

Estimation of Rural and Urban Income

Introduction

32.1 The Central Statistical Organisation (CSO) has been compiling estimates of Rural and Urban income of the Indian economy along with the exercises for revising base year of National Accounts Statistics (NAS) series, since the 1970-71 series. These estimates have so far been compiled for the years 1970-71, 1980-81, 1993-94 and 1999-2000. The preparation of such estimates is primarily dependent on estimates of working force for each economic category.

Methodology

32.2 The approach and methodology for estimating the Rural and Urban income for the base year 1999-2000 (or Net Domestic Product, NDP), sector wise, is discussed in the following paragraphs.

Agriculture Sector

32.3 The Livestock Census 2003 provides details of agricultural implements used in Rural and Urban areas. The ratio of number of cultivators and tractors in rural areas to the total number of cultivators and tractors worked out as 0.938, has been used for allocating total value of output of agriculture in rural and urban areas. The proportion of livestock population in rural areas out of total livestock population worked out as 0.9418 has been used for allocating the value of output of Livestock (excluding poultry) in rural and urban areas. Like-wise proportion of population of poultry in rural areas out of total poultry population worked out as 0.918 has been used for allocating the value of output of poultry in rural and urban areas.

32.4 The ratio of value of output in rural areas to total value of output has been used for allocating the NDP of Agriculture and Livestock sector to rural and urban areas.

Forestry & Logging

32.5 The production data for Forestry products is not available separately for rural and urban areas. A proxy indicator based on the per capita average monthly household consumption of firewood and chips as available in the NSS 55th Round Survey (Report no. 461) separately, for rural and urban areas, has been used. A proportion of around 24.6 per cent of the total value of urban consumption of firewood and chips obtained from the survey has been presumed to come from the rural areas. Therefore, the consumption of urban areas has been proportionately reduced and added to the rural consumption. The adjusted rural and

urban consumption has been used to allocate the NDP to the rural and urban areas.

Fishing

32.6 The Fishing Sector comprises both inland fish and marine fish. The Indian Livestock Census 2003 provides estimates of workforce with rural urban break-up, separately for inland and marine fisheries. The urban workforce and rural workforce, multiplied by average wage for unskilled workers in urban and rural areas respectively available in NSS report No. 458 titled '*Unemployment and employment situation in India, 1999-2000*', provided the ratio for allocation of NDP to the rural and urban areas.

Mining and Quarrying Sector

32.7 For Mining and Quarrying sector, the information available in '*Statistics of Mines in India-Vol. II, 2001*', published by the Directorate General of Mines Safety, Dhanbad has been utilized. The data on employment and average weekly earnings for the year 2001 relating to the 'above ground working', 'open cast working' and 'below ground activities' separately for coal, petroleum and metalliferous minerals are available in the said publication. For coal and metalliferous minerals, the activities pertaining to above ground are assumed to be from urban areas whereas the open cast and below ground activities are assumed to be relating to rural areas. In petroleum, the entire activity is treated as urban activity and for minor minerals the activity is assumed to be 50 per cent each in rural and urban areas. The proportion of earnings in rural and urban areas thus obtained for these four components has been used to allocate total NDP into rural and urban areas.

Registered Manufacturing

32.8 For the registered manufacturing sector, the NDP has been allocated using the estimates of gross value added (GVA) in rural and urban areas as directly available in the reports of the Annual Survey of Industries (ASI) for the year 1999-2000.

Un-Registered Manufacturing

32.9 For unregistered manufacturing sector, the differential in rural and urban GVA estimates obtained from the 56th Round Survey of NSSO on un-organised manufacturing sector conducted in 2000-01 has been used to compute rural-urban estimates of NDP.

Electricity, Gas and Water Supply

32.10 The rural/urban proportions of the workforce for the year 1999-2000, for the sub-sectors

viz. Gas, Electricity and Water Supply, has been utilized to work out the rural/urban NDP estimates of this sector.

Construction

- 32.11 In the construction sector, the estimates of output are first compiled for accounted construction and unaccounted construction separately. The commodity flow method is used to estimate the output in accounted construction and expenditure method is used in unaccounted construction. The Gross Domestic Product (GDP) in the accounted construction is directly estimated as 34.81 per cent of the output whereas it is 75 per cent of the output in unaccounted construction. The Consumption of Fixed Capital (CFC) and Financial Intermediary Services Indirectly Measured (FISIM) obtained for the entire construction sector are apportioned proportionately to the accounted and unaccounted construction and further to different institutional sectors and sub sectors and to different activities within them. Thus by netting the CFC and the FISIM from the GDP, the Net Domestic Product (NDP) estimate is derived for each activity.
- 32.12 Keeping the above procedure in view, a methodology has been developed to compile the estimates of rural and urban income. First, the different activities involved in construction like (i) cultivation of plantation crops, (ii) Installation of wind energy systems, (iii) Residential Building Construction, (iv) Non Residential Building and Other construction Works (NRB&OCW) etc. have been identified and their output, GDP, NDP are separately estimated. Thereafter, looking at the nature of activity and the institutional sector, wherein the same is covered, norms for apportioning the GDP/NDP into rural urban categories have been prepared.
- 32.13 A composite indicator of the workforce estimate for the year 1999-2000 weighted with rural/urban labour wage differentials for specified categories of construction workers (Masons, Carpenters, Unskilled workers) has been compiled. The sources of data for this are the NSS 55th round results of Employment-Unemployment Survey, population Census 2001 for workforce and the data on average wage rates in urban areas published by the NBO in its publication – ‘*Handbook of housing statistics*’ for the 23 urban centers in the case of Masons, Carpenters and Unskilled labour. The data for Carpenters, Other Agriculture Labour released by the DES, Ministry of Agriculture through its publication – ‘*Agricultural wages in India 1999-2000*’ and the data on minimum wages released by the Ministry of Labour, Government of India through its publication – ‘*Minimum Wages in India 2002*’ has been used to compile the rural average wages received by the specific categories. The weighted average incomes per worker per day both for rural and urban areas have thus been calculated and used on the workforce estimates to arrive at composite construction income indicator. Using this procedure the NDP for rural and urban categories has been estimated at 58.9 per cent and 41.1 per cent for the year 1999-2000 respectively.
- 32.14 For the Public Sector, NDP is estimated for each sub sector (Quasi Bodies, Administrative departments, Departmental Commercial undertakings and Non-Departmental Commercial undertakings). For quasi bodies the entire NDP has been earmarked as urban income. For administrative departments, DCUs and NDCUs, the output/GDP/NDP is available with (i) roads and bridges (ii) building construction and (iii) other construction, breakup. The NDP under roads and bridges has been apportioned to rural and urban categories using the above said composite construction income indicator. The NDP under building and other construction has been earmarked to the urban category on 100 per cent basis.
- 32.15 The Private Corporate Sector is further divided into sub sectors namely (i) Joint Stock Companies (ii) Other scheduled commercial banks (iii) Cooperative (credit and non-credit) (iv) New companies under construction (v) Private Quasi Bodies. The NDP estimates in respect of joint stock companies, cooperatives, private quasi bodies, and new companies have been apportioned to rural and urban areas in proportion to the share of wages to workers in rural and urban areas, as per ASI 1999-2000 survey results for the joint stock companies (Table 6 – Principle characteristics by rural-urban breakup; 30.6 per cent, 69.4 per cent). The NDP for other scheduled commercial banks (private banks and foreign banks) has been apportioned to rural and urban sectors in proportion to the share of rural-urban deposits and credits of other scheduled commercial banks for the year 1999-2000. The source of this data is the RBI’s statistical tables relating to banks in India. The respective rural-urban proportions in this case are 13.2 per cent & 86.8 per cent, respectively.
- 32.16 Some specific activities like construction of rural residential buildings and urban residential buildings, taken up by the

households engaged in both farm and non-farm business have been allocated to their respective areas. Similarly, the entire NDP obtained under plantation crops, wind energy systems has been earmarked to rural sector.

- 32.17 Activities like kutcha construction involved in land development, soil conservation measures, reclamation of land, digging out wells, laying out the rural roads, constructing temporary shelter structures for rehabilitating the households displaced by natural calamities like earth quake, cyclones, tsunami, etc in rural areas (some of these activities are undertaken by both the Government and private agencies) coming under the group NRB & OCW are identified and expenditure incurred on these activities has been first differentiated into accounted and unaccounted categories using the norms obtained from the results of All India Debt and Investment Survey 1991-92 in farm and non-farm businesses. Thereafter, the accounted expenditure is distributed to rural and urban areas with the help of construction composite indicator (58.9 per cent & 41.1 per cent, respectively). The unaccounted expenditure is distributed to rural and urban categories using the rural/urban breakup of the households in the survey (79.7 per cent & 20.3 per cent, respectively).

Trade, Hotels and Restaurants

- 32.18 The GVA for this sector is prepared in two parts namely, organised and unorganized. The organized component comprises of public sector and the organized private sector. The GVA of organized component is allocated to rural and urban areas on the basis of rural-urban differential in total workforce. For the unorganized part, the GVA estimates are available separately for rural and urban areas. The differential in rural and urban GVA thus obtained has been applied on total NDP to get rural and urban estimates of NDP. For trade sector, the GVAPW has been taken from the 55th Round (1999-2000) survey of NSSO on Informal Sector and for Hotels and Restaurants, the GVAPW has been obtained from Enterprise Survey of NSSO conducted in its 57th Round.

Transport other than railways, storage and Communication

- 32.19 The GVA estimates of rural and urban areas are prepared using the methodology similar to that of Trade, Hotels and Restaurants. The GVA of organized component is allocated to rural and urban areas on the basis of rural-urban differential in total workforce. For the unorganized part, the GVA estimates are available separately for rural and urban areas. The differential in rural and urban GVA

has been applied on total NDP to get rural and urban estimates of NDP. To compute GVA from unorganized component of all these sectors, the GVAPW has been obtained from Enterprise Survey of NSSO conducted in its 57th Round (2001-02).

Banking & Insurance

- 32.20 In the case of Banking sector, the rural and urban break-up of deposits and credits of scheduled commercial banks has been used as an indicator for allocation of the NDP to the rural and urban areas. The data on deposits and credits of scheduled commercial banks has been obtained from the Reserve Bank of India publication - 'Basic Statistical Returns-2000'. For the insurance sector, in the absence of any data on rural and urban earnings, it has been presumed that there has been no differential in earning in rural and urban areas, and thus the NDP has been effectively allocated on the basis of the working force of the financial Service sector.

Real estate, Ownership of dwellings & business services

- 32.21 The economic activities covered in this sector are (i) ownership of dwellings (occupied residential houses), (ii) real estate services (activities of all types of dealers such as operators, developers and agents connected with real estate), (iii) renting of machinery and equipment without operator and of personal and household goods, (iv) Computer and Related Activities, (v) Accounting, Book-keeping and Related Activities, (vi) Research and development, market research and public opinion polling, business & management consultancy, architectural, engineering & other technical activities, advertising and business activities n.e.c and (vii) legal services. Ownership of dwellings also includes the imputed value of owner occupied dwellings.

- 32.22 For all the activities of this sector except for organized part of software and ownership of dwellings, the estimates of GVA are prepared separately for rural and urban areas as a product of GVAPW and work force. The entire GVA of software from organized sector has been assumed to be from urban areas.

- 32.23 For GVA estimate from ownership of dwellings, 2001 census households and rent per household obtained from results of NSS 55th round have been used to estimate the gross rental separately for rural and urban areas. Cost of repair & maintenance of rural and urban areas has been subtracted from the gross rental, to get the GVA estimates for rural and urban areas. The NDP is

allocated to rural and urban areas on the basis of rural-urban differential in GVA.

Public Administration and Defence

- 32.24 For Public Administration and Defence, the distribution of employees in different pay scales has been taken from the publication '*Census of Central government Employees as on 31st March, 2001*' of the Directorate General of Employment and Training (DGE&T). The information on pay and allowances in the different city/towns available in the brochure on '*Pay and Allowances of Central Government Civilian Employees, 2000-01*' published by the Pay and Research Unit of Ministry of Finance has been combined with the number of employees in respective categories to compute income of employees in different cities. The cities categorized A1, A, B1, B2 and C are assumed to be urban areas and the residual is assumed to be rural areas. The rural and urban differential in total earnings (salaries and allowances) has been used to allocate the total NDP into rural and urban areas.

Railways

- 32.25 For Railways, the rural and urban workforce from RGI-Population Census 2001 along with GVAPW from 55th round of Employment-Unemployment Survey (EUS) has been used

to derive the rural-urban income differential. This differential has been used to allocate total NDP into rural and urban areas.

Other Services

- 32.26 The economic activities covered under this sector are (i) Coaching and Tuition, (ii) Education excluding Coaching and Tuition, (iii) Human health activities including veterinary activities (iv) Sewage and refuse disposal, sanitation activities, (v) Activities of membership organisations, (vi) Recreational cultural and sporting activities, (vii) Washing and cleaning of textiles and fur products, (viii) Hair Dressing and other Beauty Treatment, (ix) Funeral and related activities, (x) Pvt. households with employed person, (xi) Custom Tailoring, and (xii) Extra Territorial organisations and Bodies.
- 32.27 For public part of education and medical services, the GVA is allocated to rural and urban areas on the basis of rural-urban differential in total workforce. Public part of sewage and television & radio are treated as urban activities. For all other activities of this sector, the estimates of GVA are available separately for rural and urban areas as a product of GVAPW and work force. The rural-urban GVA thus obtained has been used for allocating the NDP into rural-urban areas.

Appendix 32.1

**NET DOMESTIC PRODUCT BY ECONOMIC ACTIVITY IN RURAL AND URBAN AREAS
FOR THE YEAR 1999-2000**

(at current prices)

(Rs. Crore)

industry	Rural	Urban	Total
1 agriculture, forestry & fishing	395873	28686	424559
1.1 agriculture	366187	24099	390286
1.2 forestry & logging	16195	1033	17228
1.3 fishing	13506	3538	17044
2 mining and quarrying	13978	18997	32975
3 manufacturing	85633	120493	206126
3.1 registered	51336	77317	128653
3.2 unregistered	34329	43144	77473
4 electricity, gas & water supply	10998	13206	24204
5 construction	43019	56293	99312
6 trade, hotels & restaurants	67139	181057	248196
6.1 trade	59770	167863	227633
6.2 hotels & restaurants	7383	13181	20564
7 transport, storage & communication	31000	74793	105793
7.1 railways	4531	10096	14627
7.2 transport by other means	19291	48570	67861
7.3 storage	417	919	1336
7.4 communication	6758	15211	21969
8 financing, insurance, real estate & business services	50279	162751	213030
8.1 banking & insurance	14895	87716	102611
8.2 real estate, ownership of dwellings & business services	35415	75004	110419
9 community, social & personal services	71762	174976	246738
9.1 public administration & defence	21311	85725	107036
9.2 other services	50648	89054	139702
10 total net domestic product at factor cost	773326	827606	1600932
11 population (Millions)	726	275	1001
12 per capita NDP(Rs.)	10652	30095	15993