

CHAPTER IX

INCOME FROM CONSTRUCTION

As stated earlier in the preceding chapter, construction activity was so far included under small enterprises sector. Following the industrial classification contained in the 'System of National Accounts and Supporting Tables'¹, the estimates of net income from construction have been compiled and presented separately in this chapter.

1.1. Construction has been defined in the United Nations Statistical Papers (Series² M. No. 4) as construction, repair and demolition of buildings, high ways, streets, culverts, sewers, rail roads, piers, tunnels, dams, drainage projects, sanitation projects, irrigation flood control projects, hydroelectric plants, pipelines, land reclamation, harbour, water wells, air ports, athletic fields etc., and all other construction whether undertaken by private bodies or government bodies. Special trade contractors in the field of construction such as carpenters, plumbers, plasterers and electricians are also included in this group. This, however, does not include construction, repair and demolition work undertaken as an ancillary activity by the staff and for use of an enterprise classified in any other division of the standard industrial classification of all economic activities.

1.2. For our purpose, we have not considered all construction activity in this chapter. The construction activity coming under railways, communications and government administration are included under the respective sectors. All other construction activities, whether under the private or the public sector, have been considered here³. Thus, all persons engaged in construction, repair and maintenance of buildings (masons and bricklayers, stone cutters and dressers, painters and decorators of houses and others), roads, bridges and transport works, irrigation and agricultural works, electric power and gas supply, domestic and industrial water supply and construction otherwise un-classified are covered by this sector after making allowances for such persons engaged in construction activity undertaken by railways, communications and public administration.

2. The availability of data on construction is very unsatisfactory. As in the case of small enterprises the only available statistics in respect of construction for the entire country relates to the census occupational table which gives the total number of persons engaged in construction and utilities under division 5 of the 1951 Census Occupational Classification Scheme. Apart from population census, some scattered information regarding the number of persons engaged and their earnings are

¹ As shown in Appendix I of U.N. Studies in Methods F-2 System of National Accounts and Supporting Tables.

² Index to the International Standard Industrial Classification of Economic Activities—Series M. No. 4 Add I.

³ Construction work undertaken by households, mostly in rural areas, by putting in own labour only is excluded.

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available in some of the reports on agro-economic surveys⁴ sponsored by the Ministry of Food and Agriculture. The NSS Reports dealing with small enterprises, viz. Reports Nos. 19, 21, 51 and 52, also cover a portion of the construction activity undertaken by households, namely 'repair and constructional services rendered on own account by artisans like carpenters, masons, cobblers etc.'⁵ while all construction activities undertaken by non-households are excluded. The period covered by the NSS surveys and its limitations have been discussed already in Chapter VIII relating to small enterprises. The 'Agricultural Situation in India' and the 'Agricultural Wages in India' published by the Ministry of Food and Agriculture contain information on daily wage rates of rural skilled labour such as carpenters and blacksmiths in a large number of centres located throughout the country.

3. *Method of estimation* : As stated already, construction activity so far formed part of small enterprises sector and its contribution was being estimated by the 'income approach'. The derivation of 'working force' has already been discussed in Chapter I. However, in brief, the number of persons engaged in construction activity as obtained from the 1951 Population Census was being projected for other years on the basis of the trend exhibited by the population censuses of 1941 and 1951. The total number of persons engaged in construction and maintenance was adjusted for the employment of such persons in construction activity undertaken by railways, communications and Government administration. For such adjustments certain percentages were assumed more or less arbitrarily. In the revised method the estimated number of persons engaged in construction in 1951 has been adjusted for the estimated additional employment generated as a result of investment in such subsequent year. The details have already been presented in Chapter I.

3.1. The estimates of average earnings per head used by the NIC in 1954 were based on scattered material obtained from various sources. The availability of data on average value added or earnings per person still remains unsatisfactory and as such the estimates in this sector could not be improved significantly. Yet available information in the reports on the agro-economic surveys in rural areas referred to in Chapter VIII as well as the information on wages of rural skilled workers published by the Ministry of Food and Agriculture have been used here for estimating the average value added per person in rural areas for the bench-mark year 1955-56. The average value added per person engaged in construction in rural areas in 1955-56 has thus been estimated at Rs. 490. For the urban areas no suitable estimates of value added per person or wage rates could be built up on the basis of available data and hence the average value added per person engaged in all the small enterprises together in urban areas, viz. Rs. 950 has been adopted. The schedules on small scale enterprises and construction filled up during the 14th round (1958-59) in the urban areas of greater Delhi were hand tabulated by the NIU. The estimates

⁴ A list of these surveys may be seen in the bibliography (part dealing with small enterprises).

⁵ Quotation from the NSS Report no. 51.

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of average value added per mason was thus estimated to be Rs. 808 and that of a carpenter Rs. 1440. The corresponding estimate for carpenter in the urban areas in the Punjab was Rs. 808. The estimate of value added per worker in construction and maintenance, as revealed by the survey of small scale and cottage industries in the city of Nagpur undertaken by the Directorate of Economics and Statistics, Madhya Pradesh was estimated to be Rs. 1230 in 1955. Thus these levels were kept in view while adopting the estimate of Rs. 950 as the value added per worker in construction and maintenance in the urban areas.

3.2. As has been explained in detail in para 3.6 in the preceding chapter, the estimate of working force has been inflated by 20 per cent to allow for persons following this activity as their secondary means of livelihood and then the estimate of value added for the bench-mark year obtained accordingly. For subsequent years the estimated working force together with average value added per person obtained by suitably adjusting the bench-mark estimate have been utilised for building up estimates at current prices. The index used for adjusting the bench-mark estimate of value added per person has been built up from annual average earnings of factory labour and wage rates of rural skilled labour. It is considered that the level of earnings of persons engaged in construction is likely to lag significantly behind that of the factory labour which is much more organised and it has been assumed here that the rate of change in average earnings of construction workers will be about one-half of that of factory labour. This closely agrees with the trend noticed in respect of wage rates of rural skilled labour and hence the smoothed index of average earnings of rural skilled labour has been used for adjusting the bench-mark estimate of value added per person for subsequent years. These indices are presented in Table 9.1.

TABLE 9.1: INDICES OF EARNINGS OF FACTORY LABOUR AND WAGE RATES OF RURAL SKILLED WORKERS

(with 1955-56 = 100)

year	average earnings per factory labourer* (Rs.)	index of factory earnings		rural skilled workers' graduated wage index
		index	assuming half the rate of change	
(1)	(2)	(3)	(4)	(5)
1951-52	1036	88.8	94.1	94
1952-53	1112	94.8	97.4	96
1953-54	1111	94.7	97.3	97
1954-55	1113	94.7	97.4	98
1955-56	1174	100.0	100.0	100
1956-57	1208	103.0	101.5	101
1957-58	1234	105.2	102.6	102
1958-59 ^b	1282	109.3	104.6	104
1959-60 ^b	—	—	—	105 ^c

* Relates to calendar year.

^b Provisional.

^c Projected.

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4. *The estimates* : The estimates of net output of construction thus obtained for the years 1955-56 to 1959-60 are presented in Table 9.2. Table 9.3 presents both the revised as well as the conventional estimates. As is clear from the foregoing sections the revisions effected in this sector mainly relate to the use of revised estimates of working force as well as the average earnings per head.

TABLE 9.2: ESTIMATE OF NET OUTPUT IN 'CONSTRUCTION' SECTOR
(at current prices)

year	working force (SS - ED) (000)	total working force including secondary M/L* (000)	net value added per person (Rs.)	net output (Rs. crores)
(1)	(2)	(3)	(4)	(5)
1955-56	3141	3733	720	269
1956-57	3206	3847	728	280
1957-58	3704	4445	736	327
1958-59	4008	4910	746	359
1959-60	3775	4530	757	343

* Includes persons following construction as their secondary means of livelihood

TABLE 9.3: COMPARISON OF ESTIMATES OF
NET OUTPUT IN 'CONSTRUCTION' ACCORD-
ING TO REVISED AND CONVENTIONAL
METHODS

(at current prices) (in Rs. crores)

year	revised estimates	conventional estimates
(1)	(2)	(3)
1955-56	269	184
1956-57	280	193
1957-58	327	205
1958-59	359	218
1959-60	343	226