

## CHAPTER XIV

### OTHER SERVICES

#### Coverage

14.1. The economic activities covered under this sector are, (i) educational services, (ii) research and scientific services, (iii) medical and health services, (iv) sanitary services, (v) religious and other community services, (vi) legal services, (vii) recreation and entertainment services, (viii) personal services (domestic; laundry, dyeing and dry-cleaning; barbers and beauty shops; and others), and (ix) services n.e.c. (Appendix 14.1).

#### Methodology and Source Material

##### Estimates at current prices

14.2. The method generally followed for estimation of value added from different categories of services is to use the total number of persons engaged and value added/earnings per person. To the extent necessary, the profits and dividends earned by the organised/corporate enterprises engaged in these activities is added to account for the factor incomes generated in forms other than labour income. While estimating labour income the earnings of both primary workers and secondary workers engaged in such services are taken into account.

14.3. The number of workers by sub-groups are available from 1961 and 1971 population censuses. The 1961 census figures are first adjusted for differences due to changes in concept to make them comparable with the 1971 census concepts. The number of workers as on first October 1970 and for subsequent years are estimated assuming the geometric growth rate between 1961 and 1971 census results. The observed growth rate of the male workers in the age group 15-59 between 1961 and 1971 censuses is used for the period beyond 1971.

##### Educational Services

14.4. For this sub-sector, gross value added is taken to be the sum of total wages and salaries of teachers and other staff employed in educational institutions and the secondary income arising from educational services. Wages and salaries of teachers and other staff working in recognised educational institutions is available from the *Education in India* published annually by the Ministry of Education<sup>63</sup>. There is, however, some time-lag in the availability of data on wages and salaries from the Ministry of Education. If necessary, for the more recent years therefore, the data for the latest available year is carried forward using the rate of increase in the government expenditure on wages and salaries of educational services.

14.5. On the basis of details available in the NSS Report No. 130, *Tables with Notes on Professions and Liberal Arts*, 18th Round, 1963-64, (NSSO, 1968) it has been assumed that the contribution of persons working in the unrecognised educational institutions and those having secondary occupation in educational services, forms 2 p.c. of gross value added from recognised institutions.

##### Research and Scientific Services

14.6. For this sub-sector gross value added per worker is assumed to be the same as the average salary per teacher. The number of workers have been estimated from 1971 population census results and the total gross value added is obtained by using the total number of workers and gross value added per worker.

##### Medical Health and Other Services

14.7. For medical and health services, the value added is estimated separately for public and private counterparts. For the public sector medical and health services, gross value added is taken to be equivalent to the budget expenditure on salaries and wages of doctors and other medical staff. Value added from private medical and health services are estimated using the same approach and the source material as for the rest of the services (excluding sanitary services).

14.8. The general approach in these cases is to estimate the annual working force in each of the sub-sectors using 1971 Population Census data and either the geometric rate of growth between 1961 and 1971 as revealed by population census results or any independent indicator to measure the change in the number of persons engaged and gross domestic product/gross earnings per worker. Thus, for medical and health services, the number of workers in the private sector is estimated by deducting from the corresponding total the number engaged in the public sector. The annual estimates of the total is obtained by using the base year figure from the 1971 population census and the current growth rate in the number of medical personnel available from the Ministry of Health and Family Welfare. The annual figures for similar personnel engaged in the public sector are obtained from DGET. For the rest of the services (other than sanitary) the annual growth rate adopted is the same as that of male workers in the age group 15-59 between 1961 and 1971 censuses.

<sup>63</sup> *Education in India* is published with a time lag. Therefore the data is directly collected from the Ministry of Education.

14.9. NSS Report No. 130, *Tables with Notes on Professions and Liberal Arts*, 18th Round: 1963-64 (NSSO, 1968) gives details of the number of workers with principal and secondary work and their gross earnings separately for rural and urban areas for different categories of services. Gross earnings in this case is equivalent to total output per worker and is inclusive of intermediate expenditure on inputs. Since census data on number of workers are not available separately for principal and secondary work, for use of the data from the NSS Report it is necessary to obtain adjusted gross earning per person after taking into account income from both principal and secondary work. Also the estimates are prepared separately for urban and rural areas (except for private medical and health services).

14.10. The overall adjusted gross earning per worker is obtained for each of the service group from the above NSS Report using the gross earnings per primary and secondary workers with number of primary and secondary workers reported therein as weights. The adjusted (for secondary worker) gross earning per principal worker is then obtained by dividing the adjusted total gross earning of all reported workers by the number of principal workers as available from the Report. This exercise is undertaken separately for urban and rural areas for each of the sub-groups (numbering twelve) for which data are available.

14.11. For estimating gross value added or net earning per worker it is necessary to determine intermediate consumption per worker and deduct the same from adjusted gross earning per principal worker. Such details of intermediate expenditure per worker are however available for five combined service groups only. Also, since intermediate consumption relates to output and not time disposition of worker (*i.e.* primary or secondary) no such separate data for principal and secondary workers could be collected. In view of the above, the average gross earning per worker (for principal and secondary work) is considered for these five combined service groups only for purposes of measurement of the corresponding gross value added per worker. Having obtained the gross value added for five broad (combined) groups by deducting intermediate expenditure per

worker from the corresponding estimate of gross earning, gross value added for each of the 12 service groups is calculated assuming that the ratio of gross earning to gross value added holds good for each of the sub-categories within the relevant combined groups.

14.12. As the above data on gross value added by different service groups give estimates for a single time point *i.e.*, for 1963-64 only and no similar survey has been conducted thereafter,<sup>54</sup> these are carried forward to furnish corresponding annual figures of gross value added per worker. The indicators used for the purpose are index of daily wages of rural skilled workers for rural areas and index of consumer prices for urban non-manual employees for urban areas. The annual estimates of gross value added per worker for 1970-71 thus worked out have been used along with the estimated total number of census workers by categories to obtain the corresponding total gross value added. No direct estimates of consumption of fixed capital are available from the NSS survey results. The only information available is from ASI reports in respect of laundry, job dyeing, cinema industries, etc. On the basis of such details, consumption of fixed capital for the above services is assumed to be 1.75 p.c. of the gross value added.

14.13. For private medical and health services however no breakdown of working force into urban and rural areas is available due to the absence of similar distribution of workers in the public services. The annual estimates of gross value added per worker for rural and urban areas are therefore combined to obtain the overall weighted average, the weights being the proportions of workers in medical & health services according to 1971 population census results. The estimates of gross value added by private medical and health services is then obtained using the weighted average gross value added per person and the total number of persons engaged.

14.14. The sum of the above estimates for education, medical and health, and the rest of the services covers all the incomes generated in the sector except for business profits of joint stock companies engaged in such activities. These figures are therefore added to the above

<sup>54</sup> NSS Survey on Self-employed workers *Tables with Notes of Survey of Self-employed Households in Non-agricultural Enterprises—Detailed Results* (29th Round: 1974-75) give similar results for service though not with the same extent of details. These result at the all India level have just become available and are yet to be used for revision of estimate,

estimate to obtain the aggregate figure inclusive of both corporate and non-corporate sectors. The data on business profits of joint stock companies engaged in other services (excluding sanitary services) are available annually from the *All-India Income Tax Statistics* (Directorate of Inspection, Ministry of Finance). On the basis of the results of RBI analysis of profit and loss accounts of large and medium public limited companies classified under miscellaneous activities, the expenditure on consumption of fixed capital for corporate enterprises is taken to be 10.75 p.c. of business profits.

#### *Sanitary Services*

14.15. The estimates for sanitary services are prepared separately for urban and rural areas. The data base for these estimates is the information collected from municipalities and the total number of workers/population available from 1971 population census.

14.16. Data on number of workers engaged in sanitary services and their wages and salaries are collected annually from the municipalities. Since however, the returns are not received from all the municipalities, it is necessary to use these results jointly with the census data on population by towns to prepare the estimates for the urban area. For the purpose, the towns are first classified into five groups according to population<sup>37</sup> size. For each of these categories of municipalities, the number of employees in sanitary services is first computed for 1971 by dividing its population by the estimated average population served by one sanitary worker. The latter is obtained by dividing the total population of the reporting municipalities in a category by the number of sanitary workers reported in that category.

14.17. The total wages and salaries paid to sanitary employees in 1970-71 is then worked out by multiplying the above working force in each category of municipalities by the corresponding average wages and salary payment per person. Since these estimates of compensation of employees relate to municipal employees only, these are adjusted to take account of own account workers on the assumption that the per head earning of such worker is the same as wages and salaries per employee. The ratio of total sanitary workers to employees available

from 1971 population census is used for this adjustment.

14.18. For subsequent years the estimates for urban areas are prepared separately for each state using the total employment and the average wages and salaries per person. The former is determined applying growth in employment over the previous year (as revealed by the data from responding municipalities) on the total estimated working force for the previous year and the latter is obtained from the municipal returns received annually.

14.19. The same approach is followed for rural areas. The annual estimates of number of workers is based on the base year figures from 1971 population census and the minimum growth rate of employment observed among the five categories of urban municipalities of each state. The per capita earning similarly is taken to be the lowest average observed in the five categories of towns.

14.20. To account for factor incomes other than compensation of employees in the organised sector the data on rent and interest, profits and dividends available from ASI for enterprises engaged in such services are used. The expenditure on consumption of fixed capital is also taken from the same source.

#### **Estimates at constant prices**

14.21. The base year estimates of gross and net value added (excluding profits and dividends of the corporate sector) are moved by relevant physical indicators to arrive at the annual estimates at constant prices. Thus, for educational services, the indicator used is the average of the growth rate in the number of teachers and number enrolled. The growth rate for each is prepared separately for various levels of education viz., primary, middle, secondary, university and technical, and combined into a single index as a weighted average, the weights being the wages and salaries of teaching staff at various levels in the base year. For medical and health services the corresponding indicator is the average of the indices of number of medical personnel and hospital beds. For the rest of the services, the growth rate in the working force, separately for rural and urban areas is used. The profits and dividends of the corporate sector are deflated by index number of

<sup>37</sup> The five categories are, (i) towns with population 5 lakhs and above, (ii) towns with population 1-5 lakhs, (iii) towns with population 75,000 to 1 lakh, (iv) towns with population 50,000 to 75,000 and (v) towns with population less than 50,000.

wholesale prices of all commodities to obtain the constant price estimates.

#### Reliability, Objectivity and Current Status of Data

14.22. Till regular annual surveys are undertaken to enumerate labour force engaged in the individual services of the country and their average earnings, the estimates in this sector will continue to be based on only the decennial population census data and limited information on average earnings. At present data available in respect of per head earnings in 'other services' sector (except education and public sector medical and health and sanitary services) are very limited. Thus, the present estimates are based primarily on the results of the survey undertaken by NSSO in 1963-64. If repeated surveys of similar type are taken up by NSSO at regular intervals, the data base would improve substantially and result in much more satisfactory estimates. The estimates of consumption of fixed capital are also not satisfactory and based on hardly any information. This lacuna in the estimate can be removed if data on consumption of fixed capital become available for the household part and an analysis of a sample of balance sheets of the joint stock companies covered in this sector is taken up on a regular basis every year.

#### APPENDIX 14.1 : NATIONAL INDUSTRIAL CLASSIFICATION, 1970\* OTHER SERVICES

industry	NIC—1970 Code	
	major group	minor group
(1)	(2)	(3)
1. community services		
1.1 education, scientific & research services.		
1.1.1 education . . . .	92	920, 921
1.1.2 research & scientific . . . .	92	922
1.2 medical & health . . . .		
1.2.1 medical & health (excluding veterinary)	93	930
1.3 religious & other community services	94	940, 941, 942, 949
2. legal services . . . .	83	830
3. recreation & entertainment services	95	950, 951, 952, 953, 955, 956, 959
4. personal services . . . .		
4.1 domestic . . . .	96	960
4.2 laundry, dyeing & dry-cleaning	96	961
4.3 barbers and beauty shops	96	962
4.4 others . . . .	96	963, 969
5. sanitary services . . . .	91	910
6. services/activities n.e.c.	98, 99	980, 990

\*Adopted by the Registrar General of India for the 1971 Census.