 | Paper and paper products | 937.8 | 799.7 |
| 4.16 | General purpose machinery | 215.4 | 164.7 |
| 4.17 | Publishing | 255.8 | 232.6 |
| 4.18 | Printing and service activities related to printing | 530.2 | 483.8 |
| 4.19 | Coke oven products | 147.1 | 122.0 |
| 4.20 | Electricity distribution and control apparatus | 165.0 | 150.1 |

Source: ASI, 2004-05 and 2008-09

The sector comprising non-metallic mineral products n.e.c. continued to remain a job-losing sector, alone accounting for job losses of around 2.6 lakh workers during the period 1999-2000 to 2008-09 (Table 8). In addition, the 15 declining sectors (including sectors 6.1 to 6.15 of Table 9) during the period 2004-05 to 2008-09, were responsible for around 37,77,000 (3.78 million) workers losing their jobs.

**Table 8**
**Employment and Absolute Increase in Employment (in '000s) in Jobless and Job-losing Sectors, 2004-2005 to 2008-2009**

| Sector Code | Sectors | Employment 2008-2009 | Absolute Increase in Employment |
|---|---|---|---|
| Job-losing Sectors | | | |
| 5.1 | Knitted and crocheted fabrics and articles | 83.0 | -53.6 |
| 5.2 | Non-metallic mineral products n.e.c. | 58.0 | -237.0 |

Source: ASI, 2004-05 and 2008-09

**Table 9**
**Employment and Absolute Increase in Employment (in '000s) in the Declining Sectors, 2004-2005 to 2008-2009**

| Sector Code | Sectors | Employment | Absolute Increase in Employment |
|---|---|---|---|
| | | 2008-2009 | 2004-2005 to 2008-2009 |
| *Declining Sectors* | | | |
| 6.1 | Production, processing and preservation of meat, fish, fruit, vegetables, oils and fats | 87.4 | -47.8 |
| 6.2 | Grain mill products, starches and starch products, and prepared animal feeds | 4.4 | -254.1 |
| 6.3 | Other food products | 0.9 | -532.6 |
| 6.4 | Tobacco products | 11.3 | -438.5 |
| 6.5 | Spinning, weaving and finishing of textiles. | 27.8 | -821.6 |
| 6.6 | Other textiles | 36.3 | -54.2 |
| 6.7 | Wearing apparel, except fur apparel | 70.7 | -315.9 |
| 6.8 | Footwear | 21.6 | -63.1 |
| 6.9 | Basic chemicals | 44.7 | -371.8 |
| 6.10 | Rubber products | 85.3 | -54.6 |
| 6.11 | Glass and glass products | 32.2 | -349.2 |
| 6.12 | Casting of metals | 20.0 | -140.2 |
| 6.13 | Television and radio transmitters and apparatus for line telephony and line telegraphy | 21.2 | -156.5 |
| 6.14 | Optical instruments and photographic equipment | 2.3 | -98.6 |
| 6.15 | Parts and accessories for motor vehicles and their engines | 22.4 | -78.4 |

Source: ASI, 2004-05 and 2008-09

### *(ii) Unorganised Manufacturing*

Unorganised manufacturing accounts for 85 per cent of the total manufacturing employment, but contributes to only 22 per cent of the output. Over the first half of the decade (2000-01 to 2005-06), the unorganised manufacturing sector witnessed job-losing growth, with 0.64 million workers losing their jobs. However, in the pool of 36 million workers in the unorganised manufacturing sector, this is a very small number, but signifies a positive trend if those workers are moving into the organised sector, which could well be the case in view of the growth in organised manufacturing.

Among the *employment-generating* sectors, five sectors (7.1 to 7.5) added around 6,86,000 workers. Of these sectors, 7.2 and 7.3 were declining sectors in organised manufacturing during the period 1999-2000 to 2004-05. The beverages sector has been an

employment-generating sector in terms of both organised as well as unorganised manufacturing, but the latter has seen labour productivity declining with growth (Table 10).

**Table 10**

**Employment in 2005-06 and Absolute Increase in Employment (in '000s) in the Employment-generating Sectors, 2000-01 to 2005-06**

| Sector Code | Sectors | Employment 2005-06 | Absolute Increase in Employment |
|---|---|---|---|
| | *Productive Employment Sectors* | | |
| 7.1 | Furniture | 895.3 | 170.4 |
| 7.2 | General purpose machinery | 164.5 | 39.4 |
| 7.3 | Other chemical products | 795.7 | 264.0 |
| *Labour Productivity Declining Sectors* | | | |
| 7.4 | Beverages | 584.1 | 116.6 |
| 7.5 | Paper and paper products | 347.6 | 95.7 |

Source: NSS, 2000-01 and 2005-06

Along with total unorganised manufacturing, other sub-sectors that have been *job-losing* are 8.1 to 8.6 (Table 11). These sectors were responsible for more than 15,13,000 (1.5 million) workers losing their jobs. Further, organised manufacturing in some of these sectors (spinning, weaving and finishing of textiles, and grain mill products) was also declining. The manufacture of non-metallic mineral products n.e.c. has been job-losing in both its organised and unorganised segments (Table 11).

**Table 11**

**Employment in 2005-06 and Absolute Increase in Employment (in '000s) in the Jobless and Job-losing Sectors, 2000-01 to 2005-06**

| Sector Code | Sectors | Employment 2005-06 | Absolute Increase in Employment |
|---|---|---|---|
| *Job-losing Sectors* | | | |
| 8.1 | Spinning, weaving and finishing of textiles | 3249.2 | -253.8 |
| 8.2 | Grain mill products | 2875.6 | -288.9 |
| 8.3 | Non-metallic mineral products n.e.c. | 2257.4 | -709.0 |
| 8.4 | Manufacturing n.e.c. | 2010.0 | -253.8 |
| 8.5 | Other fabricated metal products | 1094.0 | -8.3 |
| 8.6 | Total (all manufacturing including recycled products) | 36,442.8 | -639.2 |
| *Jobless Growth* | | | |
| 8.7 | Other food products | 2162.1 | 114.4 |

Source: NSS, 2000-01 and 2005-06

There were six sub-sectors (9.1 to 9.6 in Table 12) in unorganised manufacturing that were *declining*. During the period 2000-01 to 2005-06, these sectors experienced negative rates of growth of output and employment. Together these sectors accounted for 16,91,000 (1.69 million) job losses.

**Table 12**

**Employment in 2005-06 and Absolute Increase in Employment (in '000s) in the Declining Sectors, 2000-01 to 2005-06**

| Sector Code | Sectors | Employment 2005-06 | Absolute Increase in Employment |
|---|---|---|---|
| *Declining Sectors* | | | |
| 9.1 | Products of wood | 3875.1 | -1118.2 |
| 9.2 | Production, processing and preservation of meat, fish, fruit vegetables, oils and fats | 408.1 | -323.2 |
| 9.3 | Printing and service activities | 373.8 | -71.9 |
| 9.4 | Plastic products | 201.0 | -59.8 |
| 9.5 | Saw milling and plaining of wood | 183.9 | -43.9 |
| 9.6 | Other electrical equipment n.e.c. | 24.3 | -74.0 |

Source: NSS, 2000-01 and 2005-06.

There are differences in the way that the same industrial sector has performed in terms of employment during the same period, depending upon whether it is organised or unorganised. While products of wood; printing and service activities; saw milling and plaining of wood and other electrical equipment n.e.c. were declining sectors in unorganised manufacturing, these were seen to be generating employment in the organised manufacturing sector, which is a positive trend towards relatively 'decent work'. However, the production, processing and preservation of meat, fish, fruit vegetables, oils and fats; and plastic products are losing significance in both the organised as well as unorganised segments of manufacturing (Table 12).

## 3. Non-manufacturing Industry

While employment in services and in manufacturing had increased sharply during the first half of the decade, during the second half, employment in these sectors either increased slowly or declined. In contrast, employment in the non-manufacturing industry, especially construction, provided hope to the millions working in agriculture who wanted to leave agriculture in favour of employment in the non-agricultural sectors. Mining saw an increase in employment from 2.17 million to 2.64 million during the first half of the decade, and a further increase to 2.95 million during the second half. Construction saw an increase in employment

from 17.54 million to 26 million during the first half of the decade and a further increase to reach to 44 million in 2009-10.

The non-manufacturing industry accounts for a 12 per cent share in the industry sector for its contribution to GDP (together with the share of manufacturing in GDP of 15 per cent, the total contribution of industry to GDP is 27 per cent). Mining, electricity, gas and water supply, and construction constitute the non-manufacturing sectors. These are largely labour-intensive sectors showing employment growth. Within the non-manufacturing sector, while the organised segment contributes 69 per cent to GVA, its share in employment is 31 per cent.

The organised non-manufacturing sector provides employment to 93 lakh (9.3 million) workers. During the period 1999-2000 to 2004-05, this sector witnessed very high rates of growth of employment, resulting in high employment intensity of output growth. It has shown an increase in employment by over 23,65,000 workers, of which, 17,33,000 are accounted for by construction alone (Table 13). However, this increase in employment has been labour productivity declining, having an EE that is greater than 1.

**Table 13**

**Employment and Absolute Increase of Employment (in '000s) in the Labour-intensive Sectors, 1999-2000 to 2004-2005**

| Sector Code | Sectors | Employment | Absolute Increase in Employment |
|---|---|---|---|
| | | 2004-2005 | 1999-2000 to 2004-2005 |
| *Labour-intensive Growth (Productive Employment)* | | | |
| 10.1 | Mining | 1747.9 | 457.2 |
| 10.2 | Electricity, gas and water supply | 1214.6 | 175.0 |
| *Labour Intensive Growth (Productivity Decline)* | | | |
| 10.3 | Construction | 6353.1 | 1733.2 |
| 10.4 | Total organised non-manufacturing | 9315.5 | 2365.4 |

Source: NSS, 1999-2000 and 2004-2005.

The share of construction in the unorganised non-manufacturing sector is quite large. As compared to a two-thirds share of organised sector employment in non-manufacturing, the unorganised segment in construction accounts for 95 per cent of the workforce. Almost the entire quantum of increase in the workforce in the unorganised non-manufacturing sector was due to an increase in the number of construction workers, which stood at around 67,48,000 (6.75 million)

workers (Table 14). Again, this labour-intensive growth has not contributed to an increase in labour productivity, but has rather seen an EE that is greater than 1.

Organised mining (which is an export-oriented sector), and electricity, gas and water supply were also employment-generating sectors during the period 1999-2000 to 2004-05, in this case, providing productive employment (an EE of less than 1) to around 6,32,000 workers (Table 13).

However, in the unorganised segments, mining has seen a negative growth of GVA. The electricity, gas and water supply sector has been losing significance, registering negative growth rates of GVA and employment during the period 1999-2000 to 2004-05. This is a positive trend, given the fact that the organised segments showed an increase in productive employment during the same time-period (Table 14).

**Table 14**

**Employment and Absolute Increase of Employment (in '000s) in Unorganised Non-manufacturing, 1999-2000 and 2004-05**

| Sector Code | Sectors | Employment | Absolute Increase in Employment |
|---|---|---|---|
| | | **2004-2005** | **1999-2000 to 2004-2005** |
| 11.1 | Mining | 890.0 | 9.7 |
| *Declining* | | | |
| 11.2 | Electricity gas | 85.7 | -9.1 |
| *Labour-intensive Growth (Productivity Decline)* | | | |
| 11.3 | Construction | 19665.0 | 6748.2 |

Source: NSS, 1999-2000 and 2004-2005.

## 4. The Services Sector

The NSS 2009-10 data on employment indicate that during the latter half of the decade, when manufacturing employment, including both organised and unorganised, was declining, the organised segment of services continued to see a growth in employment. However, the unorganised segment of services saw a fall in employment from 81.7 million to 80 million during the latter half of the decade. More than half of this decline in the unorganised segment of employment in services was accounted for by the decline in employment in wholesale and retail trade, which is perhaps a reflection of the overall fall in economic activity in the aftermath of the downturn of the Indian economy after the global economic crisis.

The share of services in India's GDP at factor cost increased from 30.5 per cent in 1950-51 to 55.2 per cent in 2009-10. The high growth rate achieved by India in recent years has been primarily driven by the growth of the services sectors. For instance, the compound annual growth rate (CAGR) of GDP increased from 5.7 per cent in the 1990s to 8.6 per cent during the period 2004-05 to 2009-10, which is largely due to the acceleration of the CAGR in the services sector from 7.5 per cent in the 1990s to 10.3 per cent during the period 2004-05 to 2009-10 (Ministry of Finance, *Economic Survey*, *2010-11*). The growth of the services sector was significantly faster than the growth rate of 6.6 per cent for the annual output growth of the combined agriculture and industry sectors during the same period.

The tertiary sector has been the leading sector of growth in the Indian economy in recent decades, in terms of both output and employment. The EE in the sector as a whole during the post-reform period (1993-2000) has been 50 per cent higher than that in the manufacturing sector. However, earnings in the tertiary sector vary in different parts of the distribution relative to earnings in the other sectors, particularly manufacturing. 'Dualism' in terms of the gap between low and high earners in services is high and is higher in the latter than in the manufacturing sector (Mazumdar and Sarkar, 2004). However, this has also led to speculation because India has not followed the standard growth path experienced by other developed countries. India has jumped from a predominantly agricultural to a directly service-dominated economy, by-passing the intermediate growth stage of the rising share of the industrial sector. Others raise doubts about the sustainability of growth in the services sector without the concurrent growth of the real (or commodity-producing) sectors of agriculture and industry (Tendulkar, 2007).

Nevertheless, given the high share and growth rate of the services sector, its contribution to employment generation is critical for addressing the problem of joblessness. The share of services in employment has been increasing over the years. For instance, in terms of the Usual Principal and Subsidiary Status (UPSS), services sector employment accounted for 21.2 per cent (with the share of agriculture being 64.5 per cent) in 1993-94, and the share increased up to 25.5 per cent (with the share of agriculture being 15.9 per cent) by 2007-08 (Ministry of Finance, *Economic Survey, 2010-11*). In this backdrop, the performance of the services sector (organised services for the period 1999-2000 to 2004-05, and unorganised services for the period 2001-02 to 2006-07) with regard to output (gross value added), employment and the resultant EE is discussed in the following section.

## V. FRAMEWORK FOR EMPLOYMENT GENERATION

### 1. Organised Services

#### *(i) Employment-generating Sectors*

Overall, organised services generated productive employment in the economy but with a low EE. The organised services sector employed about 31.1 million workers in 2004-05, registering an increase of about 2.5 million workers from 1999-2000. The CAGR of GVA in the organised services sector during the period 1999-2000 to 2004-05 was 7.3 per cent, whereas employment registered a growth rate of 1.7 per cent during the same period. The EE of this sector is 0.2, which is quite low. What is important is that there are 13 sectors (12.1 to 12.13) that generated employment within organised services for 9.3 million workers. These sectors, which registered positive employment growth with an increase in productive employment, are as follows: hotels; computer and related activities; telecommunications; freight transport by motor vehicles; trade, banking, finance; supporting and auxiliary transport activities; and monetary intermediation (Table 15). For the period 1999-2000 to 2004-05, labour productivity measured as the GVA per worker increased by Rs. 30,184 for the hotel sector, by Rs. 1,54,222 for computer and related activities, by Rs. 74,908 for telecommunications, by Rs. 86,815 for freight transport by motor vehicles, by Rs. 1,64,390 for trade, banking and finance, by Rs. 1,00,801 for supporting and auxiliary transport activities, and by Rs. 33,803 for monetary intermediation.

**Table 15**
**Employment and Absolute Increase in Employment (in '000s)**
**in the Employment-generating Sectors 1999-2000 to 2004-2005**

| Sector Code | Sectors | Employment | Absolute Increase in Employment |
|---|---|---|---|
| | *Productive Employment Sectors* | *2004-2005* | *1999-2000 to 2004-2005* |
| 12.1 | Hotels | 810.2 | 269.8 |
| 12.2 | Computer and related activities | 583.8 | 388.0 |
| 12.3 | Telecommunications | 580.8 | 188.1 |
| 12.4 | Freight transport by motor vehicles | 625.5 | 76.8 |
| 12.5 | Trade, banking, finance | 4232.2 | 140.3 |
| 12.6 | Supporting and auxiliary transport activities | 194.9 | 15.2 |
| 12.7 | Monetary intermediation | 1759.8 | 330.0 |
| 12.8 | Other services | 26,048.3 | 2106.4 |
| 12.9 | Total organised services | 31,090.7 | 2516.5 |

| | | | |
|---|---|---|---|
| | *Labour Productivity Declining Sectors* | | |
| 12.10 | Financial intermediation, except insurance and pension funding | 2300.0 | 539.1 |
| 12.11 | Research and development | 519.4 | 227.9 |
| | Education | 8292.7 | 2163.8 |
| 12.12 | Activities of membership organisations n.e.c. | 786.6 | 291.7 |
| 12.13 | Recreational, cultural and sporting activities | 326.0 | 80.5 |

Source: NSS, 1999-2000 and 2004-2005

***(ii) Jobless and Job-losing Sectors***

Within organised services, there are two sectors for which even if the GVA is growing, employment is declining. These two sectors are public administration, defence and compulsory social security; and other scheduled passenger land transport. Both these sectors witnessed a decline in their share in both employment and GVA during the period 1999-2000 to 2004-05. However, this should be interpreted carefully as they increased their labour productivity. For public administration, defence and compulsory social security, labour productivity increased by Rs. 48,540, while for other scheduled passenger land transport, labour productivity increased by Rs. 80,274 during the period 1999-2000 to 2004-05. What is striking is that these two sectors accounted for about 31 per cent of the employment in organised services (Table 16).

**Table 16**
**Employment and Absolute Increase in Employment (in '000s) in the Jobless and Job-losing Sectors, 1999-2000 to 2004-2005**

| **Sector Code** | **Sectors** | **Employment** | **Absolute Increase in Employment** |
|---|---|---|---|
| | *Job-losing Sector***s** | *2004-2005* | *1999-2000 to – 2004-2005* |
| 13.1 | Public administration and defence; compulsory social security | 8758.3 | -917.5 |
| 13.2 | Other scheduled passenger land transport | 754.8 | -50.5 |

Source: NSS, 1999-2000 and 2004-2005

***(iii) Declining Sectors:*** The two sectors for which both GVA and employment declined are retail trade, except of motor vehicles and motorcycles; and funeral and related activities. Both these sectors lost about one million jobs (Table 17). However, these two sectors registered an increase in labour productivity. While for retail trade, except of motor vehicles and motorcycles, labour productivity increased by Rs. 31,818, for funeral and related activities, it increased by Rs. 1,56,783.

**Table 17**

**Employment and Absolute Increase in Employment (in '000s) in the Declining Sectors, 1999-2000 to 2004-2005**

| Sector Code | Sectors | Employment | Absolute Increase in Employment |
|---|---|---|---|
| | *Declining Sectors* | *2004-2005* | *1999-2000 to 2004-2005* |
| 14.1 | Retail trade, except of motor vehicles and motorcycles | 886.6 | -632.9 |
| 14.2 | Funeral and related activities | 62.0 | -418.9 |

Source: NSS, 1999-2000 and 2004-2005

## 2. Unorganised Services

The unorganised sector is a significant part of the Indian economy. The unorganised services sector provides jobs to more than 27.7 million people, most of them in rural areas. In recent years, there has been a tremendous increase in GVA with the unorganised services sector growing by 12.75 per cent. However, the CAGR of employment is only 0.7 per cent and this sector added only 1.1 million jobs during the period 2001-02 to 2006-07 (Table 18). This resulted in jobless growth in this sector. However, during the period 1983-84 to 1991-92, the employment growth rate was 7.49 per cent.[4] However, the jobless growth in the new millennium is a matter of concern as unorganised service is mostly a rural phenomenon. Further, the EE stood at 0.06, or close to zero, making matters worse.

*Sectors Generating Productive Employment*

There are six sectors (15.1 to 15.6 in Table 18) within unorganised service *generating productive employment*, which together accounted for about 16 per cent of unorganised service employment and 43.6 per cent of the GVA. It must be noted that all these six sectors registered an increase in the share of both GVA and employment during the period 2001-02 to 2006-07.

[4] See http://planningcommission.nic.in/reports/sereport/ser/index.php?state=stdy_rstruc.htm

**Table 18**

**Employment and Absolute Increase in Employment (in '000s) in the Employment-generating Sectors, 2001-02 to 2006-07**

| Sector Code | Sectors | Employment 2006-07 | Absolute Increase in Employment |
|---|---|---|---|
| | *Productive Employment Sectors* | | |
| 15.1 | Telecommunications | 2521.8 | 1514.1 |
| 15.2 | Software publishing, consultancy and supply | 538.3 | 460.1 |
| 15.3 | Hotels | 440.7 | 125.5 |
| 15.4 | Supporting and auxiliary transport activities | 399.0 | 119.5 |
| 15.5 | Activities of other membership organisations | 414.3 | 354.6 |
| 15.6 | Post and courier activities | 143.5 | 66.3 |

Source: NSS, 2001-02 and 2006-07

Together, the six sectors listed in Table 18 employed about 4.5 million workers in 2006-07, and added about 2.6 million workers during the period 2001-02 to 2006-07. Out of these 2.6 million workers, 1.5 million workers were added by the telecommunications sector alone. This was followed by the software publishing, consultancy and supply sector, which employed 0.5 million workers in 2006-07 and added 0.4 million workers. Among these six sectors, the post and courier activities sector employed the lowest number of workers (0.1 million), and also added the lowest number of workers (0.06 million) during the period under study (Table 18).

The compound annual growth rates of both GVA and employment were the highest for the software publishing, consultancy and supply sector among the six productive employment-generating sectors. The GVA growth rates for all the six sectors were more than 20 per cent, signifying a phenomenal achievement, when the GVA of the unorganised service sector was growing at a rate of 12.75 per cent. Among the productive employment-generating sectors, the two sectors recording an employment growth rate of more than 35 per cent were software publishing, consultancy and supply; and activities of other membership organizations, while the two sectors recording a more than 10 per cent employment growth rate were telecommunications; and post and courier activities, and the two sectors recording employment growth rates of above 5 per cent were hotels; and supporting and auxiliary transport activities. Given the fact that the overall unorganised services employment is growing merely at a rate of 0.7 per cent, the performance of the sectors listed above in generating employment within the unorganised services segment is quite notable.

***(i) Jobless and Job-losing Sectors***

There were two jobless growth sectors (16.8 and 16.9) and seven job-losing sectors (16.1 to and 16.7) in the unorganised services segment during the period 2001-02 to 2006-07 (Table 19). Together, these nine sectors contributed 50.3 per cent of the GVA in 2001-02, which came down to 36.3 per cent of unorganised services but the employment share remained at 54 per cent.

**Table 19**

**Employment and Absolute Increase in Employment (in '000s) in the Jobless and Job-losing Sectors, 2001-02 to 2006-07**

| Sector Code | Sectors | Employment 2006-07 | Absolute Increase in Employment |
|---|---|---|---|
| | *Job-losing Sectors* | | |
| 16.1 | Restaurants, bars and canteens | 4693.1 | -81.1 |
| 16.2 | Other service activities | 3755.6 | -392.3 |
| 16.3 | Human health activities | 2004.5 | -44.8 |
| 16.4 | Primary education | 1292.6 | -106.9 |
| 16.5 | Other education | 1062.6 | -27.1 |
| 16.6 | Motion picture, radio, television and other entertainment activities | 626.5 | -94.7 |
| 16.7 | Legal, accounting, book-keeping and auditing activities | 458.1 | -76.9 |
| | *Jobless Growth* | | |
| 16.8 | Business activities n.e.c. | 665.6 | 82.1 |
| 16.9 | Higher education | 283.3 | 29.4 |
| 16.10 | Total (all unorganised services) | 27,665.0 | 1122.5 |

Source: NSS, 2001-02 and 2006-07

Together, the seven job-losing sectors (16.1 to 16.7) employed about 13.9 million workers in 2006-07 and they lost 0.8 million jobs during the period 2001-02 to 2006-07. The two jobless growth sectors of higher education; and business activities accounted for about 1 million workers in the unorganised services segment, and added only 0.11 million workers. Out of these two sectors, the higher education sector employed about 0.3 million workers in 2006-07 and added only 0.03 million workers during the period under study (Table 19).

***(ii) Declining Sectors***

Sectors such as other land transport; secondary/senior secondary education; renting of personal and household goods n.e.c.; and sporting and other recreational activities recorded

negative growth in both GVA and employment, with an EE that is greater than 1. Together, these four sectors employed 7.3 million works in 2006-07, that is, 1.1 million workers less than those employed in 2001-02 (Table 20). In absolute numbers, the highest decline in the number of workers occurred in the other land transport sector (at 0.6 million, that is, accounting for more than 50 per cent of the total decline in all the four sectors).

**Table 20**

**Employment and Absolute Increase in Employment (in '000s) in the Declining Sectors, 2001-02 to 2006-07**

| Sector Code | Sectors | Employment 2006-07 | Absolute Increase in Employment |
|---|---|---|---|
| | *Declining Sectors* | | |
| 17.1 | Other land transport | 5267.9 | -630.7 |
| 17.2 | Secondary/senior secondary education | 1235.4 | -225.8 |
| 17.3 | Renting of personal and household goods n.e.c. | 672.9 | -71.0 |
| 17.4 | Sporting and other recreational activities | 113.7 | -197.3 |

Source: NSS, 2001-02 and 2006-07

## VI. CONCLUSIONS AND POLICY IMPLICATIONS

In any economy, the work created should be: (a) decent, and (b) productive. In an economy which is suffering from an unemployment rate of 6.6 per cent as per the Current Daily Status (CDS) definition (2009-10), an increase in employment may not always and simultaneously increase labour productivity. Increasing labour productivity almost necessitates a shift of employment from low-productivity agriculture to the secondary and tertiary sectors; and from the low-productivity unorganised to the organised sectors.

There has been a shift in both types in employment (from agriculture to non-agriculture and from the unorganised to organised sectors within non-agriculture) in terms of both the absolute level and the percentage share of non-agricultural employment in the 2000s. Most of the shift of labour in both types of employment has been due to a rise in informal employment, that is, employment without any social protection. What is notable is that the share of formal employment in the organised sector has been falling continuously, and this is matched by a corresponding increase in informal employment in the organised sector.

However, a very critical issue that we have highlighted in this paper relates to the definition of the services sector in Indian data on employment. The way in which services are defined does not enable us to clearly distinguish between the organised and unorganised

segments of the services activity. If we cannot distinguish between these two segments in the employment data, it is difficult to formulate policies to promote employment in the specific services sectors. Therefore, this conceptual confusion between the organised and unorganised parts of the services sectors needs to be addressed by the National Statistical Commission.

Another issue that has policy implications concerns the varying definition of organised manufacturing, depending upon whether the source of information is the ASI, the CSO or the NSS. Apart from the definition, the estimates for organised and unorganised workers, especially in the services sectors, are different depending on whether they are based on enterprise surveys or household employment–unemployment surveys. These varying definitions and the lack of well-defined data sources for organised services are not helpful from a policy-making perspective.

The empirical analysis over the period 1999-2000 to 2008-09 indicates that there is no universal link between the rates of growth of output and employment captured through the EE. On the basis of the data taken from the ASI, we found that while total *organised manufacturing* witnessed jobless growth during the period 1999-2000 to 2004-05, it emerged as a productive employment-generating sector over the period 2004-05 to 2008-09. As compared to an addition of around 3 lakh workers during the first half of the decade, more than 21 lakh workers found employment in the organised manufacturing sector the period during 2004-05 to 2008-09 (based on ASI data).

Over the first half of the decade (2000-01 to 2005-06), the *unorganised manufacturing* sector witnessed *job-losing* growth with 0.64 million workers losing their jobs. However, in the pool of 36 million workers in unorganised manufacturing, this is a very small number, but it can be treated as a positive trend if these unorganised sector workers are moving into the organised sector, which could well be the case in view of the growth in the organised manufacturing and services sectors.

The organised non-manufacturing sector provides employment to 93 lakh (9.3 million) workers. During the period 1999-2000 to 2004-05, the organised non-manufacturing sector witnessed very high rates of growth of employment, resulting in high employment intensity of output growth. This sector also showed an increase in employment by over 23,65,000 workers, of which, 17,33,000 are accounted for by construction alone. In addition, the unorganised construction segment added another 6.7 million workers. However, these increases in employment have

resulted in declining labour productivity, with these sectors demonstrating an EE that is greater than one.

The tertiary sector has recorded leading growth in the Indian economy in recent decades, in terms of both output and employment. Overall the *organised service* segment generated productive employment in the economy, providing employment to about 31.1 million workers in 2004-05, and registering an increase of about 2.5 million workers from 1999-2000.

The *unorganised service sector* provides jobs to more than 27.7 million people, most of them in rural areas. In recent years, the unorganised service sector has recorded a tremendous increase in GVA. However, the compound annual growth rate of employment in this sector is only 0.7 per cent, signifying an addition of only 1.1 million jobs during the period 2001-02 to 2006-07. This resulted in jobless growth in this sector.

We classified the non-agricultural sectors into those which were: (a) employment-generating, (b) jobless growth or job-losing sectors with growth, and (c) declining sectors, in terms of both output and employment. Policy-makers need to adopt a disaggregated approach for addressing the problems facing any sector, depending upon the category to which the particular sector belongs. Thus, the employment-generating sectors deserve promotion through actions supporting technology upgradation, credit, marketing support and design support. However, the job-losing sectors that are experiencing growth in GVA would need a combination of similar promotive policies, but need to be supplemented by social protection and safety nets for those losing jobs in such sectors. Finally, the declining sectors would not only need policy measures to provide them with a safety net (for example, social insurance and social assistance), but also some degree of re-training for employees losing jobs so that they can get re-employment in the sectors where output and employment are still increasing.

Labour is an abundant factor in the Indian economy, and theoretically, it should be possible for India to adopt the path that the successful East Asian exporters followed from the early 1970s onwards, that is, engaging in labour-intensive manufacturing exports, which enabled them to absorb surplus labour from agriculture, raise wages throughout the economy, and increase overall productivity. To some extent, India has followed a similar path in that its export to GDP ratio increased from around 10 per cent of the GDP in the early 1990s (1995-96) to around 16 per cent in 2008-2009 (Ministry of Finance, 2011). It went up further to 22 per cent of the GDP in 2010-11 (Planning Commission, 2011), and may well be 28 per cent of GDP in 2011-12.

While it is true that the export to GDP ratio in India has increased, the commodity composition of India's exports has not been such as to absorb labour as much, especially not on the scale required in a labour-abundant economy, whose comparative advantage should lie in low-wage, labour-absorbing exports of manufacturing and services. The analysis in Section V shows that there are a number of sectors in the organised manufacturing segment that have generated significant *productive* employment, including office, accounting and computing machinery; basic iron and steel; man-made fibres; tanning and dressing of leather, and manufacture of luggage and handbags, some of which are exportables. These sectors deserve support from the Government.

Overall, there is no doubt that many items of export are relatively labour-intensive, including gems and jewellery, leather, handicrafts, and handlooms. Yet, the evaluation of the commodity composition of India's export suggests that a significant share in increased exports is accounted for by refined petroleum products and unprocessed commodities in the raw form. Also, most of the export-oriented sector activities in India are undertaken in unorganised clusters, which clearly need support from the Government.

In late 2008, when the global financial and economic crises broke, India's exports in the employment-intensive sectors (for example, textile and garments, leather and footwear, gems and jewellery, and handicrafts) suffered. Surveys conducted by the Labour Bureau (Ministry of Labour) over the year 2009-2010 suggested that employment in these sectors fell by half a million. As expected, the major impact in these sectors was felt by export-oriented units but interestingly, in the non-export units, employment actually increased. It was also noticeable that the metals and auto sectors were offering more contractual jobs, and fewer long-term positions. As the Indian economy gets more globally integrated, such external shocks would become more common. The good news was that employment did not decline in the export-oriented sectors in India as much as they did in China; in the latter, there was a fall in employment amounting to the loss of 20 million jobs. The further good news was that in India, domestic demand and consumption did substitute for external demand in the same product areas, and the units manufacturing these products for exports did not close down on account of sustained demand from the domestic market. Domestic demand was sustained in India because of fiscal stimuli between late 2008 and mid-2009 by the Central Government (Mehrotra, 2010).

The lesson from the global economic crisis and its impact on employment in India during the period 2008 to 2010 is that domestic consumption needs to be sustained. Also, given the tough competition from Chinese manufacturers, it is imperative to encourage India's domestic manufacturing activity in order to sustain demand. Growing investments constitute a pre-requisite for sustaining organised (and unorganised) sector employment outside of agriculture. Clearly, the rising rate of interest prevailing through much of 2011 and 2012 has become a constraint on investment. Thus, given the limited fiscal space available to the Government since the fiscal stimuli to the economy after 2008, there is a need for a nuanced policy approach to achieve employment growth by boosting domestic consumption during the Twelfth Plan.

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