



**Working Paper  
21**

**Dynamics of Change in the  
Employment and Enterprise  
Structure of Gujarat**

**Niti Mehta**  
January 2016



**Sardar Patel Institute  
of Economic &  
Social Research**  
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## **Abbreviations**

EC	Economic Census
Estb.	Establishments
FIRE	Financial Services, Insurance, Real Estate and Business Services
GoG	Government of Gujarat
NIC	National Industrial Classification
NSDP	Net State Domestic Product
NSSO	National Sample Survey Office
OAE	Own Account Enterprises
UPSS	Usual (Primary & Subsidiary) Status
WPR	Worker Participation Rates



## **Dynamics of Change in the Employment and Enterprise Structure of Gujarat**

**Niti Mehta \***

### **Abstract**

There have been dramatic shifts in the rural and urban composition of workforce in Gujarat. The annual growth rate of non-farm employment has shown significant acceleration since 1990s. Given the important role that the unorganised sector plays in sustaining this growth it is essential to view the relative buoyancy of employment generation in the rural unorganised sector activities. Further, the loss of jobs in some industries and gains experienced by others generally show considerable spatial variations. Several industries are possibly shifting from rural to urban locations and may also be undergoing changes related to their size. In order to study such trends, the paper by using Economic Census and Enterprise Survey data (1998 to 2011-12) has made an attempt to identify the dynamic industries in the non-agricultural sector for Gujarat. Apparently, these activities are important for absorbing non-agricultural workforce in rural areas of the state. The study has relevance in the realm of devising support policies for infrastructure, power, credit, technology etc. in order to strengthen the base of the rural unorganised activities that are possibly gaining jobs.

**Key words:** Non-agricultural employment, Unorganised enterprises, Workforce composition, Employment data, Gujarat

**JEL Classification:** E24, E26, J100, J21, L16, R12

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## **Dynamics of Change in the Employment and Enterprise Structure of Gujarat**

### **Introduction**

An examination of the sectoral workforce estimates derived from the NSSO work participation rates (UPSS) shows that non-farm employment share in the total economy has shown a steady rise, from 36 per cent (1993-94) to 52.5 per cent (2011-12). The annual growth rate of non-farm employment showed significant acceleration in 2000s decade (from 0.9 per cent in the 1990s decade) to 3.8 per cent (1999-2000 to 2004-05) and nearly 5.6 per cent from 2004-05 to 2011-12. Given the important role that the unorganised sector plays in sustaining this growth it is essential to view the relative buoyancy of employment generation in the rural unorganised sector activities. Such activities are likely to show regional contrasts in performance as these are rooted to the resource endowments and the locational features. The unorganised activities in the non-agricultural economy are amorphous in nature and subject to rapid changes that occur due to high mobility or morbidity of smaller units and also on account of birth of new units. The loss of jobs in some industries and gains experienced by others generally show considerable spatial variations. Further given the fast pace of urbanisation many industries are possibly shifting from rural to urban locations and may also be undergoing changes related to their size.

Given the above, in this paper we use the methodology developed earlier (Mehta and Kashyap, 2002) for studying the dynamic sectors in terms of numbers and employment across locations and update for the recent decades. This kind of examination of emerging/dynamic activities has importance in the realm of devising support policies for infrastructure, power, credit, technology etc. in order to strengthen the base of the rural unorganised activities that are possibly gaining jobs. Also, as the unorganised sector of the economy continues to absorb a disproportionate share of the non- agricultural workers.

Dynamic activities can be identified on the basis of labour productivity, output levels or the employment growth. We have tried to arrive at such sectors based on the share

of employment, by comparing the information available from Economic Census (EC) for 1998 and 2005 for Gujarat. While our analysis is limited to the one-digit level of National Industrial Classification and covers only the broad activities within the non-agricultural sector, such employment accounting using database furnished by EC can also be used to study the situation for states and districts. It needs clarification at this juncture that with the launch of the EC, information on workers available from the decennial census became highly aggregated as the non-farm workers are clubbed under “other workers”. The information on the census household industry workers also does not tell much about the nature of jobs. The activity wise details of employment from the NSSO though detailed and robust, do not throw light on size of enterprises, extent of hired workers and other techno-economic characteristics with state and sectoral disaggregation. Such information on enterprises is available from the EC and the follow up Enterprise Surveys. However, in the EC the number of workers engaged in non-agricultural enterprises at the aggregate level is nearly 29 per cent less than that enumerated by the Population Census. This difference is enormous and could be because the EC excludes home based workers.

For the more recent situation we have relied on the all-India survey of unincorporated non-agricultural enterprises in manufacturing, trade and other service sector (excluding construction) conducted by the NSS (67<sup>th</sup> Round, 2010-11), which gives economic and operational characteristics of enterprises. The survey categorises non-agricultural activities as manufacturing and trading sectors. The remaining enterprises have been clubbed in “other service sector”, but exclude mining and quarrying, utilities, construction, public administration, and personal services. The present analysis thus has been conducted given these anomalies.

In the next section we trace the overall employment scenario in Gujarat. In the subsequent sections an attempt is made to identify the activities that: i) have an important share in the total non-agricultural employment, ii) have experienced growth over time, iii) are experiencing locational shifts (between rural and urban

areas) and iv) are experiencing size substitution. The share of activity groups in the net domestic product has been examined next together with the changes over time. The last section draws conclusions and policy inferences.

### *Overall Scenario*

We look at certain aggregate insights from different employment related data sources for Gujarat.

i) Gujarat has experienced a falling share of the primary sector in the Net State Domestic Product (NSDP) from 23.7 per cent in 1993-94 to 14.7 per cent in 2013-14. The non-primary sectors have recorded high growth rates from 1980-81 onwards. These developments have led to a growth accelerating impact on the state economy.

ii) Within the secondary sector, manufacturing and construction output have shown positive and significant growth acceleration in the 2000s decade (at 12 and 14 % per annum respectively). Transport and trade sectors within the tertiary sector have also shown growth acceleration.

iii) Unlike the previous decade, the high growth of non-primary sector during 2001-2011 led to commensurate high level of urbanisation (42.5 %), with urban population showing a growth of 36 per cent. From 2001-2011 the concentration of population in class 1 cities has risen from 68 to 72 per cent of the total urban population. As revealed by the census 2011 data the annual growth of population in class 1 cities is lowest at 4 percent. The drivers of urbanisation are class 6,5, and 4 towns that are growing at annual rates of 5.1, 9.8 and 5.3 per cent respectively. national figure (12 percentage point reduction).

iv) Other notable feature of the Gujarat economy in this period is that unlike the scenario in the last decade, growth of workforce (1.5 per cent per annum) has been lower than the population growth rate (1.8 per cent per annum). In rural Gujarat this has resulted in rural poverty reduction (by 17.6 percentage points from 2004-05 to 2011-12) which is marginally better than the national average (16.7 percentage points). The reduction in urban poverty is slower (by 10 percentage points), and

lower than the national figure (12 percentage point reduction).

v) The other feature is the large number of rural residents that commute to work in urban areas, particularly in the more urbanised states (Chandrashekar, 2011) and working primarily in construction, manufacturing and trade related activities. Gujarat and Maharashtra account for 11 per cent of such workers who live in rural areas but are working in urban centres. From NSSO (2009-10) employment data, it can be seen that in Gujarat 10.3 per cent of rural residents report urban as their place of work.

The scenario presented above is mixed and throws a challenge for generating adequate livelihood opportunities for the workers in the rural areas. The growing importance of smaller settlements demands timely action to ensure delivery of services and jobs for the workers diversifying out of the primary sector. The nature of economic transition will be further crystallized once we view the changes in workforce composition.

#### *Workforce Composition*

A look at the trends in employment, based on the census population tables for 2001 to 2011 establishes certain notable features. In the last decade the rural areas in the state witnessed a falling share in the total workforce. This dramatic shift in the rural and urban composition of workforce is undoubtedly led by processes of urbanisation, industrialisation and a robust agriculture. It is seen that the participation of marginal workers in rural areas has fallen from 12 per cent to 10.6 per cent. The proportion of main workers in rural areas declined more steeply (65 to 58%), leading to the fall in the total workers (by 8 per cent points), that was also quite noteworthy (change from 3.4 per cent point recorded in last decade). The visibility of urban ward shift is rather stark from the fact that while in absolute terms a total of 0.6 million workers were added in rural areas (all in the category of main workers, as the rural marginal workers declined), in urban areas the increase was by 3 million. The urban marginal work participation rates doubled (from 1.8 to 2.8%), also doubling the share of marginal urban workers over 2001. In absolute terms in urban areas the additions

were more pronounced in the category of main workers (by 2.6 million), i.e. 88 per cent of the incremental workers in urban areas were main workers.

**Table 1. Changes in workforce composition, 2001 and 2011, Gujarat**

(in thousand)

Particulars	Rural		Urban		Total	
	2001	2011	2001	2011	2001	2011
Main Workers	11114	11878	5904	8487	17018	20365
<i>% to total</i>	(65.3)	(58.3)	(34.7)	(41.7)	(100.0)	(100.0)
Marginal Workers	3879	3692	348	710	4227	4402
<i>% to total</i>	(91.8)	(83.9)	(8.2)	(16.1)	(100.0)	(100.0)
All Workers	14993	15570	6252	9197	21245	24767
<i>% to total</i>	(70.6)	(62.9)	(29.4)	(37.1)	(100.0)	(100.0)

Source: Census of India, 2001 and 2011.

The work participation rates (WPR) for the rural male main workers did not show much change (increase by 1.1 percentage point). In urban areas however it doubled (1.6 to 3%), together with steep increase in the urban male participation rate (54 to 57%). The work participation rates for rural female, both main and marginal declined; the latter more steeply. Urban female participation rates in both categories increased somewhat. Chand and Srivastava (2014), using NSSO data show that rural workforce participation rates at the all India level for both males and females declined between 1993-94 to 2009-10, more steeply for females (by 6.7 percentage points). Using census (2001,2011) data Kasturi (2015) also show that in rural areas WPR declined for both males and females, but increased in urban areas, significantly for urban females.

Census distribution of main workers for 2001 and 2011 show that agricultural workers (cultivators and labourers) increased by 6.1 percentage points. The share of agricultural labourers swelled to 35 per cent (increase of 9 percentage points), pointing towards rising landlessness in rural Gujarat. While detailed breakup

**Table 2. Work participation rates, 2001 and 2011**

(per cent)

<i>Particulars</i>	2001			2011		
	Male	Female	Total	Male	Female	Total
Main Worker						
Rural	50.3	18.8	35.0	51.4	16.2	34.2
Urban	52.3	7.1	31.2	54.2	8.8	33.0
Total	51.1	14.6	33.6	52.6	13.1	33.7
Marginal Worker						
Rural	5.1	19.7	12.2	5.8	15.8	10.6
Urban	1.6	2.2	1.8	2.9	2.5	2.8
Total	3.8	13.3	8.3	4.6	10.3	7.3
Total Worker						
Rural	55.5	38.5	47.2	57.1	32.0	44.9
Urban	53.9	9.3	33.0	57.2	11.3	35.7
Total	54.9	27.9	41.9	57.2	23.4	41.0

Source: Census of India, 2001 and 2011.

of occupational categories is not given in the census, evidence provided by the EC (1998, 2005) suggests that employment in livestock, forestry, hunting, fisheries etc. recorded gains by nearly 0.3 million workers in rural Gujarat. Despite the under-enumeration of workers in the EC, apparently 1.3 million workers in the allied sector comprise around 8.4 per cent of the total rural workers in 2011. Employment in rural household industries sector, already miniscule has recorded further decline. Workers engaged in other non-farm jobs in the rural areas have also shrunk (by 5.4 percentage points), hinting at lack of jobs other than in the primary sectors.

Examination of industry-wise data generated by various rounds of NSSO Employment and Unemployment surveys (UPSS) for Gujarat also gives insight into the changes over time. Up to 1999-00, the relative importance of the primary sector in rural areas increased. Industry sector witnessed a reduction by nearly 2.5 percentage points, even though tertiary activities, mainly trade, transport, storage etc. recorded enhanced share of workers. Between 1999-00 to 2011-12, the share of primary sector

**Table 3. Distribution of rural (main) workers by activities, 2001 and 2011)**

(per cent)

Category	2001	2011
Cultivators	41.5	38.5
Agricultural labourers	26.3	35.4
Household Industry	1.6	0.98
Other Worker	30.5	25.1
Total	100	100

*Source:* Census of India, 2001 and 2011

in the workforce declined and occupational diversification at least at the aggregate level is gaining vigour. Despite its declining share, the primary sector in rural areas continues to engage three-fourths of the workforce. Non-primary sectors that have gained workers in the 2000s decade are construction, trade and hotels followed by manufacturing. Thus in Gujarat, two sets of dynamic sectors can be identified; one belonging to the primary sector and the other to the non-farm sectors. Allied agricultural activities represent the dynamic activities in the rural primary sector. It would be useful to examine and identify the non-primary sectors and the activities that are expanding in importance therein. In the next section we deal with the emerging activities belonging to the non-primary sector.

### **Disaggregated view of Employment in Non-Agricultural Sector**

In the previous section we have elaborated on the activity wise details for Gujarat. A disaggregated analysis of information would point towards the promising industries within the non-primary sector. Earlier studies have identified emerging industries on the basis of labour productivity and employment growth, gross value added and overall productivity levels. We have however, tried to arrive at such sectors on the basis of the share and growth performance in employment, size substitution and the rural/urban location of the non-farm activities. This approach was developed and used earlier for Gujarat and can be extended even for the districts. We attempt a comparison of the economic activities using EC information for 1998 and 2005. The most recent (6<sup>th</sup>) EC while giving overall employment figures for economic

activities, as yet does not provide information of disaggregated sectors or by size composition. Instead, for the more recent picture the all-India survey of unincorporated non-agricultural enterprises in manufacturing, trade and other service sector (excluding construction) conducted by the NSS (2010-11) is used. Notably in the EC the crop and plantation sector is excluded, but information is available on allied agricultural enterprises. The EC defines an “Establishment” as an enterprise having at least one hired worker on a fairly regular basis. An “Own Account Enterprise” (OAE) is one that is normally run by household members and does not engage any hired worker on a regular basis.

#### *Size Structure of Employment in Non-Agricultural Activities and Rural-Urban Composition*

Table 4 gives the size structure of non-agricultural activities and their rural-urban composition, numbers and employment. Looking at the region as a whole between 1998 and 2005, in the rural areas all the non-agricultural enterprises taken together increased in numbers as well as employment, while in urban areas the share of number of all enterprises and employment in them declined. There was a higher concentration of non-agricultural establishments in urban areas both with regard to their numbers and workers employed. As compared to the larger establishments, a greater number of OAEs are located in rural areas. Unlike the 1990s, in the period under consideration (1998-2005), the size of OAEs and employment therein was expanding. Results for 2010-11 indicate that manufacturing, trade and other service sector establishments are becoming largely urban based. Concentration of OAEs is also far greater in urban Gujarat than rural, though the share of OAEs in rural areas is more than that of larger enterprises (or Establishments).

The activity wise location of non-agricultural workers is shown in Tables 5a to 5c. Considering the share of employment in All Enterprises (OAEs and Establishments), it can be observed that urban areas continued to depict a dominant albeit declining share by 2005. During 1998 mining & quarrying, construction and electricity, gas and water were concentrated largely in rural areas. By 2005 though only mining &



**Table 4. Size structure of non-farm employment and its rural-urban composition**  
(percentage of rural + urban)

Size	Rural			Urban		
	1998	2005	2010-11*	1998	2005	2010-11*
OAE						
Numbers	41.4	44.0	27.1	58.6	56.0	72.9
Employment	41.0	44.0 (0.6)	28.2	59.0	66.7 (-1.2)	71.8
Establishments						
Numbers	33.5	34.8	17.2	66.5	65.2	82.8
Employment	26.6	29.3 (4.2)	18.0	73.4	70.7 (2.2)	82.0
All Enterprises						
Numbers	39.0	40.0	25.6	61.0	60.0	74.4
Employment	31.2	33.3 (2.8)	23.9	68.8	66.7 (1.3)	76.1

*Note:* \*Excluding Mining & Quarrying, Electricity, Gas & Utilities, Construction, Public Administration etc., Personal Services.

Figures in brackets are the annual growth rates.

*Source:* Reports of the 4th and 5th Economic Census, GoG, Gandhinagar and All India Survey of Unincorporated Non-agricultural Enterprises, NSSO (67<sup>th</sup> Round, 2010-11).

quarrying continued to be dominantly a rural based activity, it was becoming urbanised. Within the secondary sector, manufacturing and construction activities are also shifting towards urban locations. In contrast, service sector seen in isolation though dominantly urban in 2005 was seen to be shifting to rural areas. Shift over to rural areas was quite steep for wholesale trade, transport & storage, communication, and other remaining service sector activities.

Smaller and unorganised enterprises (OAEs) engaged in mining, quarrying, electricity, gas and water, transport and storage related activities, community/personal services were found to be dominantly rural. Manufacturing, construction, trade, financial services and other service activities in the unorganised segment were largely urban. With regard to the establishments, except mining and

quarrying all other non-agricultural activities had an urban base. However by 2005 urban areas offered an increasing share of jobs in case of larger establishments engaged in construction sector only. Rest of the establishments, notably trade, hotels & restaurants, transport, storage, communications and other tertiary activities were getting concentrated in rural areas and urban areas were offering declining share of jobs. Jobs in manufacturing establishments, which were dominant in urban areas, together with electricity, gas and water do not reveal any startling changes between 1998 and 2005. The annual rate of increase in workers for all the non-agricultural enterprises was higher in rural (2.8%) than in urban areas (1.3%). Much of this was contributed by the growth in establishments. While employment in OAEs in rural areas was nearly stagnant, the establishments were found to be growing at a much faster rate (4.2%) in rural than in urban areas.

From this discussion of changes in rural-urban composition of employment in unorganised enterprises, it emerges that overall (OAE and Establishments) despite dominantly urban, enterprises relating to trade, restaurants/hotels, transport, storage, communication and other services are shifting to rural areas, whereas construction followed by manufacturing, mining, electricity, gas and water continue to be largely urban based activities.

Table 6 provides a view of the rural-urban composition of employment in enterprises in 2010-11. It is revealed that urban areas continue to offer the dominant share of employment in enterprises engaged in all the three sectors. However employment share in trading enterprises is the largest in rural areas, particularly in the small OAEs, followed by other services (excluding personal services, public administration etc.). In contrast manufacturing establishments are more dominant in rural Gujarat than trade or other services. Between 2005 and 2010-11 it can be seen that concentration of manufacturing establishments in urban areas has increased. On the other hand small manufacturing OAEs have quite significantly shifted to the rural areas during this period. Other noticeable feature is the sharp decline in jobs offered by trading establishments in rural areas, even though not much change is visible in individual-run trading OAEs in rural areas.

**Table 5a. Activity-wise change in rural - urban distribution of non-agricultural employment in all enterprises, 1998- 2005**

(percentage of rural + urban)

Location/ Industry Group	1998		2005	
	Rural	Urban	Rural	Urban
Mining & Quarrying	89.28	10.72	78.22	21.78
Manufacturing	32.23	67.77	28.09	71.91
Electricity, Gas & Water	42.25	57.75	41.62	58.38
Construction	51.68	48.32	29.82	70.18
Wholesale Trade	20.18	79.82	25.63	74.36
Retail Trade	31.00	69.00	34.51	65.49
Restaurants & Hotels	24.13	75.87	26.99	73.01
Transport & Storage	32.58	67.42	47.30	52.70
Communication	19.39	80.61	25.42	74.58
Financial, Insurance, Real Estate & Business Services	10.53	89.27	16.40	83.59
Community, Social & Personal	31.73	68.37	41.42	58.58
Other Activities	12.50	87.50	24.43	75.57
Total Non-Agricultural	31.17	68.83	33.30	66.70

Source: Economic Census, 1998, 2005, GoG.

**Table 5b. Activity-wise change in rural - urban distribution of non-agricultural employment in OAEs, 1998- 2005**

(percentage of rural + urban)

Location/ Industry Group	1998		2005	
	Rural	Urban	Rural	Urban
Mining & Quarrying	83.23	16.77	74.51	25.49
Manufacturing	51.46	48.54	46.17	53.83
Electricity, Gas & Water	72.22	27.78	58.52	41.48
Construction	47.98	52.02	28.83	71.17
Wholesale Trade	20.98	79.02	27.79	72.20
Retail Trade	37.79	62.21	42.89	57.11
Restaurants & Hotels	34.96	65.04	39.53	60.47
Transport & Storage	46.41	53.58	56.87	43.13
Communication	14.98	85.02	26.45	73.55
FIRE& Business Services	12.42	87.58	26.11	73.22
Community etc. Services	42.29	57.71	52.06	47.93
Other Activities	30.43	69.57	32.56	67.44
Total Non-Agricultural	41.01	58.99	44.02	55.98

Source: Same as Table 5a

**Table 5c. Activity-wise change in rural - urban distribution of non-agricultural employment in Establishments, 1998-2005**

(percentage of rural + urban)

Location/ Industry Group	1998		2005	
	Rural	Urban	Rural	Urban
Mining & Quarrying	89.82	10.18	78.87	21.13
Manufacturing	27.97	72.03	24.92	75.08
Electricity, Gas & Water	41.00	59.00	40.37	59.63
Construction	53.66	46.34	30.10	69.90
Wholesale Trade	19.81	80.19	24.80	75.19
Retail Trade	19.04	80.96	26.78	73.22
Restaurants & Hotels	19.67	80.33	23.40	76.60
Transport & Storage	23.64	76.35	38.98	61.02
Communication	20.67	79.33	24.93	75.07
FIRE& Business Services	10.19	89.81	14.10	85.89
Community etc. Services	28.19	71.81	39.44	60.55
Other Activities	6.85	93.15	21.80	78.20
Total Non-Agricultural	28.72	71.31	29.30	70.70

Source: Same as Table 5a

**Table 6. Activity-wise distribution of non-agricultural employment in enterprises, 2010-11**

(percentage of rural + urban)

Location/ Industry Group	OAE		Establishments		All Enterprises	
	Rural	Urban	Rural	Urban	Rural	Urban
Manufacturing	21.1	78.9	19.7	80.3	20.4	79.4
Trade	35.3	64.7	12.2	87.8	28.4	71.6
Other Services	29.6	70.4	18.9	81.1	25.3	74.7
Total Non-Agricultural	28.2	71.8	18.0	82.0	24.0	76.0

Source: All-India Survey of Unincorporated Non-agricultural Enterprises, NSS 67<sup>th</sup> Round.

### *Share of Industry Groups in Employment*

In Gujarat, there have been employment gains by nearly 13 per cent in secondary and tertiary activities between 1998 and 2005, gains being far higher (21%) in rural areas than urban (by 9.7%). If we compare employment in the activities included in the Enterprise Survey of 2010-11 with similar set in 2005, it can be seen that the gains are by 60 per cent. However, we need to identify the non-agricultural activities that are important in terms of their presence in urban and rural areas as also the overall

employment shares and gains recorded. This will enable us to identify the vibrant sectors within the non-agricultural activities where employment gains are substantial. The sectors gaining employment require adequate policy support. Further the base of the demand driven non-farm activities needs strengthening, given the increased trend of relocation of enterprises to the rural areas. Gujarat is facing enhanced degree of agricultural commercialisation that has been an important contributor to the overall growth. Furthermore, census (2011) results show that connectivity to rural areas has improved and many villages are showing urban characteristics. Possibly the rural-urban divide is becoming rather thin. We also need to explore what scale of villages are offering jobs in the rural non-farm sector, as possibly a large share of villages satisfying the census criteria of urban designation may be eligible to become census towns. Further, given the problems experienced by larger urban centres in the nature of over-congestion, pollution and other negative externalities, the rural areas have to develop as receptacles of non-farm activities.

In this section we focus upon the activity-wise shares of employment and changes over the two census periods (1998-2005) (Tables 7a to c). We first see the employment shares in all the enterprises (OAE and Establishments) in the overall economy (rural+urban). During 1998 to 2005 the share of workers engaged in manufacturing, construction, community, social and personal services have declined noticeably. The most important emerging employment generators seem to be wholesale and retail trade and communication sectors. Services that provided employment to nearly a third of the non-agricultural workforce have shown a remarkable decline in importance. In rural areas, trade especially retail trade, transport and storage were gaining greater importance as sources of non-agricultural jobs, while in 2005 the urban areas were creating more jobs also in the trading sector and to a lesser degree in communication and financial services. The decline in importance of manufacturing activities and construction in overall economy (rural and urban) appears to be less sharp than in rural areas seen in isolation.

**Table 7a. Location-wise employment share in non - agricultural OAEs, 1998-2005****(percentage share to total employment)**

Location/ Industry Group	1998			2005		
	Rural	Urban	Combined	Rural	Urban	Combined
Mining & Quarrying	0.28	0.04	0.14	0.44	0.12	0.26
Manufacturing	24.68	16.18	19.67	17.98	16.49	17.15
Electricity, Gas & Water	0.12	0.03	0.07	0.22	0.12	0.16
Construction	2.15	1.62	1.83	0.27	0.53	0.42
Wholesale Trade	1.70	4.44	3.32	3.64	7.44	5.77
Retail Trade	41.03	46.95	44.52	50.30	52.67	51.63
Restaurants & Hotels	1.57	2.03	1.84	1.41	1.70	1.57
Transport & Storage	5.50	4.42	4.86	8.73	5.21	6.76
Communication	0.25	0.97	0.67	0.88	1.93	1.47
FIRE& Business Services	0.45	2.18	1.47	1.49	3.20	2.45
Community etc. Services	22.28	21.14	21.61	14.62	10.59	12.36
Total Non-Agricultural	100	100	100	100	100	100
<i>Share in All Enterprises</i>	<i>41.8</i>	<i>27.2</i>	<i>31.8</i>	<i>36.0</i>	<i>22.8</i>	<i>27.2</i>

Source: Same as Table 5a

**Table 7b. Location-wise employment share in non - agricultural Establishment, 1998-2005****(percentage share to total employment)**

Location/ Industry Group	1998			2005		
	Rural	Urban	Combined	Rural	Urban	Combined
Mining & Quarrying	2.48	0.10	0.73	1.49	0.17	0.55
Manufacturing	43.4	40.5	41.28	31.00	38.69	36.43
Electricity, Gas & Water	1.22	0.64	0.79	1.14	0.70	0.83
Construction	3.21	1.00	1.59	0.55	0.53	0.54
Wholesale Trade	2.53	3.71	3.40	4.78	6.00	5.65
Retail Trade	8.42	12.9	11.77	19.09	21.63	20.88
Restaurants & Hotels	1.54	2.27	2.08	1.64	2.23	2.05
Transport & Storage	3.11	3.63	3.49	3.86	2.51	2.90
Communication	0.84	1.16	1.08	1.00	1.25	1.18
FIRE& Business Services	1.47	4.69	3.84	1.98	5.00	4.11
Community etc. Services	31.7	29.3	29.95	33.46	21.28	24.86
Total Non-Agricultural	100	100	100	100	100	100
<i>Share in All Enterprises</i>	<i>58.2</i>	<i>72.8</i>	<i>68.3</i>	<i>64.1</i>	<i>77.2</i>	<i>72.8</i>

Source: Same as Table 5a

**Table 7c. Location-wise employment share in non - agricultural Enterprises  
(OAE+ Establishment), 1998-2005**

(percentage share to total employment)

Location/ Industry Group	1998			2005		
	Rural	Urban	Combined	Rural	Urban	Combined
Mining & Quarrying	1.56	0.08	0.55	1.11	0.15	0.47
Manufacturing	35.59	33.8	34.42	26.31	33.62	31.19
Electricity, Gas & Water	0.76	0.47	0.56	0.81	0.57	0.65
Construction	2.77	1.17	1.67	0.45	0.53	0.51
Wholesale Trade	2.18	3.91	3.37	4.37	6.33	5.69
Retail Trade	22.05	22.2	22.17	30.31	28.71	29.25
Restaurants & Hotels	1.55	2.21	2.00	1.56	2.11	1.92
Transport & Storage	4.11	3.85	3.92	5.61	3.12	3.95
Communication	0.59	1.11	0.95	0.96	1.41	1.26
FIRE& Business Services	1.04	4.01	3.08	1.80	4.59	3.66
Community etc. Services	27.8	27.0	27.30	21.90	18.84	21.45
Total Non-Agricultural	100	100	100	100	100	100

Source: Same as Table 5a

Employment share in large non-agricultural establishments using hired labour, engaged in whole sale trade increased from 3.4 to 5.7 per cent and in retail trade from 11.8 to 21 per cent, these being the only activities showing gains within the establishment sector. Increase was much sharper in rural areas. In rural Gujarat, the transport and storage and financial services establishments recorded increase in share of workers. The petty retail traders (OAEs) gained in employment share by nearly seven percentage points. The other segment recording increase were self-employed workers in transport, storage, financial & business services followed by communication related activities, more so in rural areas.

Decline in the share of own account workers engaged in manufacturing and personal/community services (both by 7 percentage points) was quite drastic in rural areas. Loss was recorded by individual workers in construction and personal services (OAE) in urban areas. Manufacturing and community service establishments account for the largest share of non-farm workers. Amongst the enterprises hiring workers, the largest decline in share of employment was seen in manufacturing (more in rural), transport and personal/community services (more in urban) establishments.

**Table 8. Location-wise employment share in non - agricultural enterprises, 2010-11**

(% share to total employment)

Industry	Rural			Urban			Combined		
	OAE	Estb.	All Ent.	OAE	Estb.	All Ent.	OAE	Estb.	All Ent.
Manufacturing	29.52	60.58	39.31	43.37	54.19	48.26	39.47	55.34	46.12
Trade	42.37	13.58	33.29	30.44	21.46	26.38	33.80	20.05	28.03
Other services	28.12	25.84	27.40	26.19	24.35	25.36	26.73	24.62	25.84
All	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

Source: Same as Table 6

While comparing the scenario between 2005 and 2010, it can be seen that across Gujarat employment share in manufacturing enterprises has recorded significant gains (32 to 46%). Employment share in both units hiring labour as well as OAEs have increased in dominance. All enterprises (Establishments + OAE) engaged in trading show declining employment share in second half of last decade. Self-employment in service sector is the only category showing increasing share of employment in both rural and urban locations. Service sector establishments record declining employment weightage, notwithstanding its components in 2010-11.

Having looked at the employment shares in industries and changes over time, it would be interesting to observe changes in size composition of non-agricultural enterprises. The viability of activities often increases with the size of enterprises, though necessitating employment of hired workers. On the other hand several activities are emerging where self-employment is the norm. We attempt to touch upon these aspects in the next section.

#### *Size Composition of Non Agricultural Enterprises*

For the total economy during 1998 to 2005, the employment in own account enterprises declined by around 5 percentage points (Table 9). At the aggregate level at least the involvement of hired workers was on the rise. Such a shift (from OAEs to Establishments) has been sharper in case of rural (6 percentage points) than urban (4 percentage points) and more obvious in case of manufacturing, construction, trade,



restaurants & hotels, and community services. Transport & storage related activities were increasing in size in rural areas, while urban areas were reflecting gains in individual based enterprises engaged in transportation and storage activities. Self-employment was also seen to be increasing in the communication sector, to a greater degree evident in rural areas. Financial and real estate sub-sector was also reflecting this trend towards individual based enterprises. Thus apart from communication and financial and business services, all the industry groups in rural Gujarat are becoming establishments run on hired workers.

Mining and quarrying, electricity, gas and water are activities that engage hired workers. It is evident that size substitution towards smaller individual run enterprises was occurring even in these activities. The trend was sharper in rural areas.

While strict comparability cannot be maintained for information sources used for 2005 and 2010-11, it is seen that for the economy as whole, the size composition of manufacturing activities has become nearly uniform by 2010-11. Both the rural and urban areas engage workers equally in self-run enterprises and manufacturing establishments hiring workers. With regard to trading enterprises, in 2005 establishments dominated, but by 2010-11 individual run trading enterprises engaged two-thirds of the workers. In rural Gujarat presently nearly 87 per cent of the trading enterprises are own account in nature. Nearly similar trend is visible in other services too (excluding public administration, personnel services category). Thus latest information reveals that in rural Gujarat, unlike before non-agricultural employment is dominated by enterprises that are individual based, at least in manufacturing, trading and other service related activities.

So far we have examined the employment shares of each activity to the total non-agricultural workforce, and their rural-urban composition. By doing so we can ascertain those industry groups that have been gaining importance and those losing employment share across space. The growth rate of individual activities in the spatial context in addition to their size would enable us to identify the faster growing ones. We assess the activity-wise pace of growth in the next section.

**Table 9. Activity-wise and Location-wise changes in size composition of enterprises, 1998 to 2005**

Industry/Size		Rural		Urban	
		1998	2005	1998	2005
Mining & Quarrying	% OAE	7.6	14.4	12.8	17.6
	% Estb.	92.4	85.7	87.2	82.4
Manufacturing	% OAE	29.0	24.6	13.0	11.2
	% Estb.	71.0	75.4	87.0	88.8
Electricity, Gas & Water	% OAE	6.8	9.7	1.9	4.9
	% Estb.	93.2	90.3	98.0	95.1
Construction	% OAE	32.4	21.6	32.4	22.6
	% Estb.	67.6	78.4	62.4	77.4
Wholesale Trade	% OAE	32.5	30.0	32.5	26.8
	% Estb.	67.5	70.1	69.1	73.2
Retail Trade	% OAE	77.8	60.0	57.5	41.9
	% Estb.	22.3	40.0	42.5	58.1
Restaurants & Hotels	% OAE	42.3	32.6	25.0	18.4
	% Estb.	57.7	67.4	75.0	81.6
Transport & Storage	% OAE	58.9	56.0	32.6	38.1
	% Estb.	41.2	44.0	67.5	61.9
Communication	% OAE	17.4	33.1	23.8	31.4
	% Estb.	82.6	66.9	76.2	68.6
Financial, Insurance, Real Estate & Bus. Services	% OAE	17.9	29.7	14.8	15.9
	% Estb.	82.1	70.3	85.2	84.1
Community, Social & Personal Services	% OAE	33.5	19.7	21.2	12.8
	% Estb.	66.5	80.3	78.8	87.2
Total Non-Agricultural	% OAE	41.8	36.0	27.2	22.8
	% Estb.	58.2	64.0	72.8	77.2

Source: Same as Table 5a

### **Growth Pattern of Employment in Non-Agricultural Enterprises (1998-2005)**

The growth pattern of enterprises by the size of enterprises is traced in Table 10. In case of own account enterprises the largest increase in workers occurred in utilities (124%), communication sector (112%) followed by mining, wholesale trade, financial & real estate services and transport and storage. The rural areas seen alone also reflect a similar picture, although the magnitude of growth has been higher (more than two-fold) in communication and financial services and wholesale trade the urban areas. Household based manufacturing has lost dynamism, in rural areas it recorded a deceleration in employment growth. At least for the period being examined, growth of employment in construction activities faced decline across all categories. Pace of increase of employment in establishments (those hiring workers) doubled in trade followed by communication and financial services. In rural areas by themselves largest growth amongst establishments was seen in trade, financial services, transport, storage and communications activities. Rural areas recorded more than half of the total increase in jobs in these sectors. For the entire economy it can be stated that while establishments were recording a faster growth (more in rural), growth in self-employment was decelerating in urban locations.

Above discussion shows that construction, manufacturing, restaurants & hotels, community and personal services were facing loss of employment in numbers and also their relative shares in workforce, irrespective of size (OAE or Establishments) or location (rural or urban). Remaining activities were recording percentage growth in employment, and were also experiencing increased share in the economy of the state.

### **Share of Industry groups in the Net State Domestic Product**

On the basis of the discussion in preceding sections, we can attempt to identify the dynamic non-agriculture sectors (with or without hired workers) in Gujarat. Evidently in rural areas activities that are growing and creating larger opportunities for employment are retail trade, communications, transport & storage, wholesale trade and financial services. In urban areas too retail trade, wholesale trade, financial

**Table 10. Size-wise growth of employment in non-agricultural activities, 1998-2005**

(percentage change)

Industry	Rural			Urban			Combined		
	OAE	Estab lishm ents	All Enter prises	OAE	Estab lishm ents	All Enter prises	OAE	Estab lishm ents	All Enter prises
Mining & Quarrying	62.4	-20.1	-13.8	175.6	88.8	99.8	81.3	-9.0	-1.6
Manufacturing	-24.2	-5.05	-10.6	-6.2	11.1	8.8	-15.5	6.6	2.6
Electricity, Gas & Water	81.8	24.7	28.6	235	28.0	32.0	124.4	26.7	30.6
Construction	-86.8	-77.0	-80.2	-69.9	-38.2	-50.2	-78.1	-59.1	-65.7
Wholesale Trade	123.4	151.3	142.2	54.1	88.2	77.6	68.6	100.7	90.7
Retail Trade	27.6	201.5	66.3	3.2	93.9	41.8	12.4	114.4	49.4
Restaurants & Hotels	-6.2	42.1	21.7	-22.9	13.9	4.7	-17.1	19.5	8.8
Transport & Storage	65.3	65.5	65.4	8.6	-6.1	-10.9	34.9	16.8	13.9
Communication	274.0	59.3	96.7	83.2	25.0	38.9	111.8	32.1	50.1
FIRE & Business Services	248.2	79.4	109.6	35.1	24.0	25.7	61.6	29.7	34.5
Community etc. Services	-31.7	40.2	16.1	-53.9	-15.5	-23.7	-53.6	0.2	-11.1
Total Non-Agricultural	4.1	33.1	21.0	-8.0	16.3	9.7	-3.0	20.8	13.2

Source: Same as Table 5a

services, transport and communications activities are emerging as important ones. In addition in urban areas household manufacturing is also an important economic activity creating jobs. Larger establishments engaged in mining and utilities are declining in rural areas, but shifting to urban areas. Trading related activities, restaurants and financial services establishments (that hire workers) are employment generators in both rural and urban areas. However community and personal services establishments are facing more robust growth only in rural areas. Non household based manufacturing and construction were losing out in jobs at least till 2005.

The rural economy seems to be enmeshed with the rest of the economy in Gujarat as can be observed from the rather uniform pattern of employment growth. In several major state economies, the structure of employment in the rural and urban areas is moving closer or is converging after liberalisation, but Dholakia et. al (2014) find that in the states of Gujarat and Maharashtra, the structural difference between urban and rural areas has remained almost constant over time. In the recent years both are emerging as the states with highest structural differences between the two areas. It is not that the employment pattern in these economies has remained stagnant over time, but the changes in them have been of similar dimension in both the areas.

**Table 11: Output share of industry groups in Net State Domestic Product (2004-05 prices)**  
(per cent)

No.	Industry Group	1999-00*	2004-05	2009-10	2012-13
1.	Agriculture, Forestry, logging, fishing, mining & quarrying	20.1	21.1	14.4	12.8
1.1	Of which agriculture & animal husbandry	17.4	14.4	10.3	9.6
2.	Manufacturing, Electricity, gas & water, Construction	35.2	32.2	38.1	34.9
2.1	Of which Manufacturing	26.5	23.4	27.3	25.2
3.	Trade, hotels & restaurants, transport, storage and communications	19.2	25.5	28.3	32.7
4.	Banking, insurance, real estate, business services	13.7	12.8	11.9	12.8
5.	Public administration & other services	11.7	8.4	7.3	6.9
	Tertiary	44.6	46.7	47.6	52.3

Note: \* at 1999-2000 prices.

Source: Socio-Economic Review of Gujarat State, Bureau of Economics & Statistics, GoG, 2013-14.

Table 11 shows the net state domestic product emanating from the non-agricultural sectors. It can be seen that for trade, hotels, transport, storage and communications the share has increased from 19 per cent to 33 per cent between 1999 and 2013, and this has been the largest gain when seen in relation to other segment of the non-agricultural economy. In the rural areas during 1998 to 2005, community and personal service related establishments have forged ahead of their urban counterparts. However the income share of public administration and other services has declined from 12 to 7 per cent. Hotels and restaurants that had witnessed rapid expansion in employment in post reforms period were losing out their growth momentum after 1998 across Gujarat. Secondary sector output share has remained stagnant and job creation commensurately had suffered a setback. The share of employment in secondary activities has remained more or less unchanged (36 to 35 %) between 1998 and 2005.

The share of agriculture in the state's output is declining sharply after 2004-05, while it depicts a fluctuating trend in manufacturing. Manufacturing output dipped in 2004-05 to the lowest in recent times but increased to 27 per cent in 2010-11. After 2010-11, manufacturing output declined but there was a significant rise in trade, hotels, transport, communication, followed by financial services. The liberalisation of economy has bestowed maximum benefit to modern sectors like communications, transport, hospitality sector, financial services and real estate, causing faster growth in these sectors. Growth in trade etc. is also related to the increasing income levels and enhanced spending on a variety of goods and services.

It is essential to examine the level of productivity and the changes across the industry groups. We look at the per capita NSDP in each sub sector for Gujarat (Table 12). Even though rural and urban per capita output for the states has been ascertained by other scholars, for the purpose of the analysis we have estimated it using workforce as derived from the EC (i.e. employment in all enterprises in rural and urban areas combined) NSDP is at constant 2004-05 prices. In 2010-11 the enterprise survey it may be recalled excludes construction and public administration etc. Thus strict comparability is not possible across the years.

**Table 12. Per capita output in non-agricultural activities**

Industry Group	Output (₹. crore)			Workers (in 00)			Output/capita (₹.)		
	1999-00 <sup>1</sup>	2004-05	2010-11	1998	2005	2010-11	1998	2005	2010-11
Mining & Quarrying	2206	5862	5649	227	223		972	2629 (15)	
Manufacturing	2448	40265	78321	14315	14685	32150	171	274 (7)	244 (-2)
Electricity, Gas & Water	1927	2635	8507	234	306		824	861 (0.6)	
Construction	6171	12517	24786	694	238		889	5259 (29)	
Trade, Restaurants	1300	32120	67589	11454	17352	19539 <sup>2</sup>	114	185 (7)	346 (11)
Transport & Storage	3966	9149	15402	1633	1860		243	492 (11)	
Communication	834	2686	11306	394	592		212	454 (12)	
Financial, Real Estate	1272	22109	38165	1283	1726		992	1281 (4)	
Public Admin.	1086	14406	22135	11356	10100	18013 <sup>3</sup>	96	143 (6)	812 (34)
Total Non-Agriculture	7618	141749	271862	41592	47084	69702	183	301 (7.4)	390 (4)

Note: 1 Base is 1999-00, for rest of the years it is 2004-05.

2. Excludes hotels and restaurants.

3. All service activities excluding trade, public administration & defence services.

Figures in brackets are annual growth rates.

Source: As explained in text.

It was observed that in the first period (1998 to 2005) annual growth in per capita output for tertiary/service sector (combined) and manufacturing was around 7 per cent. The largest increase in per capita income was recorded for construction activity, possibly due to a downturn in the estimated workers in 2005. Per capita income from transport, storage and communications also recorded annual growth exceeding 11 percent, followed by trade at 7 per cent. Output from financial services grew at 4 per cent, the lowest amongst all tertiary activities. High growth in public administration and other services was not due to productivity enhancement. Analysis for comparable activities in 2010-11, showed that manufacturing output recorded

negative growth, while income from trade recorded significant acceleration at 11 per cent. Income from the total service sector (minus trade and public administration) recorded growth acceleration at 34 per cent.

Although we have not examined in detail the output and productivity of the activities for the different segments (organised and unorganised) separately, we can draw some tentative conclusions. Overcrowding of workers in the organised and unorganised manufacturing sector does not bode well for the workers engaged in it as seen from the declining productivity. It is imperative that the sector witnesses technological up-gradation to increase productivity. Household based industry in addition also requires support in the nature of raw materials, credit etc. The observed trends if continued for long may have detrimental impact on technological up-gradation and even adversely affect the competitive edge of the state in manufacturing. Trade seems to be the last resort for the workers spilling out from the primary activities and a positive feature is the continued acceleration of output from this sector. Rising productivity indicates that shift towards trade may not be distress induced. Possibly the entry of organised chain retailing and foreign investments has had a positive impact on the economy. The communications revolution and transportation both formal and informal is another welcome development, engaging workers at increasing productivity levels. Of late the financial and real estate sector in rural Gujarat is expanding very fast. However despite high growth tertiary sector development requires skilled manpower to remain a sustainable driver of economic growth.

At the aggregate level, up to 2005, self-employment in own account non-agricultural enterprises expanded in both rural and urban areas, the latter showing larger growth. Employment in establishments hiring workers although showed improvement in rural areas, was on the wane in urban Gujarat. The picture altered considerably after 2005, and non-agricultural enterprises was relocating to urban areas, both family run enterprises (excluding construction, utilities sector) as well as larger establishments hiring workers. Analysis earlier had brought out that this was the



result of large scale shift of the tertiary activities to urban locations. Further activities where size substitution towards bigger enterprises is noticeable are construction, trade, and community & personal services. Transport sector and manufacturing are witnessing size substitution in rural areas only. Modern sectors like communication activities, financial and business services everywhere and utilities in urban areas are becoming self-enterprises, run without hired workers. Thus a pattern in terms of service specificity can be observed.

A flourishing agriculture sector in the 2000s decade seems to have fuelled the growth in the service sector. The process is helped by urban wards migration of workers not finding adequate livelihood opportunities in rural areas, nearly 3 million workers were added in urban areas. While 88 per cent of the incremental workers in urban areas were main workers, share of marginal urban workers also doubled. The labour absorbing capacity of agriculture is limited. Labour saving cropping pattern adjustments and increasing mechanisation of field crop operations need to be reiterated. Livestock and animal husbandry in Gujarat threw up additional work in rural areas that has led momentum to diversification of primary sector- a healthy development for the economy.

### **Conclusions**

In rural Gujarat, along with commercialisation of agriculture, diversification within the primary sector as seen through the increased employment in allied activities such as, forestry, fishing, animal husbandry etc. is an on-going process. Our findings indicate that in rural areas of Gujarat the activities in the non-primary sector that are experiencing growth in share and creating more job prospects are retail and wholesale trading, communications followed by transportation and storage. Financial and business services are gaining importance in urban areas. Shift from urban to rural areas has been observed in trading, transport & storage, communications and financial services. Of late small manufacturing enterprises are also shifting to rural areas.

The share of trade, hotels and restaurants, storage and communication in total employment in 2005 was 42 per cent, and their share in NSDP was 26 per cent. The per capita NSDP from these activities has been accelerating at 7 per cent per annum (higher than that of tertiary sector in totality). Per capita NSDP from transportation sector grew at 11 per cent and communication activities at 12 per cent. Some of these activities are concentrated in the self-employment, particularly in case of petty trading, land transport, communication and also personal services. Nonetheless these are the activities which are operating as depository of surplus labour and where the surplus rural labour is finding a space. It remains for the state to create an environment where these activities become productive and viable and get integrated with the mainstream economic sectors. These are the dynamic sectors, which could receive greater policy thrust to strengthen their base. Since these are drawing the largest share of the workers outside agriculture, promotional efforts geared towards technological up-gradation leading to greater modernization coupled with support towards credit, power, etc., need to be stepped up.

The paper to an extent, by using Economic Census data, has identified the growing activities in the non-agricultural sector at the state level. Apparently, other than agriculture, these activities are very important for absorbing workforce in rural Gujarat, even though the reasons for their emergence may not have been dealt with in earnest. Quite apparently, disaggregated analysis along with insights from field are required. The present study would gain from an analysis of information available from the economic tables of census, (at 2-digit level of NIC) for total and urban areas at the levels of state, districts and urban agglomerations. This information pertains to the main and marginal workers by sex and class of workers (employer, employee, single, family worker). Such an analysis can also be extended for the activities that are dynamic at one digit level of NIC, attempt could be made to look at the employment shares of growing sectors at NIC 2-digit level. A more detailed analysis is required to identify the non-farm activities that have a bleak future, against those that might flourish in the days to come.

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