

1. Introduction

In an earlier paper based on the NSS Report on Key Results from the NSS 55th Round Employment-Unemployment Survey 1999-2000 (NSSO, 2000), we had examined the changes during the 1990s in the size and structure of work force; the extent of unemployment and under employment; labour productivity; days worked; and, wage earnings per worker and per head of population in rural and urban India (Sundaram, 2001). Since then the Provisional Population Totals based on Population Census 2001 (RGI, 2001) have been released which indicate that the India's population as on 1st March 2001 was 1027 million rather than the 1012 million in the official population projections for India (RGI, 1996). This necessitates revisions in the estimates of population and of work force for 1993-94 and 1999-2000 and hence also in the estimates of labour productivity.

Besides carrying out the necessary revisions in the size of the work force (and in labour productivity) based on the results of the 2001 Population Census, we offer in this paper a more detailed industrial distribution of the work force as well as an occupation distribution of the work force based on additional tables now available from the NSS 55th Round Employment-Unemployment Survey (NSSO 2001). A closer analysis of the 55th Round Tabulation and a better understanding of NIC 1998 showed that, in the Key Results report, the work force in "repair services" (industry group 97 as per NIC 1987) had been shown as part of Industry Division, Trade, Hotels and Restaurants (Division 6 as per NIC 1987). With the availability of separate estimates of work force in "repair services" for 1999-2000, and, consistent with the current practice in National Accounts (where repair services are merged with Manufacturing), work force in Manufacturing and Repair Services are combined together and, the estimated number of workers in "Repair Services" is removed from the estimates of work force in the Trade, Hotels and Restaurants sector for 1999-2000. Corresponding revisions have also been made in the estimates of work force in Industry Division 9 (Community, Social and Personal Services) for 1993-94. So that, for all the three Industry Divisions, namely, Manufacturing (including repair services), Trade, Hotels and Restaurants, and Community, Social and Personal Services, the work force estimates for 1993-94 and 1999-2000 are now fully comparable.

In order to lend a long-term perspective to the changes in the Industry-occupation structure of the work force, comparable estimates for 1961 based on the 1961 Population Census have been placed alongside the estimates for 1993-94 and 1999-2000.

In respect of agricultural wages and earnings, one of the issues highlighted in some recent studies, including the Mid-Term Appraisal of the 9th Five Year Plan, is the alleged slow down in the growth of real wages in rural India during the 1990s relative to the growth during the 1980s. These results are based on the wage-statistics from Agricultural Wages in India. We examine the evidence on average daily wage earnings from the NSS quinquennial Employment-Unemployment Surveys for 1983, 1993-94 and 1999-2000. Since the data from the NSS reflect the daily wages actually received by casual wage labourers for different operations over a very large number of sample person-days (over 268,000 in 1999-2000), the Employment-Unemployment Surveys are expected to provide a better database on this issue.

Finally, we examine the evidence from the Employment-Unemployment Survey on the issue of changes in the incidence of poverty on the basis of the size-distribution of per capita consumption expenditure emerging from the canvassing of an abridged consumer expenditure schedule from the sample households surveyed in the 55th Round Employment-Unemployment Survey. Being canvassed over a different set of households (from that surveyed for the 55th Round Consumer Expenditure Survey) with a 30-day reference period for food, paan, tobacco and intoxicants, as in the 1993-94 Survey, these estimates may be expected to be free from the problem of possible "contamination" from the simultaneous canvassing of expenditure on these items with two reference periods of 7-days and 30-days as in the 55th Round Consumer Expenditure Survey.

Admittedly, two sources of non-comparability with the results of the 1993-94 Survey would still remain. The first of these arises from the canvassing, in the 55th Round Employment-Unemployment Survey, of an abridged rather than a detailed consumer expenditure schedule as was done in the 1993-94 Survey. The second source of non-comparability arises from the fact that, in the 55th Round, both in the Consumer Expenditure Survey and in the Employment-Unemployment Survey, the

reference period of "last 365 days" was used in respect of expenditure on durables as well as certain items of miscellaneous expenditure such as school fees, medical expenses involving hospitalisation etc. In the 1993-94 Survey, the published size-distributions of per capita consumer expenditure are based on a uniform 30-day reference period for all items of expenditure.

Notwithstanding the above, the size-distributions from the Employment-Unemployment Survey provide an important alternative data base to examine the issue of changes in the incidence of poverty in the nineteen nineties. Given that the use of an abridged schedule is likely to result in an understatement rather than an overstatement of the consumption expenditure and since, durables and other items of consumption expenditure subject to the 365 day reference period in the 55th Round, do not figure significantly in the consumption basket of the poor (see Sundaram & Tendulkar, 2001), a reduction in the incidence of poverty established by reference to the size-distribution from the 55th Round Employment-Unemployment Survey, especially if it is sizeable, may be taken to be more definitive¹. This data base is used to derive estimates of proportion of population below the poverty line, separately, by gender, age and rural-urban location at the all-India level and separately for the rural and the urban populations in 15 major States. This data base is also exploited to examine, at the all-India level, the changes in the proportion of households below the poverty line for rural households differentiated by means of livelihood.

2. The Size of the Work force

We begin with our revised estimates of population and work force as on 1st January 1994 and 1st January 2000 - the mid-points of the Survey Years 1993-94 and 1999-2000. As noted in the introduction, the population estimates are based on an interpolation of the estimates of the population as revealed by the 1991 Population Census and the Provisional Population Totals from the 2001 Population Census. (Table 1). In relation to our previous estimates (Sundaram 2001), the revised

¹ In his paper to the NSS Golden Jubilee Seminar, Abhijit Sen, (Sen 2001) on the basis of his analysis of the NSS 51st, 52nd, 53rd and 54th Round Surveys, has drawn attention to the possibility that the use of the 365-day reference period for durables etc. could boost the consumption of the poor significantly enough to reduce the head count ratio below what it would have been with a 30-day reference period.

estimates imply a marginally smaller work force (in the aggregate and in the constituent segments) for 1993-94 - lower by a little over half a million. For 1999-2000, our revised work force estimates are higher by close to 4 million. This raises the rate of growth of aggregate work force during this six year period to slightly over 1 percent per annum compared to 0.8 percent per annum based on our earlier estimates. Our revised estimates also imply that the reduction in the absolute size of female work force in rural areas noted in our earlier paper becomes quite marginal - less than 2 lakhs.

Given the fact that in all the four population segments the crude worker population ratios for 1999-2000 are lower - and significantly so - than those for 1993-94, our earlier conclusion that in all the four population segments the rate of growth of work force is lower than the rate of growth of population continues to be valid.

In the context of the decline in the crude worker - population ratios some of our earlier conclusions bear repetition.

First, the decline in WPRs are not offset by any significant rise in the ratio of unemployed (on the Usual Status, PS+SS categorisation) in the population, so that the crude labour force participation ratios would also show a decline between 1993-94 and 1999-2000 in all the four population segments.

Second, to a significant extent, the reduction in worker - population ratios reflects a beneficial rise in the student-population ratios - not only in the 5-9 and the 10-14 age-groups covering the primary and the middle school system, but also in the 15-19 and the 20-24 age-groups indicating a rising participation in secondary and higher level education.

Third, in respect of the decline in WPRs in the age-groups 25 years and above where there are no offsetting increases in participation in education, at least for rural women, the declines in the WPRs on the usual principal plus subsidiary status categorisation in the 25 and above age-groups (except 50-54) is due entirely to

A detailed evaluation of this hypothesis is under way and we will report these results at the completion of that exercise.

declines in WPRs on the subsidiary status. In the case of urban women too, in all the five-year age-groups between 20 and 59 years, declines in participation rates on the subsidiary status have been the major factor underlying the declines in WPRs on the Usual (principal plus subsidiary) Status categorisation.

To explore this issue further we present in Table 2 the age-specific, Usual Status (PS+SS) worker-population ratios by rural-urban location and by gender from the quinquennial Employment-Unemployment Surveys beginning from 1983 upto and including the 55th Round Survey. It is seen that:

- i. In the case of both rural males and rural females, in all the younger age-groups, upto and including the 25-29 age-group, over all the four quinquennial Rounds, there is a broad downward drift in age-specific work participation rates. The same holds true for urban males and urban females as well but only upto the 20-24 age-group;
- ii. In all the four population segments a decline over time in the worker population ratios in the open-ended age-group "60 and above" is to be expected with the rising share of the older (65 years and above) population. This is confirmed for both urban males and urban females. In the case of both rural males and rural females there was an unusual increase in WPRs in the 60+ age-group between 1987-88 and 1993-94 which tends to exaggerate the decline in WPRs in this open-ended age-group between 1993-94 and 1999-2000;
- iii. In respect of rural women, we had noted above that those in the 50-54 age-group were an exception to the general pattern that the declines (between 1993-94 and 1999-2000) in WPRs on the PS+SS categorisation in the 25 and above age-groups were due entirely to declines in WPRs on the subsidiary status. Comparisons with the earlier rounds of survey suggest that, as far as the Usual Status (PS+SS) WPR for rural women in the 50-54 age-group is concerned, it is the 1993-94 level (with a sharp rise over the levels in both 1983 and 1987-88) that is an outlier. The same is also true for the WPRs for rural women in the 60+ age group.
- iv. In the case of urban females also, the 1993-94 level of WPR in the 50-54 age-group, following a sharp rise between 1987-88 and 1993-94, appears to be an

outlier in relation to the other three survey years. In the 40-44 and the 45-49 age-groups also, the rise in WPRs between 87-88 and 93-94 serves to exaggerate the subsequent decline in 1999-2000;

- v. In the case of rural males too, in respect of the age-groups 50-54, 55-59 and 60 and above, it is the 1993-94 levels that are the outliers.
- vi. In the case of both rural males and urban males, the variations in WPRs in the prime age-groups between 30 and 49 (upto 54 for urban males) are fairly small and, by and large, within the margins of sampling errors.

If the above analysis is accepted, then, the puzzles that remain are:

- a) for urban males, the sharp decline between 1993-94 and 1999-2000 (at least, a sharper decline relative to the decline over the period 1983 to 1993-94) in the WPR in the 25-29 age-group;
- b) also for urban males, the sharp decline between 1993-94 and 1999-2000 in the WPR in the 55-59 age-group - a decline that, in fact reverses a general upward drift in the WPRs in this age group over the preceding three surveys; and,
- c) In the case of urban females, the sharp decline between 1993-94 and 1999-2000 in the WPR in the 30-34 age-group.

Overall, while the decline in WPRs in the younger age group between 1993-94 and 1999-2000 in all the four population segments is a continuation of a longer-term trend reflecting a beneficial rise in student-population ratios over this period, the decline between 1993-94 and 1999-2000 in the WPRs in the 25 and above age-groups for both rural and urban women largely, if not entirely, reflects a decline in participation rates on the subsidiary status.

For men in both the rural and the urban areas, variations in WPRs in the prime age-groups between 30 and 49 are fairly small and largely within the margins of sampling fluctuations. Also, where the declines are outside the margins of errors, for both men and women and in both rural and urban areas, the decline in WPRs between 1993-94 and 1999-2000 is getting exaggerated by the fact that in a number of cases, the 1993-94 levels are outliers when seen against WPRs in the earlier quinquennial surveys.

3. Industrial Distribution of Work force

In Tables 3,4,5, we present the industrial distribution of the work force, respectively, for the total (rural plus urban), the rural and the female work force. Since absolute number are given, parallel distributions for the urban work force and the male work force can be easily derived.

As noted in the introduction, to place the change in the industrial distribution during the 1990s in a long-term perspective, we have also presented the estimates for 1961.

The estimates for 1961 are based on the 1961 Population Census. The results of the 1961 Population Census, based on the full count are available at 3-digit detail for both Industry and Occupation Classification (for workers other than Cultivators and agricultural labourers) in two volumes (II B (I) and II B (ii)) of General Economic Tables. These have been suitably aggregated to correspond to the 2-digit classification of NIC 19087. As noted earlier, the 1999-2000 results have also been recast, on the basis of 2/3-digit detail of NIC 1998 now available, to make them comparable with the NIC 1987 categorisation.

Work force estimates of the 1961 Population Census are generally accepted as being broadly comparable to those on the Usual (PS+SS) Status drawn from the quinquennial National Sample Surveys on Employment and Unemployment in terms of concepts and implementation judged in terms of the resultant worker-population ratio - especially of women. However, as we have argued elsewhere (Sundaram, 1989), it is possible that the 1961 Population Census did not fully capture women's participation in work in livestock activities not resulting in non-marketed output. If and to the extent this is the case, the reported increase in the share of livestock sector in the work force since 1961 may be overstated. By the same token, the observed decline (relative to 1961) in the share of the agriculture (and allied activities) sector in the work force would be understated.

Consider first the changes in Industrial distribution of the work force over the entire period 1961- 1999-2000.

For the total work force, there is a 16 percentage point decline in the share of the Agriculture, Forestry & Fishing sector. This decline is greater than the 10 percentage point decline in the share of this sector in the rural work force and reflects the effect of a shift in the rural-urban composition of the work force towards the latter.

Of this 16 percentage point decline in the share of the agriculture sector, less than 3 percentage points represent the gain in the share of the Manufacturing (and repair services) sector, with the Construction sector recording a 3 percentage point gain in its share in the work force.

It is the Services sector, as a group, that recorded a 10 percentage point gain in its (collective) share in the work force - with half of this being accounted for by the Trade, Hotels & Restaurants Sector. The Transport, Storage and Communications, and, the Community, Social and Personal Services sectors each gained 2 percentage points in their (respective) shares in the work force.

In respect of female work force, starting from a much higher share (861 per 1000) instead of 759 per 1000) the decline in the share of the agriculture (and allied activities) sector over the 39 year period has been significantly less (108 points per 1000 instead of 160 points per 1000) than was recorded for the total work force. Correspondingly the gains of the other sectors too have been less marked.

Focusing on the 1990s, the pace of decline in the share of the agriculture sector in the total work force has been faster: nearly twice as fast as that realised over the 33 year period between 1961 and 1994. Parallely, the gains in the shares of the other sectors have also taken place at an equally accelerated pace during the 1990s - except that, in the case of the Manufacturing (and repair services sector), this acceleration, though present, has been much less marked (from 0.6 percent per annum between 1961 and 1994 to 0.8 percent per annum in the 1990s).

In terms of the absolute number of workers, in the Agriculture and Allied Activities sector taken as a whole, the reduction in the number of workers is seen to be more modest (0.9 million) than indicated in our earlier paper. In fact, in rural areas

and among male workers the number of workers in this Industry Division has increased between 1993-94 and 1999-2000.

Within the broad Agriculture and Allied Activities Sector, crop production has recorded a reduction in the size of its work force of 1.5 million in the aggregate but not in the rural areas - where, in fact, we have a marginal increase in the number of workers in crop production. Significantly, the reduction in the number of female workers, both in the broader agricultural and allied activities sector and in the crop-production sub-sector, has been much greater than in the total work force. The reduction in the size of the work force in the livestock sector is almost totally among female workers but is somewhat more evenly split across the rural-urban divide².

Moderating the decline in the size of the work force in the agriculture and allied activities sector in the total work force and among female workers (and contributing to the increase in the rural work force in this sector) is the increase of about 2 million workers engaged in providing agricultural support services in the aggregate which is concentrated, almost exclusively, in the rural areas.

With the clubbing of repair services with the Manufacturing sector in line with the current practice in National Accounts, the absolute additions to the work force in the Manufacturing and Repair Services sector, and consequently also the gains in the share of this sector in the work force, is greater than what was reported in our earlier paper.

The addition of a little over 5 millions to the work force of the Manufacturing and Repair Services sector between 1994 and 2000 is more or less evenly split across the rural-urban divide. However, across the gender divide, only 20 percent of the additional work force in this sector are female workers.

In contrast to the rising share of the manufacturing sector as a whole, a major sub-sector, namely, textiles and textile products has suffered a sizeable decline in its

² The greater reduction in the number of female workers in crop-production and the live-stock sub-sectors and in the broader, agriculture and allied activities sector has to be seen against the background of the sizeable reduction in the worker-population ratios on the subsidiary status.

share in the total, rural and the female work force over the entire period. In the case of the total work force, the share of this sector has declined from 35 per 1000 in 1961 to 26 per 1000 in 2000. In terms of absolute number of workers, between 1994 and 2000 less than 1.5 lakh workers have been added in the Textiles & Products Sector. Further, all the increase in employment in this sub-sector has taken place in the rural areas with the employment in urban areas in this sector actually declining by about 93,000. Also, taking both the rural and urban areas together, employment of women workers in the textiles and products sector has declined by 143,000 between 1994 and 2000.

Another 2-digit manufacturing sector that invites our attention is that of Beverages and Tobacco. In the aggregate, the share of this sector in total work force has trebled over the period 1961-2000. Even over the shorter period since 1994, the share of this sector has increased by 2 points (per 1000) in the total work force and by 5 points in female work force. In fact, between 1994 and 2000, the additions to the female work force in the industry (657,000) exceeds the additions to the total work force in this industry (515,000). The central cause for concern about these developments arises from the fact that an overwhelming proportion of women workers in this sector are engaged in the manufacture of biri.

Two other non-agricultural sectors where the absolute number of workers has actually declined over the 1990s are the Mining & Quarrying (over 400,000) and the Electricity, Gas and Water (over 300,000) sectors

Construction is one of the sectors that has shown a sizeable addition to its work force - by close to 5.5 million. Of this increase, over 60 percent has been in the rural areas. However, less than 10 percent of the incremental work force in this sector were women workers.

As we shall show presently, the expansion of the work force in the Construction sector outstripped the growth in gross value added originating in the Construction sector resulting in an absolute reduction in labour productivity or gross value-added per worker. The changes in the size of the work force in the Construction sector relative to the changes in GDP originating in that sector highlight

a more general point: **elasticity of employment with respect to value-added (in this case > 1) and changes in labour productivity (in this case a reduction in the absolute size of value-added per worker) are obverse sides of the same phenomenon. Focusing exclusively on employment elasticity one can easily lose sight of the consequences for labour productivity.**

Drawing on our earlier paper, which showed a sharp rise in the number of workers in Industry Division 6 (as per NIC 1987), covering the Trade (whole sale and retail) and Hotels and Restaurants sub-sectors, some commentators have talked about expanding "McJobs" (Jairam Ramesh, 16 April, 2001) and of India becoming a "restaurant and bar economy" (Gail Omvedt, 7 May, 2001).

As noted in the Introduction, our earlier paper was based on a categorisation of the work force presented in the NSS Report on Key Results of the 55th Round Survey based on National Industrial Categorisation (NIC) 1998 corresponding broadly to the one-digit categorisation as per NIC 1987 used in the 1993-94 Industrial Distribution of the work force. With the availability now of a more detailed Industrial distribution of the 1999-2000 work force and a better understanding of NIC 1998 the data have been suitably re-grouped to make the estimates comparable over time.

On a comparable basis, the number of workers in the "Hotels and Restaurants" sector have grown from 3.4 million in 1993-94 to 4.6 million in 1999-2000. Compared to this, the work force in the Manufacturing and Repair Services has grown by a little over 5 million (from 43.2 to 48.2 million) over the same period. Even within the broader Industry Division, Trade, Hotels and Restaurants, the Hotels and Restaurants sub-sector accounted for less than 15 percent of the incremental work force in this Industry Division. Among women workers too, the Hotels and Restaurants sub-sector has added less than 3 lakh workers over the six year period. So that, while "McJobs" have indeed expanded in the 1990s, such jobs accounted for just about 5 percent of the incremental work force. And, assuredly, with a share of a little over one percent in the total work force and about half that in the rural work force and the female work force for the Hotels and Restaurants sub-sector, India is in no imminent danger of becoming a "restaurant and bar economy"!

With 4 million workers added to its work force, Transport, Storage and Communication is another sector which has absorbed over 15 percent of the increase in the total work force between 1993-94 and 1999-2000. Of this addition of 4 million workers in the TCS-sector, a little over half has taken place in the rural areas. However, women workers have contributed only marginally (0.1 million) to the additions to the work force in this sector.

Community, Social and Personal Services is another sector which has suffered an erosion in its share in the total work force and in the rural work force - but not in the female work force - between 1994 and 2000.

Taking all four population segments together, while there has been a marginal decline in the share of Public Administration and Defence (from 28 per 1000 to 27 per 1000), there has been a small rise (240,000) in the absolute number of workers in this sector.

Within the broader group of Community, Social and Personal Services (Industry Division 9 as per NIC 1987) two developments are noteworthy.

First, there has been a rise in both the absolute number of workers and of the share in work force in the two social sectors: Education and Research and Medical and Health Services³. Some of this increase in employment in both the social sectors has taken place in rural India also.

Another significant change over the 1990s is the reduction in the absolute number of workers in personal services by over 1.2 million in the aggregate with a decline of over half a million for women workers. **Given that this segment has been traditionally a low-productivity - low income - per - worker sector, a reduction in**

³ In NIC 1998, Research and Development has been shifted from the rubric of social services to that of business services. However, in the NSS Employment-Unemployment Survey, the number of sample persons in this sector has been too small to yield a share of greater than 0.5 per 1000 in the work force in all the four population segments and hence is not reported separately. Hence such employment could not be regrouped to match the NIC 1987 categorisation. In the 1999-2000 Survey, therefore, employment in the R & D sector, if at all captured in the sample survey, would be reported as part of Industry Division Finance, Insurance, Real Estate and Business Services. To the extent of such a regrouping of employment in research and development, the increase in employment in the industry group "Education & Research Services" would be understated.

the size and share of the personal services sector must be viewed as a positive development in the employment situation in the nineteen nineties.

4. Occupation Structure

Estimates of the Occupational distribution of the work force, separately for the rural, urban and the total work force, for three time points: 1961, 1993-94 and 1999-2000 are presented at the broader Occupation-division level in Table 6 and for identified 2-digit occupation groups in Table 7.

Reflecting the declines in the share of the agriculture and allied activities in the industrial distribution of the work force, the share of the occupation category: Farmers, Fishermen, Hunters, Loggers and Related workers also falls from 73 percent in 1961 to a little under 60 percent in 2000. Over the 1990s, not only the share but also the absolute number of workers in this category has declined - by over 2 million workers, equally divided between the urban and the rural areas. From Table 7, it can be seen that, over the 1990s, while the number of cultivators has declined sharply - by over 6.5 million - this has been partially offset by an over 3 million increase in the number of agricultural labourers.

Over the entire period 1961-2000, the share of the two top-end occupation categories (Professional & Technical and Related workers; and, Administrative, Executive and Managerial Workers) has increased by about 2 percentage points in each case. Over the 1990s, however, while the share of the first category has stagnated that of Division 2 has increased from 19 per 1000 to 31 per 1000.

In the Professional and Technical workers category, the 2 identified 2-digit groups are: Nursing and other Medical and Health Technicians; and, Teachers. In the former category, (i.e. Nursing & Medical), the growth in the number of workers has sharply accelerated over the 1990s: from about 2.7 percent per annum between 1961 - 1994 to 6.9 percent per annum between 1994 and 2000. In contrast, there has been a slow down in the growth of teachers - from 4.3 percent per annum (1961-1994) to 2.7 percent per annum between 1994 & 2000.

It is significant that the share of clerical and related workers in the urban work force has fallen over the entire period as also over the two sub-periods. The share of sales workers has decreased in both rural and urban work force - albeit marginally - and the equally marginal rise in its share in the total work force merely reflects a rise in the share of urban work force in the total.

Also noteworthy is the significant rise in the share of Production and Related workers in the rural work force between 1994 and 2000: with close to 7 million additional workers, the share of this mixed category has risen by 19 points (per 1000) over the six years of the 1990s compared to a 17 point rise over the 33 years between 1961 and 1994.

At the 2-digit detail, three developments are noteworthy. First, is the decline over the 1990s, in the absolute number of workers in the category, "Spinners, Weavers, Knitters, Dyers etc." from 7.1 million in 1994 to 5.8 million in 2000. This decline is partially offset by a rise of about half a million workers - in the category of Tailors, dress-makers etc.

The second, is the decline over the 1990s in the absolute number of workers in the occupation category 82-89 in the rural work force - from 5.3 million in 1994 to 3.5 million in 2000⁴.

Thirdly, we have a sharp increase in rural India, in the number of construction related workers (from 3.9 million in 1994 to 6.3 million in 2000) and of Transport equipment operators (from 2.6 to 4.2 million) between 1993-94 and 1999-2000.

Overall, despite a sizeable reduction in the share of such workers in the total work force, India still remains a land of Farmers, Fishermen, Hunters and Loggers. At the other end of the skill spectrum, Professional and Technical workers and Administrative, Executive and Managerial workers together formed less than 7 percent of the total work force at the beginning of the year

⁴ This is a mixed bag of occupations comprising stone cutters and carvers; blacksmiths, tool makers and machine tool operators; machinery fitters; electrical fitters; sound equipment operators and cinema

2000. Production process workers too accounted for less than 20 percent of the workers in 1999-2000.

5. Labour Productivity and Wages

Consequent on the revision in the size of the work force and appropriate allocation of "repair services workers" to the Manufacturing sector consistent with the current practice in National Statistics, the estimates of labour productivity we had reported in our earlier paper need to be revised. The revised estimates are presented in Table 8. Overall, the revision reduces the annual average rate of growth of labour productivity in almost all sectors except the Trade, Hotels and Restaurants (THR) sector. With the elimination from the THR-sector of "repair services" workers, numbering 4.2 million in 1999-2000, the rate of growth labour productivity in this sector is raised significantly - from 2.7 percent per annum reported in our earlier paper to 4.45 percent per annum. In the Construction sector, the revision in the size of the worker results in converting a marginal growth in labour productivity to a marginal decline in labour productivity.

Notwithstanding the generally downward revision in the estimates of labour productivity growth, the overall conclusion of a sizeable growth in labour productivity - more or less across the board with construction sector as the significant exception - still remains valid.

With the already noted exception (construction), labour productivity has grown at over 3 percent per annum in all sectors, with the Manufacturing sector and the economy as a whole recording a 5.8 percent per annum growth in labour productivity. It also needs to be emphasized that, in all the sectors recording a growth in labour productivity over the 1990s, this growth has been at a much faster rate than that recorded between 1961 and 1994.

In our earlier paper (Sundaram 2001), we had shown that this significant growth in labour productivity had translated into an equally significant and wide

projectionists; plumbers & welders; jewellery and precious metal workers; and, glass formers, potters and related workers.

spread growth in real daily average wage earnings of casual wage labourers: both for males and females and in both rural and urban India. This conclusion, not being affected by the changes in the size and the structure of work force noted above, continues to be valid.

Recently, however, a question has been raised as to whether the rate of growth of rural wages has not slowed down during the 1990s. We address the question by bringing together comparable estimates of average daily wage earnings of adult (15-54) casual wage labourers in rural India, and separately for males and females, for 1983, 1993-94 and 1999-2000, with all nominal values converted to constant 1993-94 price-based estimates by reference to the Consumer Price Index for Agricultural Labourers (CPIAL). These are presented in Table 9. Here we distinguish between manual work in cultivation and other agricultural activities, non-manual work in agriculture, manual work in non-agriculture and non-manual work outside agriculture. In addition, weighted average estimates (with person-days in employment as weights) for manual work in agriculture, Casual labour in agriculture, casual labour in non-agriculture and casual labour in all activities are presented. Also presented are the average daily wage earnings of workers who got employment in Public Work.

For adult rural male casual wage labourers, with the exception of "non-manual work in agriculture", in all the other nine-categories distinguished, the rate of growth of wages between 1994-1000 has been about the same (in fact marginally higher) or significantly higher than that realised between 1983 and 1994. In the case of adult rural female casual labourers, a sharp slow down in the growth of average daily wage earnings for "manual work in other agricultural work" (other than cultivation), also drags down the rate of growth during the 1990s of average daily wage earnings for "manual work in agriculture" and for "casual labour in agriculture" below that realised during the period 1983 to 1994. In all the eight other cases distinguished in the Table, the growth rate of average daily wage earnings in real terms has been about the same or higher during the 1990s than that between 1983 and 1994.

Thus, except for rural females engaged in manual work in other agricultural work and for manual work in agriculture as a whole, the evidence from the NSS Employment-Unemployment Surveys offers no support at all for

the hypothesis of a slow down in the rate of growth of average daily wage earnings of adult casual labourers during the 1990s relative to that between 1983 and 1994.

6. Unemployment

Before examining the evidence from the 55th Round Employment-Unemployment Survey on the issue of changes in the poverty-prevalence rates over the 1990s, it would be useful to summarise the changes in unemployment and underemployment drawing on our earlier paper. The key results are:

- i. An increase in the current daily status unemployment rate in three of the four population segments, with urban women as the sole exception. The increase in the daily status unemployment rate has been the steepest for rural males (29 percent): an increase which could well be due to a change in the status composition of the work force (a rise in the proportion of casual labourers and a reduction in the share of the self-employed) and a conversion of the underemployment of the erstwhile self-employed into open unemployment of the casual labourers;
- ii. a reduction in the unemployment rates on the usual principal status for the educated in almost all the four population segments; and,
- iii. an increase in self-perceived underemployment captured by a reduction, over the 1990s, in the proportion of usual status workers who had not sought additional work. However, much of this is reflected in an increase in the proportion of usual status workers who sought additional work on "Some days" rather than on "most days". Also, even among those adding to the proportion of workers who sought additional work on "most days", the principal reason was the need to supplement income rather than lack of work per se.

7. Poverty

In our earlier paper, we had shown that, despite a marginal reduction in the number of days worked by male workers - per usual (ps+ss) Status worker - and the

reduction in crude worker-population ratios, the sizeable and broad-based growth in average daily wage earnings in real terms and the rise in the number of days worked by female worker was adequate to raise real average wage earnings per capita at over 2.5 percent per annum in both rural and urban India over the period 1993-94 to 1999-2000⁵. This result was consistent with a decline, over the same period, in poverty ratios in both rural and urban India. However, given the fact that the results of the 55th Round Consumer Expenditure are still mired in controversies regarding possible "contamination" of results with a 30-day reference period by the simultaneous canvassing of expenditure details on a 7-day reference period, it would be useful to examine the evidence on this issue from the Employment-Unemployment Surveys. For reasons discussed in the Introductory section, such an exercise would be valuable despite the residual problems of comparability (with the results of the 1993-94 survey) that would still remain.

We present, in Table 10, the estimates of the proportion of population in households below the poverty line by gender, age and rural-urban location, **at the all-India level**, for 1993-94 and 1999-2000 based on the distribution of population by per capita consumer expenditure size-classes derived from the Employment-Unemployment Surveys for 1993-94 and 1999-2000. Table 11, presents similar results for the **proportion of households** below the poverty line for types of rural households differentiated by their principal means of livelihood.

At the all-India level, the results are clear and unambiguous. Except in respect of girl children in urban India, there is a definite and unambiguous decline in the proportion of population in households that lie below the poverty line. The same holds true, in terms of the proportion of households below the poverty, for all the types of households distinguished by reference to their principal means of livelihood. Particularly significant is the 7.5 percentage point decline in the incidence of poverty for agricultural labour households and a 6 percentage point decline for other labour

⁵ A Similar exercise focused on the high-poverty group of rural agricultural labour households (not reported here) shows that, in their case too, estimates of annual wage-earnings per capita (at constant 1993-94 prices) for 1993-94 and 1999-2000 imply an average growth at 2.35 percent per annum. As we shall see presently, consistent with this growth in earnings per capita, our estimates of poverty prevalence rates based on the NSS 55th Round Employment-Unemployment Survey show a reduction of close to eight percentage points in the proportion of agricultural labour households below the poverty line.

households. We are confident that this result of a clear and sizeable decline in the poverty prevalence ratios among agricultural labour households and other labour households would survive any adjustment for use of a 365-day reference period for durables etc. in the NSS 55th Round Survey.

By the same token, the decline in the incidence of poverty in the self-employed households is much less striking. Equally important to note is the fact that, the order of decline in the proportion of population below the poverty line (between 2 and 3 percentage points) is much less than what has been claimed on the basis of the 55th Round Consumer expenditure survey.

Overall, at the all-India level, the results of 55th Round the Employment-Unemployment Survey confirms the direction of change: the prevalence of poverty has indeed declined over the 1990s. However, the order of decline is much less than that indicated by the 55th Round Consumer Expenditure Survey.

Is the above conclusion also valid for the major states individually? To answer this question, we present in Table 12, estimates of poverty prevalence ratios for all-India and 15 major States for 1993-94 and 1999-2000 based on the size-distribution now available from the 55th Round Employment-Unemployment Survey. These estimates are presented separately for the rural and the urban populations in each State.

The key results to emerge from Table 12 are:

- i. In respect of rural areas in six States (Assam, Karnataka, Madhya Pradesh, Orissa, Tamil Nadu and West Bengal) the poverty prevalence ratios in 1999-2000 are higher than in 1993-94 while in Maharashtra, there has been virtually no change in the poverty ratios between 1993-94 and 1999-2000.

At the all-India level, and in eight of the fifteen major States, rural poverty prevalence ratios have declined over the 1990s. Of these eight states, except in three States (Andhra Pradesh, Bihar and Gujarat) where the decline in

poverty ratios is less than 10 percent (of the 1993-94 value), the decline has been sizeable: ranging from 19 percent in Punjab to 51 percent in Haryana;

- ii. In urban areas, a decline in poverty ratios is seen in eight of the fifteen states - besides all-India. Among these eight states (Andhra Pradesh, Gujarat, Karnataka, Maharashtra, Orissa, Rajasthan, Tamil Nadu and West Bengal) the order of decline was less than 5 percent in Maharashtra and between 5 and 10 percent in Andhra Pradesh and Orissa. In the other five states, the decline ranged between 20 and 25 percent of the 1993-94 levels.

As for the other seven states, the poverty ratios remained more or less unchanged in Bihar, Haryana, Karnataka, and Punjab, while in Uttar Pradesh, the increase was of the order of 6 percent. In two states, Assam and Kerala, the poverty ratios increased by more than 13 percent between 1994 and 2000.

Overall, the confirmation that we obtained from the Employment-Unemployment that, at the all-India level the prevalence of poverty in India had indeed declined over the 1990s is not uniformly present across all the major States. While in a majority of the 15 States analysed (albeit a majority of one) poverty ratios have indeed declined between 1993-94 and 1999-2000, in both the rural and the urban areas, in seven States poverty ratios have either remained unchanged or have even increased over the 1990s.

This above result is, of course, in sharp contrast to the results of an across-the-board and sharp reduction in poverty obtained from the 55th Round Consumer Expenditure Survey.

The only effective way of resolving this conflict of results from the two Surveys is to track the consequences of the two sources of non-comparability (with the 1993-94 Survey) that remain: (I) the use of an abridged consumer expenditure schedule in the 55th Round Employment-Unemployment Survey; and, (ii) the use of a 365-day reference period in respect of expenditure on durables as well as certain items of miscellaneous expenditure.

In our earlier paper, we had examined, at the all-India level, the combined effect of a reduction in the number of days worked in year (for males) and the growth in real daily wage-earnings to show a significant growth over the 1990s in average wage-earnings on a per capita basis (despite a reduction in worker-population ratios) and argued that such a result was consistent with a reduction in poverty at the all-India level. A parallel analysis at the level of individual states would offer another approach to resolve the conflicting results from the 55th Round Consumer Expenditure and Employment-Unemployment Surveys. The draft report on the 55th Round Employment-Unemployment Survey, by providing the data on average daily wage earnings of casual wage labourers at the level of individual States, has provided one key component for this exercise. However, in the absence of parallel, processed data from the 1993-94 Survey it is not possible to carry out the analysis presently.

We may now summarise our principal results.

First, revisions based on the Provisional Population Totals from the 2001 Population Census raises the rate of growth of aggregate work force between 1994 and 2000 to a little over 1 percent per annum with only a marginal reduction in the absolute size of female work force in rural areas.

Second, while the decline in worker-population ratios in the younger age-groups between 1993-94 and 1999-2000 represents a continuation of a longer-term trend reflecting a beneficial rise in student-population ratios, in the 25 and above age-groups the decline in WPRs in the 1990s is getting exaggerated by the fact that, in a number of cases, the 1993-94 levels are outliers when seen against the WPRs from the earlier quinquennial Surveys. In other cases, either the variations are by and large within margins of sampling fluctuations (rural and men in the age-groups between 30 and 49) or, as in the case of both rural and urban women, they largely reflecting declines in work participation on the subsidiary status.

Third, the reduction in the number of workers in the agriculture and allied activities is more modest than indicated in our earlier and is seen to be concentrated among women workers.

Fourth, a misclassification of the work force in repair services earlier had: (i) exaggerated the growth of work force in the Trade, Hotels and Restaurants sector; (ii) moderated the growth in employment in the Manufacturing sector; and, (ii) exaggerated the decline in the share of the Community, Social and Personal Services (taken as a group) in the total work force.

Fifth, seen in relation to the industrial distribution of the work force in 1961, the pace of decline in the share of agriculture (and parallely, gains in the shares of other sectors) has been faster between 1994 and 2000 relative to the change between 1961 and 1994.

Sixth, a noteworthy change during the 1990s has been the reduction in the absolute number of workers in personal services by over 1.2 million in the aggregate. Given that this segment has been traditionally low-productivity - low income-per-worker sector, this reduction in the size and share of the personal services sector must be viewed as a positive development in the employment situation in the nineteen nineties.

Seventh, in terms of occupation structure, despite a sizeable reduction of such workers in the total work force, India still remains a land of Farmers, Fishermen, Hunters and Loggers. At the other end of the skill spectrum, Professional and Technical Workers and Administrative, Executive and Managerial Workers together formed less than 7 percent of the work force at the beginning of the year 2000.

Eighth, revisions in the estimates of work force consequent on the 2001 Population Census have tended to dampen the growth in labour productivity (relative to our earlier estimates). While the re-allocation of repair-service workers to the Manufacturing sector accentuated the dampening of labour productivity growth, it has raised the labour productivity growth in the Trade, Hotels and Restaurants and the Community, Social and Personal services sectors.

Ninth, the result in our earlier paper of a wide spread growth in real average daily average wage earnings of casual labourers, not being affected by the changes in the size and structure of the work force, continues to remain valid. Further, except for

rural females engaged in manual work in other agricultural work (other than cultivation) and for manual work in agriculture as a whole, the evidence from the NSS Employment-Unemployment Surveys offers no support at all for the hypothesis of a slow down in the rate of growth of average daily wage earnings of adult casual labourers during the 1990s relative to that between 1983 and 1994.

Finally, at the all-India level, the results of the 55th Round Employment-Unemployment confirms that the poverty ratios have indeed declined over the 1990s. However, at the level of individual states, the results are more mixed. While in eight out of fifteen major States, poverty ratios have indeed declined over the 1990s, in seven others it has remained either unchanged or have even increased. In all-cases, even at the all-India level, the order of decline (wherever that has materialised) in the poverty prevalence rates revealed by the Employment-Unemployment Survey has been significantly smaller than that revealed by the 55th Round Consumer Expenditure Survey. Clearly, there is scope for further work in terms of tracking the consequences for poverty of the two remaining sources of non-comparability with the results of the 1993-94 Survey.

Table1: Estimates of Population and Work Force by Gender and Rural-Urban Location: All-India 1993-94 - 1999-2000

(in '000)

Population Segment	Estimates of Population as on		Estimates of Usual Status (PS+SS) Work Force as on		Usual status (PS+SS) Crude Worker Population Ratios (Per 1000)	
	1.1.94	1.1.2000	1.1.94	1.1.2000	1993-94	1999-2000
Rural Males	338,628	370,761	187,266	196,874	553	531
Rural Females	317,881	348,104	104,265	104,083	328	299
Rural Persons	656,509	718,865	291,531	300,957	444	419
Urban Males	124,930	148,853	64,964	77,106	520	518
Urban Females	112,566	136,367	17,337	18,955	154	139
Urban Persons	237,496	285,220	82,301	96,061	347	337
All Areas: Males	463,558	519,614	252,230	273,980	544	527
All Areas: Females	430,447	484,471	121,602	123,038	283	254
All Areas: Persons	894,005	1,004,085	373,832	397,018	418	395

Notes: 1. Estimates of total Male and Female Population as on 1.1.94 and 1.1.2000 (the mid-points of Survey year 1993-94 and 1999-2000) are obtained by interpolation from Population Census estimates for 1st March 1991 and 1st March 2001, which are (in '000): Males: 1991=439,230, 2001: 531,277; and Females: 1991: 407,072 and 2001: 495,738. RGI, Census of India 2001, Paper 1 of 2001, Provisional Population Total, March 2001.

2. The rural-urban split of the male and female population for 1993-94 are assumed to be same as given in Visaria (1998) and for 1999-2000 are obtained by interpolation from estimates for 1st March 1999 and 1st March 2000 contained in RGI (1996).

3. Crude Worker-Population ratios on the usual (principal plus subsidiary status) for rural males, rural females, urban males and urban females are drawn from, respectively, Sarvekshana, vol. 20, no. 1, July-September 1996 for 1993-94 and, Report on Employment-Unemployment in India 1999-2000, Key Results, NSS 55th Round, July 1999-2000, December 2000.

Table 2: India: Age Specific Usual Status (PS+SS) Worker Population Ratios By Rural Urban Residence and Gender 1983 to 1999-2000

Age-Group	Rural Males				Rural Females			
	1983	1987-88	1993-94	1999-2000	1983	1987-88	1993-94	1999-2000
5-9	25	23	11	6	23	24	14	7
10-14	238	190	138	91	224	182	141	96
15-19	644	600	577	503	433	399	364	304
20-24	884	872	859	844	483	465	456	409
25-29	963	959	957	950	540	523	525	491
30-34	985	982	983	979	577	577	585	555
35-39	987	986	989	984	606	596	608	579
40-44	982	979	987	983	611	610	606	586
45-49	980	978	983	980	589	580	594	566
50-54	957	959	970	953	526	523	542	515
55-59	921	928	942	929	476	459	467	450
60+	662	668	699	639	227	218	241	218
All	543 (564)	539 (546)	553	531	330 (346)	323 (333)	328	299
Age-Group	Urban Males				Urban Females			
	1983	1987-88	1993-94	1999-2000	1983	1987-88	1993-94	1999-2000
5-9	7	5	5	3	7	3	5	2
10-14	106	85	66	49	64	65	45	36
15-19	398	355	356	314	144	146	123	105
20-24	710	674	674	658	182	185	180	155
25-29	913	914	904	883	222	223	224	194
30-34	964	969	964	960	290	272	301	235
35-39	981	981	983	975	290	309	301	285
40-44	978	983	981	974	305	308	320	283
45-49	972	973	973	969	283	306	317	267
50-54	939	938	942	935	269	268	286	262
55-59	837	845	856	809	230	234	226	207
60+	508	480	442	402	124	123	113	94
All	510 (538)	506 (526)	520	518	146 (155)	152 (159)	154	139

Note: Figures in parentheses show the crude WPRs that would have been observed if the age distribution of the surveyed population in 1983 and 1987-88 had been the same as was reported by the 1993-94 survey.

Sources: For 1983, and for age-standardised WPR for all ages for 1983 and 1987-88: P. Visaria, "Employment and Work force in India: Implications for National Income Estimates", mimeo, July 1998.

For 1987-88, Sarvekshana, Spl. No. September 1990.

1993-94: Sarvekshana Vol. 20, no. 1, 68th Issue, July-September 1996.

For 1999-2000: NSSO: Employment and Unemployment in India 1999-2000 Key Results NSS 55 Round July 1999-June 2000, December 2000.

Table 3: Industrial Distribution of Total (Rural plus Urban) Work Force: All India: 1961, 1993-94 and 1999-2000

Industry Division / Group	1961		1993-94		1999-2000	
	No. of Workers ('000)	Share (per 1000)	No. of workers ('000)	Share (Per 1000)	No. of workers ('000)	Share (Per 1000)
0. Agriculture, Forestry & Fishing	143,282	759	238,682	638	237,786	599
00-01. Crop production & Plantations	138,637	735	217,220	581	215,751	543
02. Livestock	3,684	20	16,936	45	16,141	41
03. Agricultural Services	NIL	NIL	1,850	5	3,769	9
04-06. Logging, Forestry & Fishing	952	5	2,696	7	2,125	5
1. Mining & Quarrying	919	5	2,676	7	2,263	6
2+3+97. Mfrg+Repair Services	17,906	95	43,218	116	48,296	122
Of which: Food Products	2,126	11	4843	13	5,409	14
Beverages & Tobacco	1,124	6	4,410	12	4,925	12
Textiles & Products	6,553	35	10,335	28	10,480	26
Wood, Products & Furniture	2,175	12	4,295	11	5,367	14
Leather, Fur & Products	704	4	730	2	1,081	3
Non-metallic Mineral Products	1,504	8	3,134	8	3,485	9
Metal Products & Parts	944	5	1,638	4	2,276	6
Repair Services	366	2	3,362	9	4,203	11
4. Electricity, Gas & Water	257	1	1,394	4	1,048	3
5. Construction	2,768	15	12,127	32	17,618	44
6. Trade, Hotels & Restaurants	8,171	43	28,459	76	37,128	94
Retail Trade	6871	36	21,384	57	28,887	73
Hotels & Restaurants	805	4	3,436	9	4,600	12
7. Trspt, Storage +Communication	3,262	17	10,757	29	14,757	37
8. Finance, Insurance, Real Estate & Business Services	542	3	3,653	10	4,924	12
9. Community, Social & Personal Services	11,571	61	32,866	88	33,200	84
Of which: Public Admn + Defence	3,394	18	10,349	28	10,589	27
Education + Research	1,811	10	6,513	17	8,554	22
Medical & Health	645	3	1,966	5	2,522	6
Community Services	593	3	1,125	3	1,055	3
Personal Services	4,490	24	10,654	28	9,429	24
Total Work Force	188,676	1000	373,832	1000	397,018	1000

Table 4: Industrial Distribution of Rural Work Force: All India: 1961, 1993-94 and 1999-2000

Industry Division /Group	1961		1993-94		1999-2000	
	No. of Workers ('000)	Share (per 1000)	No. of workers ('000)	Share (Per 1000)	No. of workers ('000)	Share (Per 1000)
0. Agriculture, Forestry & Fishing	139,622	861	228,551	784	229,440	762
00-01. Crop production & Plantations	135,360	834	209,269	718	209,375	696
02. Livestock	3,452	21	15,328	53	14,843	49
03. Agricultural Services	NIL	NIL	1,665	6	3,520	12
04-06. Logging, Forestry & Fishing	805	5	2,289	8	1,702	6
1. Mining & Quarrying	708	4	1727	6	1494	5
2+3+97. Mfrg+Repair Services	10,379	64	21,711	74	24,062	80
Of which: Food Products	1466	9	2998	10	3104	10
Beverages & Tobacco	677	4	3,021	10	3,496	12
Textiles & Products	3,659	23	4892	17	5,130	17
Wood, Products & Furniture	1,649	10	2,998	10	3,694	11
Leather, Fur & Products	493	3	188	0.6	197	0.7
Non-metallic Mineral Products	1120	7	2,310	8	2,698	9
Metal Products & Parts	475	3	562	2	891	3
Repair Services	111	1	1,311	4	1772	6
4. Electricity, Gas & Water	79	0.5	562	2	394	1
5. Construction	1309	8	6930	24	10,005	33
6. Trade, Hotels & Restaurants	3572	22	12,486	43	13,700	46
Retail Trade	3217	20	9823	34	10,920	36
Hotels & Restaurants	266	2	1437	5	1,795	6
7. Trspt, Storage +Communication	914	6	4,224	14	6404	21
8. Finance, Insurance, Real Estate & Business Services	96	0.6	853	3	984	3
9. Community, Social & Personal Services	5567	34	14,487	50	14,475	48
Of which: Public Admn + Defence	1272	8	3,496	12	3,764	13
Education + Research	1026	6	3,268	11	4,099	14
Medical & Health	286	2	771	3	799	3
Community Services	324	2	666	2	498	2
Personal Services	2378	15	5247	18	5,014	17
Total Work Force	162,246	1000	291,531	1000	300,957	1000

Table 5: Industrial Distribution of Female Work Force: All India: 1961, 1993-94 and 1999-2000

Industry Division /Group	1961		1993-94		1999-2000	
	No. of Workers ('000)	Share (per 1000)	No. of workers ('000)	Share (Per 1000)	No. of workers ('000)	Share (Per 1000)
0. Agriculture, Forestry & Fishing	51,022	857	94,065	774	92,212	749
00-01. Crop production & Plantations	50,030	841	81,013	666	79,130	643
02. Livestock	822	14	11,855	97	11,074	90
03. Agricultural Services	NIL	NIL	784	6	1449	12
04-06. Logging, Forestry & Fishing	170	3	433	4	559	5
1. Mining & Quarrying	172	3	580	4	389	3
2+3+97. Mfrg+Repair Services	4857	82	11,500	95	12,510	102
Of which: Food Products	785	13	1353	11	1317	11
Beverages & Tobacco	380	6	3,019	25	3,676	30
Textiles & Products	2404	40	3624	30	3479	28
Wood, Products & Furniture	582	10	1129	9	1147	9
Leather, Fur & Products	67	1	87	0.7	114	0.9
Non-metallic Mineral Products	416	7	798	7	900	7
Metal Products & Parts	53	1	35	0.3	180	1
Repair Services	8	0.1	35	0.3	38	0.3
4. Electricity, Gas & Water	9	0.1	52	0.4	38	0.3
5. Construction	308	5	1648	14	2057	17
6. Trade, Hotels & Restaurants	865	15	3919	32	5253	43
Retail Trade	799	13	3122	26	4228	34
Hotels & Restaurants	53	0.9	556	5	834	7
7. Trspt, Storage +Communication	74	1	329	3	446	4
8. Finance, Insurance, Real Estate & Business Services	11	0.2	433	4	474	4
9. Community, Social & Personal Services	2188	37	9136	75	9662	79
Of which: Public Admn + Defence	103	2	1248	10	1157	9
Education + Research	341	6	2322	19	3290	27
Medical & Health	153	3	624	5	853	7
Community Services	45	0.8	173	1	199	2
Personal Services	1373	23	4422	36	3925	32
Total Work Force	59,505	1000	121,602	1000	123,038	1000

Table 6: Occupational Distribution of Work Force by Rural-Urban Residence: All-India, 1961-1999-2000

NCO 1968 Divisions	1961			1993-94			1999-2000		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
0-1. Professional & Technical and Related Workers	1689 (10)	1547 (59)	3236 (17)	6516 (22)	7191 (87)	13707 (37)	5984 (20)	8590 (89)	14574 (37)
2. Administrative, Executive & Managerial Workers	764 (5)	1048 (40)	1812 (10)	2415 (8)	4717 (57)	7132 (19)	4179 (14)	8039 (84)	12218 (31)
3. Clerical & Related Workers	1046 (6)	2820 (107)	3866 (21)	3497 (12)	7573 (92)	11070 (30)	4053 (13)	8480 (88)	12533 (32)
4. Sales Workers	3244 (20)	3632 (138)	6876 (37)	11635 (40)	13681 (166)	25316 (68)	11716 (39)	15856 (165)	27572 (69)
5. Service Workers	2815 (17)	2743 (104)	5558 (30)	5331 (18)	7421 (90)	12752 (34)	7117 (24)	9219 (96)	16336 (41)
6. Farmers, Fishermen, Hunters, Loggers & Related Workers	134329 (830)	3261 (124)	137590 (731)	227763 (781)	10152 (123)	237915 (636)	226762 (753)	8885 (92)	235647 (594)
7,8,9: Production and Related Workers, Trspt Eqpt. Operators and Labourers	18052 (111)	11234 (427)	29286 (156)	34370 (118)	31564 (384)	65934 (176)	41148 (137)	36993 (385)	78141 (197)
All Occupations	161,939	26,285	188,224	291,529	82,299	373,826	300,959	96,061	397,021

Figures within brackets relate to share (per 1000) of the occupation-group to the corresponding total workers in all occupations.

Table 7: Number of Workers in Identified 2-digit Occupation-groups by Location: All-India: 1961 - 1999-2000

(in '000s)

NCO 1968: Occupation Groups	1961			1993-94			1999-2000		
	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total
08: Nursing & other Medical & Health Technicians	143	180	323	298	469	767	414	728	1142
15: Teachers	959	623	1582	3258	3082	6340	3717	3739	7456
30-35: Clerical Workers & Supervisor, Stenographers, Bookkeepers etc.	738	2459	3197	2831	6800	9631	3265	7539	10804
36-39: Trsp & Communications Workers & Supervisors	308	361	669	666	767	1433	788	941	1729
40: Merchants & Shopkeepers	2449	2241	4690	8493	8424	16919	8244	9313	17559
51-54: House keepers, Cooks, Maids etc.	1000	1590	2590	1687	3813	5500	1632	2338	5970
55-56: Launderers, Hair dressers, Beauticians etc.	1352	476	1828	2124	1105	3229	2906	1278	4184
60-61: Cultivators	97,889	1732	99621	117,669	3895	121564	111,701	3343	115,044
63: Agricultural Labourers	30,603	919	31522	86413	3535	89948	91,747	3029	94,776
64: Plantation Workers	990	67	1057	3106	299	3405	3115	249	3364
71: Miners, Quarrymen etc.	546	126	672	960	360	1320	802	327	1129
72: Metal Processors	46	103	149	189	407	596	198	405	603
75: Spinners, Weavers, Knitters, Dyers etc.	3002	1959	4961	3723	3409	7132	3136	2710	5846
77: Food & Beverage Processors	1346	491	1837	1458	1070	2528	1918	1269	3187
79: Tailors, Dressmakers etc.	634	574	1208	2625	2824	5449	2720	3247	5967
82-89: Machines & Workers, Tool makers & operator	1828	2043	3871	5333	6480	11813	3472	7707	13179
95: Brick layers & other Construction Workers				3910	2707	6617	6276	4177	10,453
98: Trspt Eqpt. Operators	375	832	1207	2641	3608	6249	4160	4973	9133
99: Labourers not elsewhere classified	6020	2621	8641	5351	4028	9379	7182	4676	11858

Table 8: Workers, Gross Domestic Product (at 1993-94 Prices) and Labour Productivity By Industry Division in India: 1993-94 - 1999-2000

Industry Division	1993-94			1999-2000			
	GDP at 1993-94 prices Rs. Crores	Work Force ('000)	GVA Per Worker	GDP at 1993-94 Prices Rs. Crores	Work force ('000)	GVA Per Worker (Rs.)	Rog of GVA Per Worker (pcpa)
0: Agriculture & Allied Activities	241967	238682	10137	290334	235597	12323	3.15
1: Mining & Quarrying	20092	2676	75082	26446	2263	116863	7.65
2 & 3: Manufacturing including Repair Services 97	125493	43218	29037	196763	48296	40741	5.81
4: Electricity, Gas & Water	18984	1394	136984	28225	1048	269323	12.04
5: Construction	40593	12127	33478	58728	17618	33334	0.07
6: Trade, Hotels + Restaurants	99369	28459	341917	168355	37128	45344	4.45
7: Transport, Storage & Communication	51131	10757	47533	84477	14757	57245	3.15
8: Financing, Insurance etc. less: GDP in Dwellings	90084 43507			146546 51391			
(8) - less GDP on Dwelling	46577	3653	127503	95155	4924	193247	7.17
9: Community + Social Services	9363	32866	28489	152117	33200	45818	8.24
All Activity (excluding GDP in Dwelling)	737838	373,832	19737	1100600	397.018	27,722	5.82

Table 9: Average Daily Wage Earnings Received by Adult (15-59) Casual Wage Labourers in Rural India by Gender and Activity at Constant 1993-94 Prices: All-India, 1983, 1993-94 and 1999-2000.

Activity (Operation codes)	Rural Males			Rural Females			Rate of Growth of Real Wages (Percent Per Annum)			
	1983	1993-94	1999-2000	1983	1993-94	1999-2000	Rural Males		Rural Females	
							1993-94/1983	1999-2000/93-94	1993-94/1983	1999-2000/93-94
1. Manual Work in Cultivation (1-6)	15.89	20.,85	24.80	11.00	14.88	17.75	2.62	2.93	2.92	2.98
2. Manual Work in Other Agricultural Work (7-11)	18.59	24.37	29.06	10.86	16.39	19.68	2.61	2.98	4.00	3.10
3. Manual Work in Agriculture (1-11)	16.26	21.59	25.44	10.98	15.12	17.98	2.74	2.77	3.09	2.93
4. Non-Manual Work in Agriculture (13-14)	14.23	22.61	27.75	11.81	15.61	18.83	4.51	3.47	2.69	3.18
5. Casual Labour in Agriculture (1-11, 13-14)	16.24	21.60	25.48	10.99	15.12	17.99	2.75	2.79	3.09	2.94
6. Manual Work in Non-Agriculture (12)	23.64	NA	38.03	11.47	NA	23.75	NA	NA	NA	NA
7. Non-Manual Work in Non-Agriculture (14)	22.51	30.15	36.14	11.43	17.46	22.83	2.82	3.07	4.12	4.57
8. Casual Labour in Non-Agriculture (12-14)	23.52	30.15	37.49	11.47	17.46	23.49	2.39	3.70	4.08	4.07
9. Casual Labour in All Activities	17.87	23.18	28.65	11.07	15.33	18.51	2.51	3.59	3.15	3.19
10. Public Works	19.44	24.65	30.89	12.14	18.52	24.87	2.29	3.83	4.10	5.04

Notes: Adjustment for inflation has been made by reference to Consumer Price Index for Agricultural Labourers

CPIAL: 1960-61=100 1983: 511; 1993-94: 1147

CPIAL: 1986-87=100 1993-94: 194.74; 1999-2000: 309.

Table 11: Proportion of Rural Households below the Poverty Line by Livelihood categories: All-India: 1993-94 - 1998-2000.

Percentage of Households Below the Poverty Line

Household/Type	1993-94	1999-2000
Self-Employed in Agriculture	27.81	24.12
Self-Employed in Non-Agriculture	29.68	27.00
Agricultural Labour	54.49	46.96
Other Labour	35.21	29.24
Others	23.64	18.38
All	35.24	31.48

Notes & Sources: 1993-94: Results on Employment Situation in India, Fifth Quinquennial Survey, NSS 50th Round (July 1993-June 1994), Sarvekshana vol. 20, no.1, July-September 1996.

1999-2000: Results on Employment-Unemployment in India, 1999-2000, NSS 55th Round, July 1999-June 2000.

Poverty Lines: (Rupees Per capita per month) 1993-94:Rural:211.30 Urban: 274.88
 1999-2000:Rural:335.46 Urban: 451.19

Table 12: Poverty Prevalence Ratios by Rural-Urban Location: All-India and 15 Major States 1993-94 - 1999-2000

Percentage of Population Below the Poverty Line

States	Rural		Urban	
	1993-94	1999-2000	1993-94	1999-2000
All-India	39.36	36.35	30.37	28.76
Andhra Pradesh	27.97	25.48	35.44	32.28
Assam	58.25	61.78	10.13	12.45
Bihar	64.41	58.85	45.03	45.10
Gujarat	28.62	26.22	28.86	21.70
Haryana	30.52	14.86	13.40	13.79
Karnataka	37.73	38.50	32.41	24.55
Kerala	33.95	26.50	28.20	31.89
Madhya Pradesh	36.93	39.35	46.02	46.29
Maharashtra	50.21	50.00	33.52	32.16
Orissa	59.12	62.67	36.99	34.27
Punjab	17.61	14.24	6.79	6.74
Rajasthan	25.92	15.01	30.60	24.36
Tamil Nadu	37.27	39.37	37.83	29.82
Uttar Pradesh	39.08	29.87	34.23	36.39
West Bengal	54.15	56.16	20.97	16.74

Notes and Sources:

State-specific poverty lines for 1993-94 have been adjusted for inflation by reference to the Consumer Price Index for Agricultural Labourers (for rural population) and the Consumer Price Index for Industrial Workers for the urban population.

Poverty Prevalence Rates for 1993-94 have been computed from Table 4.4.1 in Sarvekshana vol. 20, No. 1, July-September 1996 and those for 1999-2000 from Table 4.3.2 in Draft Report No. 458 (55/10/2), Employment-Unemployment Situation in India 1999-2000 Part I, NSS 55th Round (July 1999-June 2000), NSSO, April 2001.

Post-Script

The office of the Registrar General of India has just released (21.07.2001) the rural-urban break-up of the population as per the 2001 Population Census. This shows that the share of urban areas in India's population did not grow as fast as had been projected earlier and is now placed at 27.79 percent as on 1st March, 2001.

Using standard interpolation techniques, the revised estimates of population as on 1.1.1994 and 1.1.2000 are presented in Table A.1. Using the crude Worker-population ratios on the Usual Status (ps+ss) categorisation presented in Table 1, the revised work force estimates for the four population segments, rural males, rural females, urban males and urban females, are also presented in Table A.1.

The revised work force estimates reveal the following :

- i) relative to the estimates presented in Table1, the revised estimates for 1993-94 are marginally higher (by 292,000) in the aggregate. The aggregate change is made up of an increase, by a little over 1 million in rural work force and a reduction , by 0.75 million, in the urban work force :
- ii) For 1999-2000, the changes are more pronounced. The rural work force is higher by 3.4 million, while the urban work force is lower by 2.5 million, leaving a net increase of a little under 1 million, relative to the estimates in Table1.
- iii) an increase in rural female work force - by 0.93 million - instead of a marginal decline (by 0.18 million) reported earlier.

In terms of the rural-urban and the male-female composition of the workforce, with the revised estimates, the decline in the share of rural areas and of women workers in the total work force is moderated somewhat.

As per the revised estimates, the share of rural areas in the total workforce declines from 78.20 percent in 1993-94 to 76.48 percent in 1999-2000. That is, a decline in the rural share by 1.72 percentage points compared to a 2.18 percentage point decline in the share of rural areas revealed by Table1.

Similarly, the share of women workers in the total work force declines from 32.57 percent in 1993-94 to 31.14 percent in 1999-2000 - a decline of 1.43 percentage points. The earlier estimates revealed a marginally greater decline in the share of women workers (of 1.54 percentage points).

These revisions in the estimates of work force in the four population segments may be expected to moderate the decline in the absolute number of workers in agriculture and the corresponding gains by the non-agricultural sector. However, in terms of the changes in the industry-occupation structure, the results in the paper are unlikely to be affected much.

Table A.1: Revised Estimates of Population and Work force by Gender and Rural-Urban Location: All India, 1993-94 and 1999-2000

Estimates of Population and Usual Status Work force

(‘000s)

Population Segment	Estimates of Population		Estimates of Work force	
	as on 1.1.94	as on 1.1.2000	as on 1.1.94	as on 1.1.2000
Rural Males	339,603	374088	187,800	198,641
Rural Females	319,422	353,523	104,770	105,703
Rural Persons	659,025	727,611	292,570	304,344
Urban Males	123,954	145,525	64,456	75,382
Urban Females	111,027	130,950	17,098	18,202
Urban Persons	234,981	276,425	81,554	93,584
Total Males	463,557	519,613	252,256	274,023
Total Females	430,449	484,473	121,868	123,905
Total Persons	894,006	1004,086	374,124	397,928

Note : The underlying estimates of population as on 1.3.2001 in the four population segments (in '000s) are :

Rural Males: 381,141
Urban Males: 150,136

Rural Females: 360,519
Urban Females: 135,219

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