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Size, Structure and Growth
of Workforce in Gujarat

Aalok Ranjan

'Shyam' Institute

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WORKFORCE: 1981-2011

SIZE, STRUCTURE, GROWTH

BACKGROUND

The size, structure and growth of the work force depicts a non-monetary picture of the state of the economy of any administrative unit which is more relevant to human development perspective than the conventional gross or net domestic product. At the early stages of economic development, the economy is heavily dependent its primary sector so that the work force is dominated by workers in agriculture and allied sectors. With the growth and expansion, the structure of the economy also changes. First the manufacturing sector and then the tertiary sector plays a dominant role in the economy. As a result, the size of the workforce increased and, at the same time structure of the work force shifts from the primary or the agriculture sector to secondary and tertiary sectors of the economy. If the growth and expansion of the economy is not associated with the increase in the size of the work force and transition in its structure then the economic growth may have only limited impact on human development and quality of life. In order that the growth and expansion of the economy has the maximum impact on the quality of life of the people, it is imperative that economic growth should also expand opportunities for the participation of the people in social and economic production system or the economy should be more and more participatory and economic growth more and more inclusive.

It is in the above context that this paper analyses the transition in the size, growth and structure of the work force in Gujarat during the 30 years period between 1981 and 2011. The analysis is based on the information about the work status of the people collected during the decennial population census 1981, 1991,

2001 and 2011. Information about the work status of the people is also available through the National Sample Survey. The information available through the population census and the National Sample Survey are largely comparable. Information available through the National Sample Survey is based on the survey of a sample of the population whereas the information available through the population census is based on the complete enumeration of the population. Similarly, the usual status definition of the work employed in the National Sample Survey is comparable with the definition of work in the population census while categories like principal and subsidiary status used in the National Sample Survey are similar to the main and marginal workers of the population census. Despite the similarity in the concepts and definitions of work and work force employed in the population census and the National Sample Survey, there is some discrepancy in the work participation rates estimated on the basis of the data available from the two sources. This discrepancy has even led to the conclusion by that there is an undercount of the total number of workers in the population census, especially in case of women (Sinha, 1982). The present analysis is however limited to the data available through population census only.

The paper is organised as follows. The next section outlines the concept of work adopted at the 2011 population census. Results of the analysis are presented in section three while the last section of the paper discusses the policy implications of the size, growth and structure of the work force in Gujarat.

THE CONCEPT OF WORK IN THE POPULATION CENSUS

Work, in the Indian population census, is defined as participation of a person or any sex and age in any economically productive activity with or without compensation, wages or profit. Participation may be physical and/or mental. Work involves not only actual work but also supervision and direction. Part time help or unpaid work on farm, family enterprise or in any other economic activity is also classified as work in the population census. All persons engaged in some type of work as defined above are classified as workers. Persons who are engaged in cultivation or milk production even solely for domestic consumption are also classified as workers.

Workers identified in the population census according to the above criteria are first classified as main workers or marginal workers on the basis of the period in the year preceding the census during which they were engaged as worker. All workers who worked for at least six months during the year preceding the census are classified as main workers. Rest of the workers are classified as marginal workers.

Main and marginal workers are further classified into four categories according to the type of work – 1) Cultivator; 2) Agricultural labour; 3) Household industry worker; and 4) Other workers. A worker is classified as cultivator if he or she is engaged in cultivation of his or her land owned or land held by other

individuals or institutions including government for payment in money, kind or share. Cultivation includes effective supervision or direction in cultivation. A person who has given out her/his land to another person or persons or institution(s) for cultivation for money, kind or share of crop and who does not even supervise or direct cultivation of land, is not treated as cultivator. Similarly, a person working on another person's land for wages in cash or kind or a combination of both (agricultural labourer) is not treated as cultivator. Cultivation involves ploughing, sowing, harvesting and production of cereals and millet crops such as wheat, paddy, jowar, bajra, ragi, etc., and other crops such as sugarcane, tobacco, ground-nuts, tapioca, etc., and pulses, raw jute and kindred fibre crop, cotton, cinchona and other medicinal plants, fruit growing, vegetable growing or keeping orchards or groves, etc. Cultivation does not include the following plantation crops - tea, coffee, rubber, coconut and betel-nuts (areca).

A person who works on another person's land for wages in money or kind or share is classified as agricultural labourer. She or he has no risk in the cultivation, but merely works on another person's land for wages. An agricultural labourer has no right of lease or contract on the land on which she/he works.

A worker is classified as household industry worker if he or she is engaged in a household industry. A household industry is an industry conducted by one or more members of the household at home or within the village in rural areas and only within the precincts of the house where the individual lives in urban areas. The household industry is not run on the scale of a registered factory. In urban areas, even if household members run an industry by themselves but at a place away from the precincts of their home, it is not considered as a household industry. Household industry relates to production, processing, servicing, repairing or making and selling (but not merely selling) of goods. It does not include professions such as a Pleader, Doctor, Musician, Dancer, Waterman, Astrologer, Dhobi, Barber, etc., or merely trade or business.

All workers who are not classified as cultivators or agricultural labourers or household industry workers are classified as other workers. They include government servants, municipal employees, teachers, factory workers, plantation workers, those engaged in trade, commerce, business, transport banking, mining, construction, political or social work, priests, entertainment artists, etc.

Non-workers are those who did not work at all during the year preceding the census. Non-workers broadly constitute students who did not participate in any economic activity paid or unpaid, household duties for attending daily household chores like cooking, cleaning utensils, looking after children, fetching water, etc. and those who are not even helping in the unpaid work in the family farm or in cultivation or in milking and dependants such as infants or elderly people. Beggars, vagrants, prostitutes and persons having unidentified source of income and with unspecified sources of subsistence and not engaged in any economically productive work are also classified as non-workers. Renters, persons living on remittances,

agricultural or non-agricultural royalty, convicts in jails or inmates of penal, mental or charitable institutions doing no paid or unpaid work and persons who are seeking/available for work are also classified as non-workers.

MEASUREMENT OF PARTICIPATION

The simplest measure of participation in a productive activity is the work participation rate (WPR) – the proportion of the population classified as workers. WPR is only a crude measure of participation as not all sections of the population are capable of doing an activity that may be classified as work. A more refined measure of participation is the participation rate in the working age population. Generally, population aged 15-59 years is classified as the working age population. More specifically, participation rate may be estimated separately for different ages for a better insight about the level of participation in the social and economic production system.

The 2011 population census provides data about the number of workers classified by main and marginal work status and non-workers. Marginal workers are further classified by the duration they are engaged in the work during the year preceding the census. Both main workers and marginal workers are further classified by the type of work. However, classification by the age of the worker is currently not available through the 2011 population census so that calculation of work participation rate in the working age population or age specific work participation rate is not possible. Information about the population aged 7 years and above is however available from the 2011 population census. If it is assumed that population aged 0-6 years is not physically and mentally capable of any type of work, then a measure of participation that is more refined than the crude work participation rate that may be calculated from the 2011 population census data is the work participation rate in population aged 7 years and above. This measure is very similar to the literacy rate calculated from the census data.

PARTICIPATION IN PRODUCTIVE ACTIVITIES IN GUJARAT

Size and growth of work force. The size of the work force in Gujarat was around 12.72 million at the 1981 population census. At the 2011 population census, the work force of the State increased to 24.77 million. This means that during the 30 years between 1981 and 2011, the work force in the State increased at an average annual rate of 2.22 per cent per year. The growth of the work force has however not been the same in all decades of the period 1981 through 2011. The increase in the size of the work force was the most rapid during the period 1981-91. During the period 1991-2001, there was a marginal slowdown in the growth of the work force but, during the decade 2001-11, the growth of the work force in the State slowed down rapidly during the decade 2001-11. The average annual rate increase in the

workforce during this period was just 1.48 per cent per year which is well below the average annual rate of increase in the work force during the period 1981-91.

Two factors account for the change in the size of the work force over time – change in the size of the population and change in the work participation rate. Mathematically it can be shown that

$$\ln(W_t/W_0) = \ln(P_t/P_0) + \ln(WPR_t) - \ln(WPR_0)$$

where P is the size of the population, W is the size of the work force and WPR is the work participation rate. The subscripts t and 0 stand for time.

Application of the above decomposition formula suggests that between 1981 and 2011, more than 85 per cent of the growth in the work force was accounted by the increase in population while increase in the work participation rate accounted for less than 15 per cent of the growth. This means that the probability of productive participation in the social and economic production system has increased only marginally during the 30 years a rapid expansion of the State economy.

Levels and trends in work participation rate. According to the information available through the 2011 population census, around 41 per cent of the population of the State was engaged in some type of productive activity during the year preceding the population census. This proportion was higher in rural population (45 per cent) as compared to that in the urban population (36 per cent) of the State. The male work participation rate was nearly the same in rural and urban populations but the female work participation rate in the rural population (32 per cent) was nearly three times higher than that in the urban population (11 per cent). In the working age population (population aged 15-59 years), the work participation rate was around 59 per cent - 67 per cent in the rural population and 50 per cent in the urban population. At the same time, around 35 per cent of the population aged 60 years and above was found to be engaged in some productive activity at the 2011 population census - around 42 per cent in the rural population and around 25 per cent in the urban population. Finally, in the population aged less than 15 years, the proportion of the population engaged in some productive activity was very close to 4 per cent. This proportion was more than 4 per cent in the rural population and almost 3 per cent in the urban population. According to the 2011 population census, there were 0.463 million child labourers in the State at the time of the census. This number was 0.326 million in the rural population and 0.137 million in the urban population. Child labour, incidently, is prohibited by law in the country.

The age-specific work participation rate, on the other hand is found to be the maximum in the population aged 35-39 years. In this age group, very close to 70 per cent of the population was engaged in some productive activity at the 2011 population census. The work participation rate was also found to be more than 60 per cent in population aged 30-34 years and in population aged 40-59 years. In the rural population, on the other hand, almost 78 per cent of the population aged 35-39 years was engaged in some productive activity but this proportion was less than 60

per cent in the urban population. The work participation rate in the rural population aged 30-59 years was more than 70 per cent but in the urban population, the work participation rate in this age group was never more than 60 per cent.

The gender imbalance in the working population is very marked in the State. There were only 376 female workers for every 1000 male workers in the State according to the 2011 population census. The workers sex ratio was significantly higher in the rural population (531 female workers for every 1000 male workers) as compared to urban population (175 female workers for every 1000 male workers) of the State. The workers sex ratio in the working age population (population aged 15-59 years) is even lower. In the old age population also the sex imbalance in the workers is very marked. In the working age population aged 60 years and above, there were only 357 female workers for every 1000 male workers in the State. This ratio was 436 in the rural population but only 190 in the urban population. On the other hand the child workers sex ratio is very high which implies that female children are disproportionately engaged in labour compared to male children. Incidentally, engaging children below 15 years of age in any type of work is prohibited by law in the country.

The work participation rate in working age males is more than 80 per cent but only around 33 per cent in females. In the rural population, work participation rate in working age males is almost 85 per cent but 48 per cent in female. In the urban population, this gap is very wide - 80 per cent in males to only about 15 per cent in females.

The work participation rate in Scheduled Tribes (49.7 per cent) is higher than that in Scheduled Castes (39.8 per cent) in the total population and in all population sub-groups. Moreover, gender imbalance in Scheduled Castes is substantially higher than the gender imbalance in Scheduled Tribes as is reflected from workers sex ratio. On the other hand female child work participation rate in Scheduled Tribes is higher than the female child work participation rate in Scheduled Castes. More than 6 per cent of the Scheduled Tribes female children aged less than 15 years have been found to engaged in different forms of child labour.

Information available through the 2011 population census indicates that most of the workers in the State had ample opportunities for their participation in productive process for major part of the reference year, although opportunities of participation appear to be more for male workers compared to female workers. These observations suggest that the health of the economy of the State is quite good. It has been able to provide opportunities for productive participation to most of the workers for major part of the year.

During the 30 years between 1981 and 2011, the work participation rate in the State has increased by only around 3.7 per cent points (4.3 per cent points in males and 2.7 per cent points in females). In the rural population, the work participation rate increased by around 4 per cent points whereas the corresponding

increase in the urban population was around 6.3 per cent points. This means that average annual increase in the work participation rate has been around 0.32 per cent per year. More importantly, the average annual increase in the work participation rate was more than two times in the urban population (0.65 per cent per year) as compared to the rural population (0.32 per cent per year). This means that expansion of the work force in the urban population has been more than two times more rapid than the expansion of the work force in the rural population. The increase in the work participation rate has also been more rapid in females as compared to males. In females, the work participation rate increased at an average annual rate of around 0.41 per cent per year whereas the corresponding increase in males was only around 0.26 per cent per year. A similar situation prevailed in the rural and urban populations of the State also. The female work participation rate increased at a very rapid rate of almost 1.85 per cent per year in the urban population of the State during the period under reference whereas the corresponding increase in males was only 0.44 per cent per year. In the rural population also, the average annual rate of increase in the female work participation rate has been more rapid than that in the male work participation rate.

The increase in the main work participation rate has however been significantly slower than that in marginal work participation rate. The main work participation rate increased at an average annual rate of 0.15 per cent per year between 1981 and 2011 compared to an average annual rate of 1.23 per cent per year in the marginal work participation rate. In the rural population, in fact, the main work participation rate for males decreased during the period under reference whereas the marginal work participation rate for males increased by more than 6 per cent per year during the period under reference. The increase in the main work participation rate for females has however been faster than the increase in the marginal work participation rate for females in the total and rural populations but not in the urban population. The rate of increase in the marginal work participation rate has been typically high in the urban population in both males and females.

The observed average annual increase in the main and marginal work participation rates in the rural and urban populations reflect some of the negative features of the social and economic production system of the State. The transition in the economic and social production system of the State appears to have resulted in increased casualisation of work opportunities. It appears that the economic and social production system of the State is reaching its limits as far as provision of work opportunities to workers for the major part of the year is concerned. If the rate of increase in the main work participation rate is any indication then it is obvious from the information available from the 2011 population census that the social and economic production system of the State will have to open up new opportunities for engaging the workers for major part of the year. Engaging workers in the productive participation for major part of the year is also necessary for the further growth and expansion of the economy of the State.

Structure of the Work Force. A very positive feature of the work force in Gujarat

is that more than four-fifth of the workers are classified as main workers. They had worked for at least six months during the year preceding the census. This proportion was more than 92 per cent in the urban population but around 76 per cent in the rural population. Between male and female workforce, however, there is a wide gap in this proportion. More than 92 per cent of the male workers enumerated at the 2011 population census were classified as main workers but this proportion was only 56 per cent for female workers. Among male workers in the urban population, almost 95 per cent had work for at least 6 months of the year preceding the census whereas in the rural population, this proportion was almost 90 per cent. By comparison, among female workers in the rural population, only about half of the workers were classified as main workers.

At the 2011 population census, marginal workers have been classified, for the first time, into two categories: 1) workers who had worked for 3-6 months; and 2) workers who had work less than 3 months during the reference year. This distribution is also very positive in the State as almost 90 per cent of the marginal workers had workers for a period of 3-6 months during the year under reference – 87 per cent for males and 90 per cent for females. Moreover, there is only a marginal difference in these proportions in the rural and urban populations.

The transition in the structure of the State economy is however well reflected in the transition in the structure of the work force. In 1981, only around 36 per cent of the workers in the State were engaged in non-agricultural pursuit. This proportion has increased to more than 50 per cent in the year 2011. This transition in the structure of the work force is particularly marked in female workers. The proportion of female workers engaged in non-agricultural pursuit almost doubled between 1981 and 2011. In male workers, on the other hand, the increase has been slow – from around 43 per cent in 1981 to around 56 per cent in 2011. A similar situation may also be observed in the rural population also. Even in the urban population the increase in the proportion of female workers in non-agricultural pursuit has been more rapid as compared to the increase in male workers. In 1981, almost two third of the work force in the State was relying upon the primary sector of the economy for productive participation. This proportion has decreased to around 50 per cent in 2011. In the rural areas of the State, however, nearly three-fourth of the workers are still dependent upon the primary sector of the economy for their productive participation. More importantly, this proportion appears to have increased in recent years. One reason for this reversal may be the fact that the growth of the primary sector of the economy has been quite rapid during the period 2001 through 2011 which appears to have created new opportunities for productive participation of workers.

Future projections of the Work Participation Rate. The trend in the work participation rate during the 30 years between 1981 through 2011 has been used to project the likely work participation rate by the year 2021 through the application of time series analysis. The model builder option in the forecasting module of the software Statistical Package for Social Sciences (SPSS) has been used for the

purpose. The forecasting exercise suggests that there would be a marginal decline in the work force participation rate in the current decade and by the year 2021, the work participation rate will come down to less than 40 per cent. The forecasting exercise also suggests that the tendency of casualisation of the work force will gain momentum during the current decade unless corrective actions are not taken in the social and economic production system of the State. There is every possibility that the increase in the casualisation of the work force will have a negative impact on the social and economic production system, especially in the context of human development and quality of life of the people as increasing casualisation of the work force will contribute towards increasing distribution inequality.

CONCLUSIONS

Information available through the 2011 population system reveals both positive and negative features of the social and economic production system of the State as far as productive participation of the people is concerned. The current status of the State economy is definitely providing work for the major part of the year for most of the workers in the work force. This is a very positive feature of the State economy. However, the tendency of increasing casualisation of the work force in the State economic is also very much evident from the information available through the 2011 population census. This is a matter of concern that needs to be addressed otherwise it will have a negative impact on further growth and expansion of the State economy. At the same time, despite rapid growth and expansion of the economy, the probability of productive participation of the people has increased only marginally. This essentially means that despite growth and expansion, the State economy has not been able to create new work opportunities. In order to increase the probability of productive participation, the entire social and economic production system needs to be reoriented. This is going to be major development challenge for the State in the years to come.

On the whole, this analysis of the size, growth and structure of the work force in Gujarat suggests that the social and economic production system in the State is capacity efficient in the sense that it is able to provide work opportunities to most of the worker for the major part of the year. However, the system is not needs effective in the sense that it is not able to create additional work opportunities. If the social and economic production system of the State is to have the maximum impact on human development and quality of life of the people of the State then it must be both needs effective and capacity efficient.

Table 1
Growth of work force in Gujarat, 1981-2011

	1981	1991	2001	2011	1981-2011
Number of workers (million)	12.72	16.64	21.35	24.77	12.05
Growth rate (Per cent per year)		2.69	2.50	1.48	2.22
Growth accounted by the increase in population (Per cent)		71.54	81.80	118.19	85.77
Growth accounted by the increase in work participation rate (Per cent)		28.46	18.20	-18.19	15.23

Source: Author's calculations based on census data.

Table 2
Work participation rate by age categories in Gujarat: 2011

Region	Total	Male	Female
All ages			
Total	40.98	57.16	23.38
Rural	44.88	57.15	31.95
Urban	35.73	57.18	11.35
15-59 years			
Total	59.29	82.77	33.6
Rural	66.87	84.84	47.82
Urban	50.02	80.32	15.54
60 years and above			
Total	35.49	55.75	17.58
Rural	42.48	53.98	23.78
Urban	25.19	43.86	7.77
5-14 years			
Total	3.86	4.06	3.64
Rural	4.41	4.3	4.53
Urban	2.99	3.69	2.13

Table 3
Work participation rate in Scheduled Castes by age categories: 2011

Region	Total	Male	Female
All ages			
Total	39.85	55.44	23.1
Rural	43.39	56.38	29.57
Urban	35.34	54.25	14.77
15-59 years			
Total	57.52	80.14	33.03
Rural	64.3	82.98	44.05
Urban	49.61	76.83	20.23
60 years and above			
Total	32.78	50.05	17.93
Rural	38.57	58.35	22.23
Urban	23.17	37.03	10.41
5-14 years			
Total	3.14	3.35	2.87
Rural	3.2	3.14	3.27
Urban	3.04	3.71	2.25

Table 4
Work participation rate in Scheduled Tribes by age categories: 2011

Region	Total	Male	Female
All ages			
Total	49.71	55.49	42.79
Rural	50.65	56.54	44.66
Urban	41.29	56.04	25.81
15-59 years			
Total	75.76	86.04	65.27
Rural	77.91	86.78	68.88
Urban	58.74	80.29	36.05
60 years and above			
Total	55.58	71.43	41.8
Rural	57.29	73.02	43.5
Urban	35.22	51.31	22.54
5-14 years			
Total	6.23	6.19	6.27
Rural	6.38	6.29	6.46
Urban	4.7	5.12	4.74

Table 5
Age-specific work participation rates in Gujarat: 2011

Age	Total			Rural			Urban		
	Total	Male	Female	Total	Male	Female	Total	Male	Female
5-9	1.5	1.6	1.4	1.4	1.4	1.4	1.6	1.9	1.4
10-14	6.1	6.4	5.8	7.3	7.1	7.5	4.3	5.4	2.8
15-19	30.6	38.0	22.1	36.9	42.5	30.9	21.8	32.0	9.0
20-24	54.2	75.7	30.2	62.9	80.6	43.9	44.0	70.1	13.2
25-29	64.3	92.3	33.4	72.6	93.9	49.5	55.1	90.5	15.4
30-34	67.8	96.2	37.5	76.0	97.0	54.1	58.3	95.3	17.4
35-39	69.6	97.1	39.8	77.9	97.7	56.6	59.6	96.4	19.2
40-49	69.0	96.8	39.4	77.1	97.6	55.6	59.0	95.9	18.7
50-59	62.7	90.5	33.2	70.1	93.5	46.4	53.3	86.9	15.5
60-69	43.0	65.2	22.3	51.6	75.1	30.6	30.3	51.4	9.3
70-79	26.4	43.2	12.1	31.9	51.3	16.0	17.7	31.0	5.8
80+	17.9	31.5	8.1	19.5	32.8	10.0	15.5	29.7	5.2

Table 6
Workers sex ratio (females per 1000 males) in Gujarat: 2011

Age category	Total	Rural	Urban
All social classes			
All ages	376	531	175
15-59	371	532	170
60+	357	436	190
42137	780	949	475
Scheduled Castes			
All ages	388	493	250
15-59	381	490	244
60+	416	461	306
42137	750	943	519
Scheduled Tribes			
All ages	743	777	438
15-59	743	780	426
60+	673	680	557
42137	964	982	743

Table 7
Work force participation rate in Gujarat, 1981-2021

	1981	1991	2001	2011	2021
Total population					
Person	37.27	40.23	42.10	40.98	39.88
Male	52.91	53.57	55.02	57.16	59.61
Female	20.66	25.96	28.03	23.38	19.14
Rural population					
Person	40.80	45.51	47.55	44.88	42.30
Male	54.18	54.91	55.59	57.15	58.76
Female	26.85	35.60	39.04	31.95	25.46
Urban population					
Person	29.44	33.51	33.07	35.73	38.52
Male	50.17	54.75	54.12	57.18	60.30
Female	6.52	10.09	9.11	11.35	13.79

Remarks: Estimates for 2021 are projections.

Source: Estimates for 1981-2011 are taken from Bhagat and Das (2008)
Estimates for 2011 and projections for 2021 are author's calculations

Table 8
Main work participation rate in Gujarat, 1981-2021

	1981	1991	2001	2011	2021
Total population					
Person	32.22	34.12	33.66	33.70	33.78
Male	52.19	53.17	51.25	52.61	53.98
Female	11.03	13.74	14.53	13.12	11.78
Rural population					
Person	33.78	36.54	35.11	34.24	33.41
Male	53.27	54.42	50.41	51.36	52.33
Female	13.46	17.70	18.93	16.20	13.67
Urban population					
Person	28.78	32.20	31.26	32.97	34.75
Male	49.85	54.49	52.61	54.24	55.91
Female	5.49	7.62	7.23	8.80	10.50

Remarks: Estimates for 2021 are projections.

Source: Estimates for 1981-2011 are taken from Bhagat and Das (2008)

Estimates for 2011 and projections for 2021 are author's calculations

Table 9
Marginal work participation rate in Gujarat, 1981-2021

	1981	1991	2001	2011	2021
Total population					
Person	5.04	6.11	8.43	7.28	6.17
Male	0.72	0.40	3.77	4.55	5.39
Female	9.63	12.23	13.50	10.26	7.43
Rural population					
Person	7.02	8.97	12.44	10.64	8.95
Male	0.90	0.49	5.19	5.79	6.43
Female	13.40	17.90	20.11	15.75	11.81
Urban population					
Person	0.66	1.31	1.80	2.76	3.92
Male	0.32	0.26	1.51	2.94	4.80
Female	1.03	2.46	2.14	2.55	2.99

Remarks: Estimates for 2021 are projections.

Source: Estimates for 1981-2011 are taken from Bhagat and Das (2008)

Estimates for 2011 and projections for 2021 are author's calculations

Table 10
Share of non-agricultural workers in the work force in Gujarat, 1981-2011

	1981	1991	2001	2011
				Total population
Person	36.33	39.16	48.42	50.39
Male	43.18	48.24	55.68	56.15
Female	17.69	19.13	32.90	35.08
				Rural population
Person	18.56	20.90	28.76	24.65
Male	21.97	25.60	31.18	26.35
Female	11.39	13.20	25.08	21.43
				Urban population
Person	90.87	82.00	95.47	93.97
Male	92.53	86.60	96.52	94.85
Female	76.80	54.30	88.61	88.95

Source: Estimates for 1981-2011 are taken from Bhagat and Das (2008)
Estimates for 2011 are author's calculations

Figure 1
Work Participation Rate in Gujarat, 2011

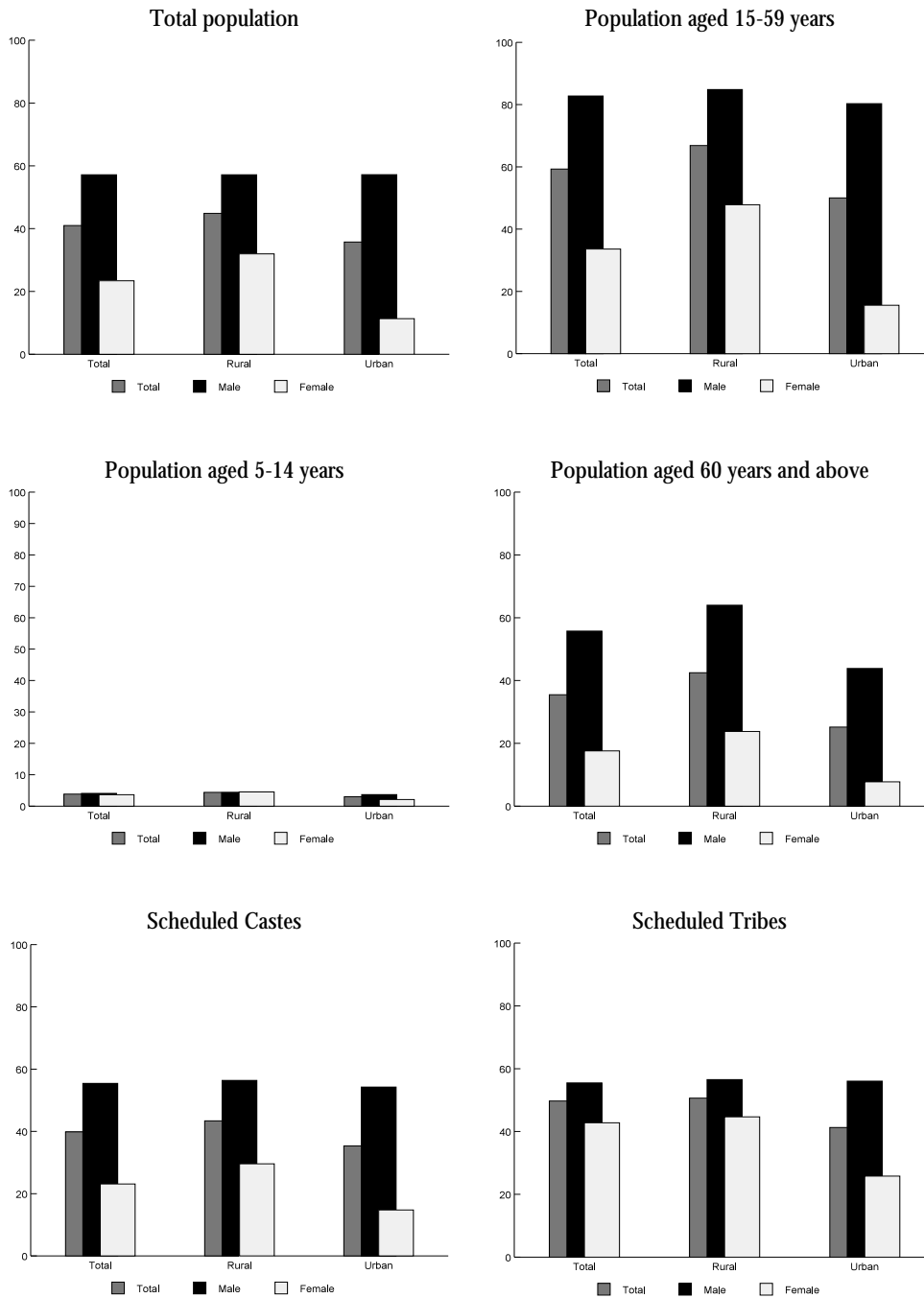


Figure 2
Age specific work participation rates

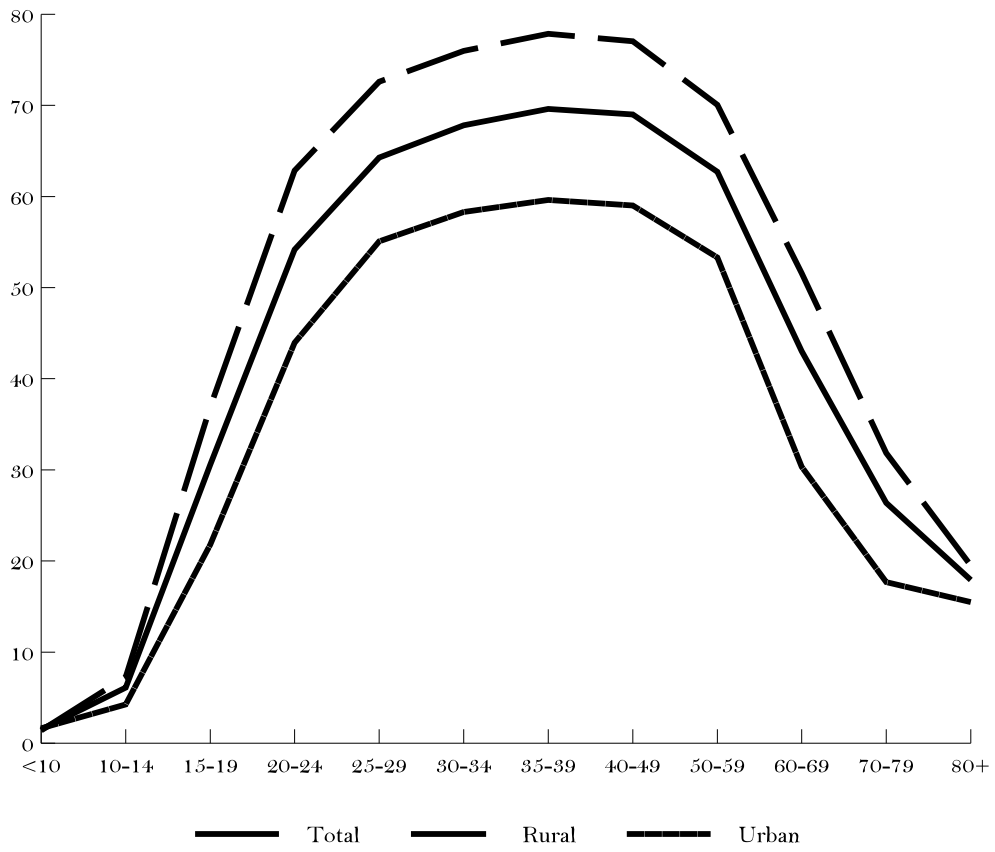


Figure 3
Work Participation Rate

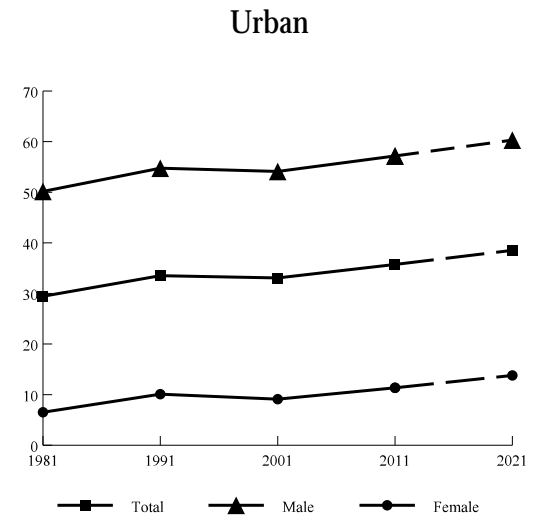
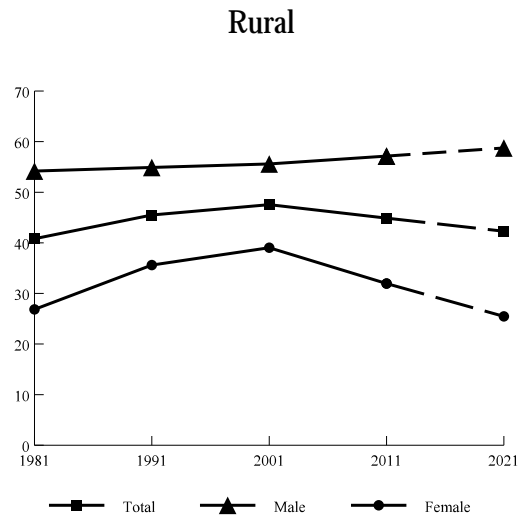
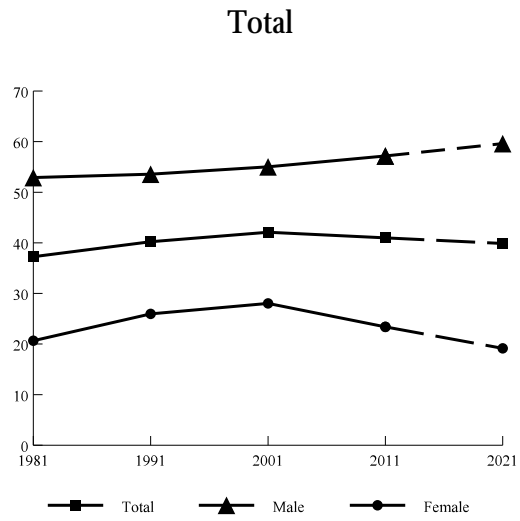


Figure 4
Main Work Participation Rate

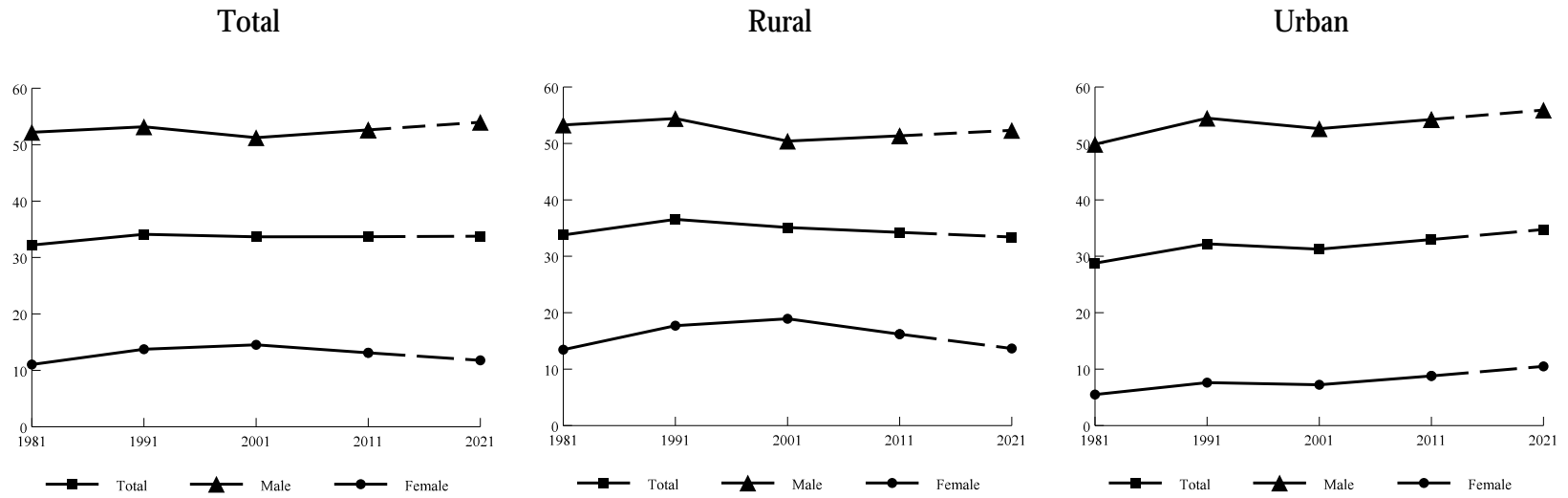


Figure 5
Marginal Work Participation Rate

