

CHAPTER- 1

REPORT ON THE NEW SERIES OF STATE INCOME OF MAHARASHTRA 1999-2000 TO 2006-07 (1999-2000 as Base) INTRODUCTION

1.1 The Directorate of Economics and Statistics, Maharashtra (DES) has been compiling the estimates of State Income since a long time. As the State Income, also known as Net State Domestic Product (NSDP) is one of the most important single economic indicator used to measure the growth and to throw light on the structural changes taking place in the economy, hence the estimates of the same are indispensable. The first estimate of State Income for the erstwhile Bombay province for the year 1948-49 was published in January 1950 in the issue of this office bulletin. The series of State Income estimates prepared, following the standard methodology prescribed by Central Statistical Organisation (CSO), New Delhi, was first published for the years 1960-61 to 1967-68 at current prices and at constant (1960-61) prices, in 'Maharashtra - an Economic Review 1968-69'. The estimates of State Income at current and at constant (1960-61) prices prepared on similar lines were available for the years 1960-61 to 1979-80. Later on, the Advisory Committee on National Income and the Working Group on State Income recommended another revision of the series with 1970-71, as the base year. In the meanwhile, the committee on Regional Accounts, appointed by Government of India, suggested in its final report the methodology for working out sectoral State Income. The methodology suggested by the Committee on Regional Accounts, broadly conform to the standard methodology adopted earlier for compiling State Income estimates. It also provides enough flexibility for the states to use available better data. The State Income estimates prepared on the lines mentioned above are available for the period 1970-71 to 1987-88 at current and at constant (1970-71) prices.

1.2 In the year 1988, the CSO released the new series on National Accounts Statistics, with base year 1980-81. In order to have comparability the CSO advised to shift the base year to 1980-81, in place of 1970-71. Following the guidelines prescribed by CSO, the estimates of NSDP of Maharashtra with base 1980-81 and with base 1993-94 were prepared in 1988 & 2000 respectively. The State Income estimates according to 1980-81 series are available for the period 1980-81 to 1997-98 and 1993-94 based series are available for the period 1993-94 to 2004-05. Recently, the estimates with base 1999-2000 pertaining to Maharashtra are prepared following the guidelines given by CSO in the workshop on new series on National Accounts held in April, 2006 at Hyderabad for all states. The changes regarding the data base and the methodology were discussed at length in the workshop. A detailed note explaining the methodology followed and the current sources of data used in preparing the estimates at national level and their implications at state level for preparing the estimates of NSDP under the new series with 1999-2000 as base was furnished to the participants in the workshop. Accordingly, the new series is prepared and presented in this document by taking into account all these changes in database as suggested by CSO. This document also gives the idea about the changes made in New Series of SDP of Maharashtra in part I and disaggregate tables in part II of this report.

1.3 In the present report, the new series of State Income beginning 1999-2000 has been presented both at current and at constant 1999-2000 prices. The changes in the current price series are primarily due to the use of the latest

data. The first set of estimates (at current prices) prepared by this Directorate were discussed with the officials of CSO in August, 2006 at the time of discussion on comparable estimates and the estimates given in this report are finalised keeping in view, their suggestions and comments.

1.4 Results, surveys and type studies used in New Series are:

- 1) Livestock Census – 2003.
- 2) Results of various type studies conducted by CSO & other States.
- 3) Population Census- 2001.
- 4) NSS- 55th, 56th, 57th and 58th Round.
- 5) Cost of cultivation studies of the ministry of Agriculture.
- 6) Quinquennial survey on employment and un-employment 1999-2000 (55th round).
- 7) All India census of small scale industries 2001-02, Development Commissioner, small scale industries, Ministry of small scale industries.
- 8) Annual data by the Directorate General of Employment and Training (DGET).
- 9) Indian Horticulture Database - 2004.
- 10) Operational Land Holding and Livestock Holding Survey 1991-92 (48th round of NSSO).
- 11) Administrative records of the ministry of Non-conventional Energy sources for information on Gobar gas plants, Wind Energy systems.
- 12) All India Debt and Investment Survey (AIDIS) 1991-92 NSSO.
- 13) Cost structure of Wind Energy system, plantation crops, NABARD.
- 14) Annual Accounts of the Employee's Provident Fund organisation (EPFO).

1.5 Concept and Method

For the purpose of estimation generally the entire economy is classified in three broad sectors

like Agriculture and allied activities, Industry and Service sector. Estimates of GSDP / NSDP of these sectors are prepared by a blend of the following three approaches :

- i) Product Approach
- ii) Income Approach
- iii) Expenditure Approach

(i) Production Approach : In this approach the sum of values of goods and services produced within the state boundary during a year is evaluated and value of inputs consumed in the process of production is deducted to arrive at the estimates of gross value added. This approach is followed to estimate the value for the sectors like Agriculture (included Livestock), Forestry, Fishery, Mining & Quarrying and Manufacturing (Registered)

(ii) Income Approach : In this method income accrued to the factors of production like, land, labour and capital in the form of rent, salary and wages and other money value of benefits and interest along with the profit of the entrepreneur are considered to estimate the value added. The sectors for which this method is adopted are Manufacturing (Unregistered), Electricity, Gas and water supply, Trade, Hotels & Restaurants, Transport, Storage Communication, Financing and Insurance, Real Estate, Ownership of Dwelling, Business Services, Public Administration and Other Services.

(iii) Expenditure Approach : This method is based on the measurement of income at the stage of disposal. The total produce is either consumed or partly consumed and a part is saved either for future consumption or the future production of goods and services. Thus the total consumption expenditure along with saving gives the total income. This method is applied in estimating the value added by construction sector.

Chapter - 2

AGRICULTURE (PROPER)

Coverage

2.1 The economic activities included in this sector are (i) growing of crops, fruits, nuts, seeds and vegetables, (ii) growing of trees on farm lands and village common lands, (iii) agricultural and horticultural services on a fee or on contract basis such as harvesting, baling and thrashing, husking and shelling, preparation of tobacco for marketing, pest destroying and spraying, pruning, picking, packing and operating irrigation systems (including those operated by Government) and (iv) ancillary activities of the cultivators such as gur making, transportation operations* and activities yielding rental income from farm buildings and farm machinery and interest on agricultural loans. In India, Agriculture and Livestock production generally go together and it has so far not been possible to segregate the various inputs like livestock feed, Dung manure, repairs and maintenance cost, consumption of fixed capital etc., into those used for agriculture production and livestock production. As such, activities like breeding and rearing of animals and poultry, production of milk, slaughtering, preparation and dressing of meat, production of raw hides and skins, eggs, dung, raw wool, bristles & camel hair, honey, silk worm cocoon, are covered in a separate sector under Animal Husbandry and allied activities in Chapter 3. However, the inputs common to both Agriculture and Animal Husbandry are considered in the present chapter.

2.2 The gross value of output from Agriculture (proper) is estimated by using the production approach, which involves estimation of gross value of agriculture products and by products and ancillary activities. After adding to this, the gross value of output from Animal Husbandry sector and deducting the value of inputs of raw

materials and services paid for both these sectors, the gross value added (GVA.) of the 'Agriculture and allied activities' sector is arrived at. In short, this sector is also referred to as the 'Agriculture' sector. For Irrigation, an income approach is used and the total factor incomes generated as a result of providing irrigation services is measured. To arrive at the Net Value Added (NVA) from the agriculture sector, the FISIM [i.e. Financial Intermediation Services Indirectly Measured] and consumption of fixed capital (CFC) is deducted from the G.V.A.

2.3 In all 107 agricultural commodities including various by - products have been considered for evaluation. The data on area and production of different agricultural commodities in each district of Maharashtra are made available by Commissionarate of Agriculture, Maharashtra State, Pune. Estimates of production of 51 major crops are available regularly from Commissionarate of Agriculture. Those are paddy, wheat, jowar, bajra, barley, maize, ragi, italian millets, small millets, [small millets includes kodra, common millets (vari), sava and badali] other cereals, gram, tur, udid, moong, masur, horse gram, math, wal, chawali, watana, lakh, linseed, sesamum, groundnut, rape and mustard, caster seed, soyabean, sunflower, coconut, safflower, nigerseed, dressed cane, other sugar, kapas, sunhemp, mesta, tobacco leaf, tobacco stems, dry chillies, dry ginger, turmeric, garlic, arecanut, tamrind, banana, grapes, sweet orange, cashewnut, mango, potato, sweet potato and onion. The production data for some crops is not available, however, their area is available from Commissionarate of Agriculture. These are other oilseeds, other sugercane, other fibres, other drugs & narcotics, other condiments & spices, other fruits and vegetable. The valuation

* To the extent the producers themselves carry their farm products to primary markets.

of such crops is based on the area figures and value per hectare worked out on the basis of related crop surveys carried out by DES. & CSO. In case of lemon, litchi, sapota, papaya, brinjals, cabbage, cauliflower, okra and Tomato, area and production at state level are made available by Commissionarate of Agriculture and Directorate of Horticulture. Same are allocated to districts on the basis of area of other fruits and vegetables. As the data on area & production is not available for other cereals and other pulses, same is worked out by subtracting the area and production of major crops from total area and production of cereals and pulses. For evaluating the other cereals & other pulses, weighted prices are worked out on the basis of major crops of cereals & pulses.

2.4 The valuation of 24 by-products is done on the basis of per hectre value furnished by CSO every year. This per hectare value is applied to area of respective crops. Ratios & norms used for the estimation of by product is given in Appendix – 2.1. The production of by-products like other cereals, other pulses, masur, chillies, Groundnut, sesamum and tobacco are estimated by using the norms available from the type study on agricultural by-product conducted by DES & CSO. These are given in Appendix - 2.2

2.5 The data on the wholesale prices are collected from all the regulated markets in the State through DSO. As far as possible the prices are collected for the peak marketing periods of different crops and the valuation is done at the district level wherever the estimates of districtwise production are reported by the Commissionarate of Agriculture, Pune. The list of peak marketing periods for different agricultural crops is given in Appendix - 2.8

2.6 *Valuation of Sugarcane and gur* – Sugarcane production is available from Commissionarate of Agriculture, Pune. As regards quantity of sugarcane crushed and the price paid to sugarcane producers is collected from the Commissionarate of Sugar, Pune. As the

districtwise gur production is not available, same are worked out on the basis of some ratios.

2.7 Valuation of sugarcane is done at the district level. However, the valuation of gur and bagasse is done at the state level. For working out the production of gur, the cane available for the purpose is derived by deducting the (i) quantity of cane crushed, (ii) quantity of cane used for chewing (0.5 per cent of cane production), (iii) quantity of cane used for seed (6.777% of the sugarcane area supplied by Commissionarate of Agriculture, Pune) (iv) cane used in manufacturing sector for gur production (2.82 per cent of total cane production, as per norm supplied by CSO) from the total cane production. Often, it so happens that the quantity of cane crushed in the state is more than the total production of cane. In such a situation, as no residual cane is available for manufacturing of gur, it is presumed that there is no gur production in the household sector in that year. The year, in which the gur production is estimated, the production of the by-product bagasse is also worked out for valuation (22.5 per cent of gur production as per norm supplied by CSO).

2.8 *Valuation of Kapas.*- Kapas represent lint plus seed. The estimates of districtwise production of kapas are supplied by Commissionarate of Agriculture and prices are collected from Cotton Monopoly Procurement scheme of Government of Maharashtra.

2.9 *Valuation of Grass.*- Under the category grass, only naturally grown grass is considered. The total grass means weight of green grass and dry grass. Area of grass is available from Land Use Statistics. The yield rate of grass i.e. 0.43757 tonne per hectare is supplied by CSO. This yield rate is applied to the total area under culturable waste, permanent pastures, fallow lands, land under miscellaneous tree crops and net area sown to arrive at the total production of natural grass in the state. For valuation of grass, prices reported by DSO are used.

2.10 Valuation of Fodder.- Fodder represents all the cultivated fodder crops in Maharashtra. Two types of fodder is used for estimation. One is fodder available from irrigated land i.e. irrigated fodder and another one is fodder available from unirrigated land i.e. unirrigated fodder. Area under these crops are reported by Commissionarate of Agriculture. The yield of fodder i.e. irrigated and unirrigated has been taken as 50 tonnes per hectare for irrigated land and 25 tonnes per hectare for unirrigated land. These yield rates are supplied by CSO. These yield rates for irrigated and unirrigated fodder has been updated on the basis of type study conducted by Socio Economic Research Centre (SERC).

2.11 Valuation of Unspecified crop groups
- In case of 'other cereals' and 'other pulses', the valuation is done on a different footing due to the highly varying nature of their composition. The average per unit price of their production is estimated by average per unit value of the corresponding known items from concerned group. Thus for other cereals, the average price used is 75 per cent of the weighted average price of Jowar, bajra, barley, maize and ragi following the method adopted by the CSO. Also in case of 'other pulses' the price per unit is estimated at 85 per cent of the weighted average price of udid, moong, masur and arhar.

2.12 As indicated earlier in the case of crop/crop groups (for which only area figures are available) in respect of which outturn figures are not available* their valuation is done by applying appropriate average value of yield per hectare to the corresponding area figures for each crop group separately. In doing so the ratios made available by CSO are used in certain cases. Crops groupwise ratios are indicated in the Appendix 2.3 of this chapter.

2.13 Derivation of Net Product.- For arriving at the estimate of net value, deductions

* fodder, other oilseeds, other fibres, other drugs and narcotics, other condiments and spices, other fruits and vegetables, miscellaneous food crops and misc. non food crops.

have been made for various items of inputs, FISIM and the depreciation. Because of the interdependence of Agriculture (proper) and Animal Husbandry, the input deductions so made are for the combined activities yielding value added for both the sectors together. The items of inputs considered are seed, chemical fertilizers, organic manures, pesticides and insecticides, diesel oil, irrigation charges, electricity charges, market charges [separately worked for Agriculture and Animal Husbandry], operational cost, current repairs and maintenance of fixed assets and livestock feed.

2.14 **INPUTS** -

(i) **Seed.-** The quantity of seed used in this series is estimated by the seed utilization per hectare of area sown. These estimates are based on the information collected partly through the 'Survey of Agricultural output and inputs' undertaken by DES in March-May, 1976 and partly from CSO.

The yearwise and cropwise seed rates are given in Appendix-2.4 of this report. The Districtwise seed quantity is worked out using these seed rates. In some cases, where seed rates are not available, seed cost is worked out using per hectare seed cost value, which is given in Appendix-2.5 of this report. In the case of "Other crop groups" seed cost are worked out on the basis of norms available from Cost of Cultivation Study and type study under taken by CSO & DES, which is given in Appendix 2.5 of this report. Data on quantity of Hybrid / Improved seeds are available from Comissionarate of Agriculture, Pune. To arrive at local seed quantity, the quantity of Hybrid / Imroved seed is dededucted from total seed used. The quantity of Improved / Hybrid seed is evaluated on the basis of prices supplied by Maharashtra State Seed Federation and for quantity of local seed, wholesale prices of respective crops reported by DSO are used.

(ii) Chemical fertilizers – The districtwise quantity of consumption of different types of chemical fertilizers for the Maharashtra State and the respective prices available in a publication “Fertilizer and Agriculture Statistics of Western Region” brought out by the Fertilizer Association of India are used in the estimation of the value of fertilizer cost.

(iii) Organic Manure, Pesticides and Insecticides and Diesel Oil – Value of organic manure is worked out on the basis of dung quantity available from Commissionerate of Animal Husbandry. The state level estimates of insecticide & pesticides are furnished by CSO every year. Same is allocated to districts on the basis of area of cereals, pulses, cotton, fruits & vegetables. State level estimates of diesel oil are made available by CSO are allocated to district on the basis of no. of tractor & diesel engines as per latest Livestock Census i.e. 2003.

(iv) Irrigation Charges - The irrigation charges are taken to correspond to the irrigation receipts forthcoming in the State Government budget documents. The irrigation receipts so culled out from the budget documents are taken as the irrigation charges for different years at current prices (The budgetary items covered are under the Budget Heads 0701 and 0702- sale of water for irrigation purposes, sale proceeds from canal plantation, indirect receipts, irrigation cess and portion of land revenue due to irrigation). The estimates at constant prices of the irrigation charges for 1999-2000 are moved to further years on the basis of the index of area irrigated by ‘other sources’ (A major part of which is net irrigated area by surface irrigation under Government channel and tanks).

v) Electricity Charges :- Here expenditure on electricity used for cultivation is considered. The electricity consumption and the tariff is supplied

by the Maharashtra State Electricity Board, Mumbai. The electricity charges at constant prices are worked out by applying the 1999-2000 tariff to the electricity used for cultivation for different years.

vi) Market Charges - There are two type of market charges i.e. market charges for Agriculture and market charges for Animal Husbandry.

(vi) (a) Market Charges (Agri.) - This refers to charges incurred for buying & selling of different Agriculture produce in the market. Marketing charges (2.358% of Gross Value of Agriculture) for agriculture is supplied by CSO.

(vi) (b) Market Charges (Animal Husbandry) - Market charges of animal husbandry is a revision in this series. Here market charges refer to the charges incurred for buying and selling of different livestock during the year. Therefore, these market charges are applied to only slaughtered animals and are used as a part of agricultural input.

(vii) Operational Cost - This is revision to this series. This refers to the operation or transaction cost of animal husbandry products in the market. This includes the operational value from milk, hides, poultry meat, wool & bristles group, silk & honey, eggs & increment in livestock. For this 0.25% value from these items is taken as operational cost.

viii) Current Repairs and Maintenance of Fixed Assets.- This refers to repairs and maintenance of all the implements used in agriculture operations for e.g. tractor, trollers and all diesel/ electronic motors etc. State level estimates of repairs and maintenance of fixed assets and other operational cost both at current and at constant (1999-2000) prices is supplied by CSO. Same is distributed on the basis of districtwise agricultural implements available from Livestock census-2003.

(ix) Livestock Feed. – There are two types of livestock feed i.e. (1) Roughages (2) Concentrates. Both are considered as a input of Agriculture sector.

(a) **Roughages.** - Roughages include cane trash, grass, fodder, stalks and straws etc. For this purpose the entire production of output of fodder, cane trash, grass and 95 per cent of the value of stalks and straws in agriculture sector are accounted here. An adjustment of 3 per cent is also made to exclude the consumption of animals like bullock, horses, camels etc., in urban areas as, these animals are not used in agricultural activities. Thus the 97% of this is considered as roughages.

(b) **Concentrates** - Concentrates includes oilcakes, crushed pulses, grains, gram, rice bran, rice husk, oilseeds, gur, salt and medicines.

(1) **Bovine** - Category wise per animal/ annual consumption of concentrates used for cattle and buffalo (bovine) is taken into account. By using consumption rates and the total no. of projected bovines based on Livestock Census, total quantity of concentrates is worked out. Percentages of animal consumption of concentrates are given in Appendix 2.6.

(2) **Sheep and Goat** - As said above the estimated norms of annual consumption of concentrates by sheep and goat are taken into account. By using consumption rates and total no. of sheep & goat projected on the basis of Livestock Census, total quantity of concentrates is worked out. Percentage of consumption is given in Appendix 2.6.

(3) **Poultry** - The annual consumption of concentrates per bird is 9.13 kg per annum is applied to projected number of birds in respective year to work out the quantity of concentrates consumed in that year. Percentage of consumption of concentrates for poultry is given in Appendix 2.6.

This total quantity of concentrates is then distributed among the various types of concentrates i.e. grain, crushed pulses, husk, gram, oilseed, oilcake, bran, salt medicine etc. The quantity of concentrates thus arrived, is evaluated by using weighted prices of respective crops. Percentage distribution of concentrates is given in Appendix 2.7.

The estimates prepared separately for bovine, sheep and goat, pig and poultry are added together to get the total value of concentrates.

2.15 Income from operation of Government Irrigation System.- GVA from Government irrigation system is taken to be sum total of compensation of employees, interest payments, rent, profit and depreciation. The data regarding factor incomes from this activity is available annually from the derived sheets of Economic and Purpose Classification of State Government and local bodies budget. Data on depreciation at current and constant prices is also furnished annually by CSO. Income from operation of Government irrigation system at constant prices is worked out by moving the 1999-2000 income to other years on the basis of the index of area irrigated by 'other sources' (a major part of which is net irrigated area by surface irrigation under Government canals and tanks) as published in the Economic Survey of Maharashtra.

2.16 Estimates of net product from ancillary activities - The ancillary activities covered are rearing of silk worms, bee-keeping which are explained in Chapter – 3.

2.17 SDP at constant (1999-2000) price - For estimating SDP at constant prices, the output of different agricultural commodities is evaluated at 1999-2000 prices. Wherever base year prices are not explicitly available, the estimate of 1999-2000 is moved to other years with the help of suitable physical indicators which are explained in the relevant paras.

2.18 **Revisions** - The major revisions carried out in the agriculture sector are -

(i) Valuation of Toddy (Tady) has been introduced in the new series. Per capita consumption & price of Toddy for rural and urban areas is taken from 55th round of NSS (1999-2000). Base year price is moved to other years with WPI of “malt liquor”.

(ii) Being an illegal activity Hunting & Trapping is excluded from coverage.

(iii) Estimation of honey, wax & silk is now excluded from Agriculture sector and included in Animal Husbandry sector.

(iv) Estimation of by-products like straw of rape & mustard, soyabean, sunflower and Niger seed are newly added.

(v) Valuation of paddy procured under minimum supports price scheme by Government is estimated separately.

(vi) Valuation of tobacco stem and tobacco leaf is done separately.

(vii) Valuation of new crop Tamrind is done under the group ‘Condiments & Spices’.

(viii) For estimating fodder crops, new yield rates as supplied by CSO based on type study conducted by Socio Economic Research center (SERC) are used.

Fodder Irrigated – 50 MT / Ha.

Fodder Unirrigated – 25 MT/ Ha.

(ix) Estimation of area under grass are revised.

Area = 4 * Area under permanent pasture + 1* Misc. tree crops + 2* culturable waste + 2* fallow land + 1*net area sown. * Fixed yield rates based on NSS results i.e. Yield rate = 0.43757 MT/Ha.

(x) The ratio of market charges is replaced by 2.358% of Gross value from Agriculture (proper).

(xi) Market charges in Animal Husbandry Sector.

(xii) Operational cost in Animal Husbandry Sector.

APPENDIX - 2.1**Statement Showing ratios and norms used for estimating by-products***(Rs/Hec)*

Sr.No.	Name of by-product	1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
1.	Paddy	1838.63	1955.71	1944.56	1964.01	2080.68	1964.01	1948.12
2.	Wheat	3192.99	2460.89	2386.70	2410.57	2745.58	2410.57	2570.66
3.	Jowar	3795.61	3231.98	3213.56	3245.69	3438.51	3245.69	3219.44
4.	Bajra	1299.31	1660.46	1651.00	1667.57	1766.57	1667.51	1654.02
5.	Barley	3133.80	3480.54	2971.44	3001.15	3670.89	3001.15	3437.01
6.	Maize	1442.25	1619.93	1610.70	1626.80	1723.45	1626.80	1613.64
7.	Ragi	195.94	202.33	201.18	203.19	215.26	203.19	201.55
8.	Gram	763.93	644.78	598.77	604.76	1140.08	604.79	1067.45
9.	Udid	28.08	30.01	29.84	30.14	31.93	30.14	29.89
10.	Moong	100.87	53.74	53.43	53.97	57.17	53.97	53.53
11.	Ground nut	991.50	700.18	696.19	703.15	744.92	703.15	697.46
12.	Arhar Sticks	1144.08	1144.08	779.01	779.01	779.01	779.01	812.04
13.	Cotton sticks	328.08	400.05	421.54	421.54	421.54	421.54	439.41
14.	Sugar cane trash	3788.61	4019.10	4519.82	4568.63	3903.86	4568.63	3655.14
15.	Rape & Mustard	298.00	251.44	366.02	366.02	366.02	366.02	381.54
16.	Soyabean	153.61	153.61	152.74	154.40	154.40	154.40	144.56
17.	Sunflower	13.79	13.79	14.53	14.53	14.53	14.53	15.15
18.	Niger seed	36.56	49.11	48.83	49.36	54.44	52.44	49.10

APPENDIX – 2.2**Statement showing ratio's and norms used for estimating by-products.**

Name of by-product	Ratio's and norms used
1] Masur	0.253 tonne per hectare
2] Sesamum stick	0.405 tonne per hectare
3] Other cereals	0.311 tonne per hectare
4] Other pulses	0.382 tonne per hectare
5] Tobacco Straw	83.63 per cent of tobacco out put
6] Bagagge	22.5 per cent of gur production

APPENDIX - 2.3**Norms in respect of crop groups for which valuation is based on area**

<i>serial No.</i>	<i>crops group</i>	<i>Norm (value of yield per hectare of area equal to)</i>
1	Other Oilseed	85 per cent of weighted average value of yield per hectare of sesamum, linseed and castor seed.
2	Other fibres	90 per cent of weighted average value of yield per hectare of sunhemp and mesta
3	Other drugs and narcotics	90 per cent of average value of yield per hectare of tobacco.
4	Other condiments and spices	90 per cent of average value of yield per hectare of dry chilies.
5	Other fruits and vegetables	100 per cent of weighted average value of yield per hectare of bananas, oranges, mangoes, potatoes, cashewnuts and sweet potatoes.

APPENDIX - 2.4**Yearwise estimates of seed utilization per hectare of sown area
Supplied by CSO**

Sr.No.	Crops	Seed rates per hectore (per tonne)						
		1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
1	Paddy	0.05775	0.05775	0.05775	0.05775	0.05775	0.05775	0.05775
2	Wheat	0.0721	0.0721	0.0721	0.0721	0.0721	0.0721	0.0721
3	Jowar	0.01036	0.1006	0.01036	0.01036	0.1036	0.1036	0.1036
4	Bajra	0.00359	0.00359	0.00359	0.00359	0.00359	0.00359	0.00359
5	Barley	0.05604	0.05604	0.05604	0.05604	0.05604	0.00359	0.00359
6	Maize	0.024	0.024	0.024	0.024	0.024	0.024	0.024
7	Ragi	0.005	0.005	0.005	0.005	0.005	0.005	0.005
8	Small millets	0.01554	0.01554	0.01554	0.01554	0.01554	0.01554	0.01554
9	Gram	0.031	0.031	0.031	0.031	0.06784	0.06784	0.06784
10	Arhar	0.01429	0.01429	0.01429	0.01429	0.01429	0.01429	0.01429
11	Udid	0.01452	0.01452	0.01452	0.01452	0.01452	0.01452	0.01452
12	Moong	0.01501	0.01653	0.01501	0.01501	0.01501	0.01501	0.01501
13	Masur	0.04942	0.04942	0.04942	0.04942	0.04942	0.04942	0.04942
14	Linseed	0.015	0.015	0.015	0.015	0.015	0.015	0.015
15	Sesamum	0.003	0.003	0.003	0.003	0.003	0.003	0.003
16	Groundnut	0.08979	0.09006	0.08949	0.08979	0.08979	0.08979	0.08979
17	Rape and Mustard	0.0051	0.0051	0.0051	0.0051	0.0051	0.0051	0.0051
18	Castor	0.00502	0.00502	0.00502	0.00502	0.00502	0.00502	0.00502
19	Sugarcane	3.196	2.593	2.481	2.481	3.502	3.502	3.502
20	Potato	1.05325	1.05325	1.05325	1.05325	1.05325	1.05325	1.05325
21	Cotton	0.00325	0.00423	0.00325	0.00325	0.00325	0.00325	0.00325

APPENDIX - 2.5
Seed Cost Per Hectare

(Rs./Hec)

Sr. No.	Crops	Seed rates per hectore (per tonne)						
		1999-2000	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06
1	Other cereal	188.46	183.37	179.90	183.48	186.43	188.12	196.58
2	Other condiments	1177.96	1053.10	978.88	1009.52	1066.76	978.82	1057.81
3	Misc.food crop	210.50	216.86	223.97	227.91	230.83	236.93	248.38
4	Misc.nonfood crops	92.08	78.45	96.04	103.89	117.01	115.17	112.97
5	Fodder	146.12	147.90	187.30	258.47	283.64	230.49	257.89
6	Dry Chilies	235.8802	196.2286	192.7375	195.8137	226.9634	174.2109	164.5702

Other Oil seed - 9.53% of Gross Value of Niger seed safflower, Sunflower & Soyabean

Other Pulses – 3.55% of Gross Value of other pulses and horse gram.

Sweet potato - 12.1% of Gross Value of other vegetable.

APPENDIX –2.6

Statement showing percentages of consumption of concentrates per animals / Per year.

(in K.g.)

Types of Animal	Types of Concentrates	Consumption of total concentrates per annum
Cattle		
[Ind. & C.B.]	1] Male over 2.5 years	62.78
	2] Female over 2.5 years	25.55
	3] Young stock	4.02
	4] Not calved even once	1.82
Buffalo	1] Male over 3 years	214.62
	2] Female over 3 years	226.3
	3] Young Stock	7.30
	4] Not calved even once	6.94
Total Goat		1.68
Total Sheep		2.44
Pigs		1.00
Poultry (All)		9.13

Note – Above consumption rates are based on NSS 30th round- 1975-76

APPENDIX - 2.7
Percentage distribution in total concentrates

Animal	Concentrates	Percentage in total concentrates
Bovine	1] Grains	2.21
	2] Crushed Pulses	3.67
	3] Husk	27.63
	4] Gram	0.49
	5] Gur	0.64
	6] Oilseed	6.24
	7] Oilcake	58.08
	8] Bran	1.04
	9] Salt Medicine etc.	3.58
Goat	1] Grain	32.8
	2] Gram	7.1
	3] Salt medicine etc	60.1
Sheep	1] Grain	36.9
	2] Gram	4.9
	3] Salt	58.2
Pig	All Concentrates	100% total
Poultry	1] Grain	81.8
	2] RM Feed	18.2

APPENDIX - 2.8

Peak marketing periods for different agricultural crops.

Sr. No	Crop	Months for which prices are collected
1	Paddy	11,12,.1.
2	Wheat	3,4,5.
3	Jowar	12,1,2,3,4,5.
4	Bajra	12,1.
5	Barley	4,5.
6	Maize	11,12.
7	Ragi	11,12.
8	Italian Millets	10,11.
9	Sava	11,12,1,2.
10	Gram	3,4.
11	Arhar	3,4.
12	Udid	11,12.
13	Moong	10,11.
14	Masur	4,5.
15	Math	10,11,12,1,2,3,4,5.
16	Wal	10,11,12,1,2,3,4,5.
17	Chavli	10,11,12,1,2,3,4,5.
18	Watana	11,12,1,2,3,4.
19	Lakh	3,4.
20	Linseed	3,4.
21	Sesamum	10,11,12.
22	Groundnut	12,1.
23	Rape and Mustard	3,4.
24	Castor seed	3,4.
25	Coconut	6,7.
26	Sugarcane	1,2,3.
27	Cotton	11,12,1,2.
28	Sun hemp	11,12.
29	Mesta	1,2.
30	Tobacco	6,7.
31	Dry chillies	11,12,1.
32	Dry Ginger	2,3.
33	Turmeric	5,6,7.
34	Potato	2,3,4.
35	Sweet potato	10,11,12,1.
36	Banana	9,10,11,12,1,2.
37	Citrus fruits @	9,10,11,12,1,2,3,4,5.
38	Mango	4,5,6.
39	Grapes	2,3,4.
40	Arecanut	12, 1,2,3,4
41	Fodder	6,7,8,9,10.
42	Straw	12, 1,2,3,4
43	Rice husk	11,12,1.
44	Rice bran	11,12,1.
45	Arhar sticks	3,4
46	Sesamums stick	10,11,12.
47	Cottons stick	11,12,1,2.

- Month No. 1 Stand for January.
 - Month No. 2 stand for February
 - Month No. 12 stand for December
- @ (i) Peaches and pears, (ii) Sweet Orange,
(iii) Mandarin Orange, (iv) Pomelo etc.

Chapter - 3

ANIMAL HUSBANDRY AND ALLIED ACTIVITIES

Coverage:

3.1 This sector comprises the value of various livestock and poultry products and of addition to livestock and poultry population. Various products like milk, meat and meat products, hides and skin, hair and wool, dung, eggs and value of useful items of fallen animals and increment in livestock are covered under this sector. The activities concerning production of honey and silkworm cocoons are also covered in this sector. The estimates of SDP in this sector are prepared by adopting production approach.

Source of data

3.2 Data regarding production of milk (cow, buffalo and goat) hen eggs, wool, meat, number of animals slaughtered during the year and utilization rates of dung etc. are annually collected from Commissionerate of Animal Husbandry (CAH), Pune. This information is based on the integrated sample surveys carried out by CAH. The information received from CAH has been used in the estimation of income from this sector. The livestock censuses 1997 and 2003 providing the data on number of livestock (including poultry) of various categories are used in estimating the strength of livestock for different years. In the earlier series the yield rates of various Livestock products were based on yield rates collected for the year 1973-74 from Deonar slaughter house and MAFCO factory, Borivali, Mumbai. As these yield rates were not available annually, they were adjusted for every year, according to weight of meat reported by Directorate of Animal Husbandry, Pune. To update these old yield rates CSO and Socio Economic Research Centre (SERC) conducted the type study and supplied updated yield rates to DES. These updated yield rates as supplied by CSO are used in the present series. These updated

yield rates are given in the Appendix – 3.1. Some of offal's viz. Bladder, Intestine, Tongue, Brain, Head trimming, Liver, Spleen, Heart, Trachea, Pancreas etc. which were taken into account in earlier series are not considered in present series, as they are not marketed separately or sold out with some other offals. This office has been collecting regularly the prices of livestock, livestock products and poultry from three rural and three urban centers in each district. The annual average price is worked out on the basis of this data and the same is used for valuation

Estimation of livestock products.

3.3 **Milk** - The information relating to annual milk production separately for cow, buffalo and goat is supplied by CAH for 13 strata separately in the state. As per the present series, coverage of milk production has been extended by CSO to goat milk and camel milk. However, the goat milk is already considered for estimation since 1980-81 series. In case of camel milk, it is observed that number of female camel in Maharashtra are very less in numbers and due to this camel milk production is very negligible from the point of view of SDP. Therefore the camel milk have not been taken into account for estimation of milk.

3.4 **Other livestock products.** - The estimates of other livestock products are prepared according to the method explained in Para 3.2 above. From the total value of meat and meat products, 7.52 per cent is deducted to account for animals slaughtered in registered factories (as suggested by CSO based on the study of ASI data for earlier series)

3.5 **Eggs and poultry meat** - The data regarding hen eggs production during the year, is collected from CAH. The norms used to worked

out poultry meat data regarding hen eggs production during the year, the same are collected from CAH. The norms used to work out poultry meat production, duck eggs and duck meat production are given in Appendix 3.2 of this Chapter.

3.6 Wool, goat hair, pig bristles and camel hair - This group consists of wool, goat hair and pig bristles. However, C.S.O. for present series extended this group to camel hair. The estimates of wool production as reported by CAH are used in estimation. As regards the output of goat hair, pig bristles and camel hair the norms made available by CSO have been used.

3.7 Dung output - The data regarding average dung quantity [collected per bovine, per day] and its utilization rates are available from CAH annually.

3.8 Increment in livestock - Increment in Livestock of different categories viz. cattle, buffalo, sheep and goat, pig, duck and fowls is ascertained from the figures of livestock in different years estimated by interpolation and extrapolation from livestock census data of 1997 and 2003.

3.9 Production of certain items from fallen animals. - The items considered are horns, tails, hide and skin of fallen animals. The estimated number of fallen animals as furnished by CAH are used.

3.10 Silkworm cocoons, honey and wax - The data regarding value of silkworm cocoons, honey and wax are collected from the Directorate

of Silk, Nagpur and Khadi and Village Industries Commission respectively. This is treated as net income. The income at constant prices is derived by moving the income in the base year 1999-2000 to different years according to the index of production

3.11 Valuation of output - The prices of livestock and livestock products collected by the DSO from each district in the state are used for valuation purpose.

3.12 Gross State Domestic Product. - Since the input estimates are combined for agriculture (proper) and animal husbandry activities, independent estimate of Gross State Domestic Product from Animal Husbandry sector alone is also not available. Only gross value of output from Animal Husbandry sector is estimated and clubbed with those of agriculture (proper) before the deduction of input.

3.13 SDP at constant (1999-2000) prices. The output is evaluated at 1999-2000 prices.

3.14 Revision-

- i) The valuation of camel hair is newly added using yield rate & prices supplied by CSO.
- ii) For estimating the value from increment in Livestock four new categories of animals i.e. horses, donkeys, mules and camels are included.
- iii) The market charges on slaughtered animals and operational cost 0.25% of total value of milk + hide group + poultry meat & wool group + silk & honey + eggs & increment are newly introduced in this series as a input.

Appendix – 3.1

Yield Rates of Meat & Other Products

Sr.No. Items	Rates in Kg. per Animal Slaughtered				
	Cattle	Buffaloes	Goats	Sheep	Pig
1 Meat	95.000	129.44	8.431	10.194	46.444
2 Edible offal & glands.	4.444	5.090	0.706	0.708	1.741
3 Heads	5.889	7.310	0.792	0.811	3.485
4 Leg	4.889	6.090	0.455	0.599	1.042
5 Fat	4.806	8.970	0.286	0.219	2.670
6 Oesophagus	0.206	0.310	0.075	0.037	0.185
7 Blood	8.500	8.840	0.674	0.564	2.267
8 Tail stump	0.875	0.720	-	-	-
9 Bones	11.833	14.310	-	-	-
10 Guts	3.389	4.220	0.706	0.903	2.484
11 Horns	0.542	1.280	0.076	0.060	-
12 Hoofs	0.347	0.340	0.059	0.047	0.140
13 Hide/Skin	28.500	39.000	5.500	5.500	8.750
14 Wastage	2.972	6.560	0.323	0.236	0.816
Total	172.192	232.480	18.083	19.878	70.024

Source – Central Statistical Organisation

Appendix - 3.2

Poultry and Poultry Meat

1	<i>Hen Eggs</i>	. . . Annual Production of Hen Eggs Data from Commissionarate of Animal Husbandry, pune.	
	(i) Eggs lost in Collection	. . . 0.38 per cent of Eggs Production.	
	(ii) Total Eggs Collection	. . . Eggs Production minus Lost in collection.	
	(iii) Eggs used for consumption	. . . 80.06 per cent of Eggs Collected.	
	(iv) Eggs used for hatching	. . . 19.94 per cent of Eggs Collected.	
	(v) Eggs hatched i.e. chicken produced	66.60 per cent of Eggs used for hatching.	
	(vi) Chicken survived	. . . 50 per cent of Eggs hatched.	
2	<i>Duck Eggs</i>	. . . Information based on livestock census, No. of birds taken into consideration for Duck Eggs production.	
	(i) No. of Eggs per female bird per year	. . . 90 Eggs.	
	(ii) Production of Eggs	. . . 90 x No. of Average female birds.	
	(iii) Eggs lost in Collection	. . . per cent of Eggs production.	
	(iv) Total Eggs Collection	. . . Eggs Production minus Eggs lost in Collection.	
	(v) Eggs used for consumption	. . . 40 per cent of Eggs Collected.	
	(vi) Eggs used for hatching	. . . 60 per cent of Eggs Collected.	
	(vii) Eggs hatched i.e. Ducklings	66.60 per cent of Eggs used for hatching.produced	
	(viii) Ducklings survived	. . . 50 per cent of Eggs hatched i.e. Ducklings produced.	

Source: SM: Standard Methodology

Chapter - 4

FORESTRY AND LOGGING

Coverage

4.1 This includes economic activities like (1) Forestry (gathering of uncultivated forest products, charcoal burning carried out in the forests and (2) Logging (felling and rough cutting of trees, hewing or rough shaping of poles, blocks etc.) and transportation of the logs upto permanent lines of transport. The forest products are classified into two broad group viz., (a) Major forest products: comprising Industrial Wood (timber, round wood and match and pulp wood) and Fuel Wood (fire wood and charcoal wood) and (b) Minor Forest Products: comprising a large number of heterogeneous items such as tendu leaves, bamboo, sandal wood, charcoal, lac etc.

4.2 The production approach is adopted for estimating the SDP/DDP in this sector. The district wise data on output and prices of different major forest products and the value of minor forest products are regularly collected from the office of the Chief Conservator of Forests, Maharashtra State, Nagpur every year. Forest Development Corporation of Maharashtra (FDCM) also manages some part of the forests in the state. The relevant district wise data regarding forest produce from the forest area managed by FDCM is also collected. In case of firewood chips i.e. firewood quantity is taken from NSS 55th round for the year 1999-2000. For further year it is worked out by using growth observed in quantity of firewood consumption of NSS 50th & 55th round and districtwise projected population of corresponding years. This district wise quantity of firewood is evaluated by using W.P.I. for fuel and light.

This district wise estimates of firewood is reduced by deducting the value of agriculture by-

product viz. cotton stick, arher stick, jute stick & bagase, which is consumed as fuel by the households and have already been taken into account in Agriculture Sector. These estimates are then inflated by 1.06 per cent to account for consumption of fuel wood by industries & on funerals.

4.3 In order to account for the district wise unrecorded production of major as well as minor forest produce, the proportion of unrecorded output to recorded output as suggested by [i.e. for Timber it is 10% of recorded and 9 times in case of Minor Forest Produce] CSO are used.

4.4 Input : The input is taken as 10% of gross value of Timber wood, firewood and MFP combined all forest products. The annual data on depreciation is furnished by CSO and same is used to arrive at Net Value Added from forestry sector.

4.5 The estimates of gross value at constant i.e. 1999-2000 prices are worked out by evaluating the output of timber and firewood at 1999-2000 prices. In the case of minor forest produce, where only value is available, the implicit price deflator as obtained from the value of major forest produce at current and constant price is used to arrive at gross value of MFP at constant price.

Similarly, the depreciation at constant prices as reported by C.S.O. is used to arrive at Net Value Added (NVA) at constant prices.

4.6 The farm Yard Wood mostly comprises of fuel wood and only a small proportion of it is industrial wood, which is included in the unrecorded production of major forest product.

4.7 Revision - 1] NSS 50th & 55th Round – consumption of firewood.

Chapter - 5

Fisheries

Coverage:

5.1 The activities included in this sector are commercial fishing in (i) ocean, coastal and off-shore waters and (ii) inland waters, which include catching, tackling and gathering of fish from rivers, irrigation and other canals, lakes, tanks, inundated, tracts etc. Also included are gathering of sea weeds, sea shells, pearls, sponges and other ocean and coastal water products and subsistence fishing and exploitation of uncultivated plant life in inland waters and artificial ponds, Fish curing viz., salting and sun drying of fish is also covered under this sector. The estimates of SDP are prepared by adopting production approach.

5.2 The basic data on district wise output and value of marine fish (including salted and sun-dried fish) variety wise and district wise inland fish are made available by the State Commissionerate of Fisheries. In the new series, data regarding marine fish production is collected for seven major categories of fish viz., Shrimps, Harpodon, Lobster, Dara-rawas, Pomfret, Prawns and others. The estimates of output of marine fish are based on the comprehensive surveys carried out by the fisheries department in coastal districts of Maharashtra State. The valuation of marine

fish is done considering the utilisation in fresh form and in cured form. The inland fish is all consumed in fresh form and hence its value in fresh form only is considered. No reliable data on subsistence fishing is available and hence the same is taken as 12.5 per cent of inland fish production as indicated by CSO for earlier series. The net production from collection of pearls and chanks etc. has not been considered as this activity is of negligible scale and the relevant data are not available.

5.3 Adequate annual data on inputs and operational cost pertaining to the fisheries sector are not available so far. The GVA is, therefore, worked out by deducting the input norm of 22.5 per cent of gross value of marine fish in fresh form, 1% of gross value of output for subsistence and salted fish & 10 per cent of gross value of output of inland fish and cost of salt.

5.4 The estimates of gross value of output at constant (1999-2000) prices is prepared by evaluating the quantity of marine fish in fresh form, sun dried and salted and inland fish at 1999-2000 prices.

5.5 No revision is made in the sector.

Chapter - 6

Mining and Quarrying

Coverage :

6.1 The economic activities covered under this sector comprises of extraction of minerals which occur in nature as solids, liquids or gases, underground and surface mines, quarries and oil wells with all supplementary operations for dressing and beneficiating ores and other crude minerals such as crushing, screening, washing, cleaning, grading, milling, floatation, melting, palletising, topping and other preparations needed to render the material marketable. All these activities are covered to the extent they are carried on at the mine site.

6.2 Hitherto, the production of salt obtained evaporation of water from sea, lake etc. were excluded from the purview of this sector and included in manufacturing sector. Now as per NIC -1998 extraction of salt including salt mining, crushing and screening and salt production by solar evaporation of sea water, like brine or other natural brines is covered under code 14220 in mining sector and code 24298 processing of salt covered in manufacturing sector. Therefore this economic activity has now been covered in mining sector. The district wise data on production & prices are available from the office of the Salt Commissioner.

6.3 The estimates of District Domestic Product (DDP)/ State Domestic Product (SDP) from this

sector are prepared by production approach. The district level & State level data on production and value of the major minerals for Maharashtra are collected from the Indian Bureau of Mines (IBM) Nagpur. Input rates for different years are also collected from IBM, Nagpur. In case of coal the data on production and input rate are collected from Annual Account of Coal India Limited.

6.4 As regards the district wise data on value of minor minerals, the same are collected from Geology & Mining Department of State Government, Nagpur. Data on FISIM & Depreciation in respect of all minerals as reported by CSO is used to arrive at Net value added at current prices from mining sector.

6.5 To arrive at the estimates at constant prices, the major minerals are evaluated at the base year i.e. [1999-2000] prices. In the case of minor mineral where only values are available, the implicit price deflator as obtained from the value of non-metallic major minerals at current and constant prices is made use to arrive at gross value of minor minerals at constant prices.

6.6 From the gross value added of all major and minor minerals, value of depreciation and FISIM are deducted to workout the Net Value Added from this sector.

6.7 Revision: Activity of salt evaporation of water from sea is included.

Chapter -7

Registered Manufacturing

Coverage:

7.1 Manufacturing activities are classified into two broad sectors 'Registered' & 'Unregistered'. The Registered Sector includes all factories (NIC 1998 group code 151 to 372 and 01405) covered under section 2m (i) & 2m (ii) of the Indian Factories Act, 1948, which respectively refers to the factories employing 10 or more workers using power & those employing 20 or more workers but not using power on any day of the preceding 12 month and bidi and cigar establishments registered under Bidi and cigar workers (condition of employment) Act 1966 and employing 10 or more workers using power or 20 or more workers not using power. Factories registered under factories act but not engaged in manufacturing activities are excluded from the coverage of the sector. However, the contribution of some activities such as Railway, workshops, currency coinage & mints and security printing are included in the manufacturing activity.

Source of data -

7.2 The ASI data relating to Maharashtra are available from ASI section of this Directorate. From 2003-04 onwards the ASI data is made available by CSO's ASI wings Kolkatta & IIP index is available from CSO.

Estimates of SDP at current prices-

7.3 To estimate the GVA for the registered manufacturing sector, production approach is used & the production data in respect of units registered under factories act & others is available through the results of Annual Survey of Industries (ASI). The estimates of GVA at current prices are prepared for the years 1999-2000 to 2002-03 on the basis of the ASI data relating to Maharashtra available in this Directorate. Since 2003-04 onwards ASI data available from ASI wing kolkatta have been made

use of. For the latest year, as the ASI tabulation could not become available the earlier year estimate at current price is moved by using (i) Index number of industrial production worked out for the state using the trend in the all India index of Industrial production for 'Selected Industry groups where Maharashtra has a substantial share and State level weights ii) All India wholesale price index numbers of manufactured products.

From the GVA, the estimates of CFC supplied by the CSO at current prices are deducted to arrive at NVA at current prices.

Estimates of SDP at Constant (1999-2000) prices : -

7.4 To arrive at constant price estimates the Gross value added at current prices is deflated by the WPI of relevant industry groups. For the latest year, when the ASI tabulation does not become available, previous year estimate of constant prices is moved by, using the index number of industrial production (IIP) of relevant industry groups and the constant price income is inflated by all-India wholesale price index number for the concerned industry groups. These estimates will undergo changes as soon as ASI results are available.

The Net value added at constant price is worked out by deducting Consumption of Fixed Capital (CFC).

Revision-

- 7.5
- i) Adoption of NIC 1998 in place of NIC 1987
 - ii) Inclusion of the activities of currency, coinage & mint units under public sector.
 - iii) Exclusion of industry group "Repair services" (3-digit codes 394, 398 & 97 under NIC (1987) from Reg. Mfg & included in the Trade Sector.

Chapter -8

Unregistered - Manufacturing

Coverage :

8.1 Unregistered manufacturing sector covers all manufacturing units, which are not registered under the Indian Factories Act, 1948. In other words, it covers all manufacturing units employing less than 10 workers, if using power or less than 20 workers, if not using power. All manufacturing & processing activities, including repair & maintenance services undertaken by household and non-household units are included.

Source of data –

8.2 i) Third all India census of small scale industrial units, 2001-02 conducted by the office of the Development Commissioner for small scale industries (DCSSI) for value added per worker (VAPW) of SSI units.

ii) Survey on unorganised manufacturing sector 56th round 2000-01 survey conducted by the NSSO for VAPW.

iii) NSS/ population census 2001 for labour input.

iv) IIP index.

v) WPI index.

Bench mark year estimates :-

8.3 GVA estimates for base year 1999-2000 have been prepared separately for the two segments of the Un-registered manufacturing sector

i) First segment is of small scale industries (SSI) (other than those covered under the ASI)

ii) Another segment is the rest of the unorganized manufacturing sector i.e. the manufacturing sector which is not covered under either the ASI or the SSI

8.3.1 The GVA for the SSI segment has been estimated using the value of output data available from the results of Third All India Census on small scale industries units, 2001-02 published by the Development Commissioner, Small Scale Industries and the GVA / GVO ratio available from the results of NSS 56th round survey on unorganized manufacturing. The estimates of GVA are not separately available in

the results of SSI census. Due adjustments have been made to bring the estimates of GVA of the SSI segment to the price levels of 1999-2000.

8.3.2 The estimates of other un-registered manufacturing units, i.e. the units not belonging to SSI group mentioned above, have been compiled by using the information on GVA per worker from the integrated surveys of enterprises and households in the 56th round of NSS 2000-01 has suitably been deflated to 1999-2000. The workforce (labour input) estimate regarding units neither belonging to ASI nor to SSI has been obtained from the total work force on manufacturing activities by subtracting the workforce relating to ASI & SSI (non-ASI) segment. The bench mark year estimates of workforce (labour input) is given in Appendix- 8.1.

8.3.3 The bench mark year estimates of value added for each industry group for rural and urban areas are combined and moved forward with the help of All India IIP & WPI of concerned industry groups. The benchmark year estimates is given in Appendix - 8.2 .

At Constant Prices-

8.4 GVA at constant prices is estimated the benchmark year estimate move forward with help of IIP of respective industry group.

Gross Value of output (GVO) -

8.5 The estimates of trade, hotels & restaurants, un- organized transport, the gross value of output at current and constant (1999-2000) prices from the commodity producing sectors including unregistered manufacturing are used as the indicators. For this purpose, the gross value of output is worked out using the year wise ratio of GVA to GVO supplied by CSO.

Revision -

8.6 In the new series (base 1999-2000) the bench mark year estimates are moved to further years on the basis of rise in IIP & WPI instead of value of output have been used in the earlier series.

Appendix – 8.1

Estimates of workforce in the unregistered manufacturing sector, 1999-2000

INDUSTRY	NIC. 98 CODE	Total no. of workers in manufacturing sector	Total no. of workers in registered manufacturing sector	Total no. of workers in un registered manufacturing sector-SSI part	Total no. of workers in un registered manufacturing sector-non- SSI part
Production, Processing and Preservation of meat fish, fruits, vegetable oils & fats	151	62606	16031	13258	33317
Manufacturing of Dairy Products	152	77822	10369	3336	64117
Manufacturing of Grain mill products, etc and Animal Feeds	153	230957	10967	12340	207650
Manufacturing of other food products	154	232166	65078	16478	150610
Manufacturing of Beverages	155	20138	9818	3997	6323
Manufacturing of Tobacco products	16	64835	37735	1078	26022
Spinning, Weaving and Finishing of Textiles etc.	171+172+173	563768	168552	21767	373449
Wearing apparel, except fur apparel & tailoring	181-18105	620873	16667	10284	593922
Tanning and Dressing of Leather, Fur and Fur products	182+19	74662	3585	3400	67677
Manufacturing of Wood and products of wood except furniture	20	352046	3196	12216	336634
Manufacturing of Furniture	361	74764	7226	18887	48651
Manufacturing of Paper and Paper Products, Publishing, Printing etc.	21+22	188910	36726	37216	114968
Coke, refined petroleum products, nuclear, rubber & plastic products	23+25	120400	44277	34626	41497
Mfg of Chemical and Chemical Products	24	124193	79304	31684	13205
Mfg of Other Non-metallic mineral products	26	314701	26005	35395	253301
Manufacturing of Basic iron and Steel and Non-ferrous metals	271+272+2731+ 2732	77505	50634	22735	4136
Recycling of metal waste and scrap + non-metal scrap	371+372	6868	0	218	6650
Manufacturing of fabricated metal products, machinery & equipment n.e.c	28+29+30	470246	114822	121754	233670
Elect. Machinery and apparatus n. e. c.+ radio, TV & communication equipment.	31+32	160679	41304	23245	96130
Manufacturing of medical precision and optical instruments, watches, clocks etc.	33+369	281508	32375	8748	240385
Motor vehicles, Trailers and Semi-trailers & Other Transport equipments	34+35	98083	70092	11777	16214
TOTAL		4217730	844763	444439	2928528

n.e.c. :- not elsewhere classified.

Appendix - 8.2

Estimates GVA of Unregistered manufacturing sector, 1999-2000

INDUSTRY	NIC. 98 CODE	SSI		Non-SSI			Total GVA (in Lakhs)	
		Workforce (in nos.)	GVA/W (in Rs.)	GVA (in Lakhs.)	Workforce (in nos.)	GVA/W (in Rs.)		GVA (in Lakhs.)
Production, Processing and Preservation of meat fish, fruits, vegetable oils & fats	151	13258	157105	20829	33317	38641	12874	33703
Manufacturing of Dairy Products	152	3336	279254	9316	64117	10695	6857	16173
Manufacturing of Grain mill products, etc and Animal Feeds	153	12340	716894	88465	207650	18525	38466	126931
Manufacturing of other food products	154	16478	107284	17678	150610	23835	35899	53577
Manufacturing of Beverages	155	3997	194850	7788	6323	22136	1400	9188
Manufacturing of Tobacco products	16	1078	181541	1957	26022	8136	2117	4074
Spinning, Weaving and Finishing of Textiles etc.	171+172+173	21767	79750	17359	373449	28669	107066	124425
Wearing apparel, except fur apparel & tailoring	181-18105	10284	238342	24511	593922	18274	108535	133047
Tanning and Dressing of Leather, Fur and Fur products	182+19	3400	237449	8073	67677	21740	14713	22786
Manufacturing of Wood and products of wood except furniture	20	12216	130166	15901	336634	18050	60762	76663
Manufacturing of Furniture	361	18887	91778	17334	48651	30960	15063	32397
Manufacturing of Paper and Paper Products, Publishing, Printing etc.	21+22	37216	101245	37680	114968	38733	44531	82210
Coke, refined petroleum products, nuclear, rubber & plastic products	23+25	34626	88315	30580	41497	32914	13658	44238
Mfg of Chemical and Chemical Products	24	31684	126562	40100	13205	61582	8132	48232
Mfg of Other Non-metallic mineral products	26	35395	69952	24759	253301	14713	37269	62028
Manufacturing of Basic iron and Steel and Non- ferrous metals	271+272+2731+ 2732	22735	91425	20785	4136	46191	1910	22696
Recycling of metal waste and scrap + non-metal scrap	371+372	218	158367	345	6650	38970	2592	2937
Manufacturing of fabricated metal products, machinery & equipment n.e.c	28+29+30	121754	104871	127685	233670	37429	87460	215145
Elect. Machinery and apparatus n. e. c.+ radio, TV & communication equipment.	31+32	23245	7711	1792	96130	53524	51453	53245
Manufacturing of medical precision and optical instruments, watches, clocks etc.	33+369	8748	251531	22004	240385	27872	67000	89004
Motor vehicles, Trailers and Semi-trailers & Other Transport equipments	34+35	11777	166263	19581	16214	52210	8465	28046
TOTAL		444439			2928528			

n.e.c. :- not elsewhere classified.

Chapter - 9

Construction

Coverage :

9.1 Construction activity covers all new constructions, alterations & repairs of buildings, highways, streets, bridges & culverts, railways roadbeds, rail roads, subways, airports & parking areas, dams, drainages, wells & other irrigation sources, water power projects, communication system such as telephone & telegraph lines, land reclamations, bunding & other land improvements, planting & cultivating new orchards, afforestations projects & all other types of heavy constructions. The basic materials considered for construction includes cement & cement products, iron & steel, bricks & tiles, timber & round wood and fixture & fittings. Activities of the special trade contracts, such as carpenters, plumbers, plasterers & electricians relating to construction projects and assembly & installation at the sites of prefabricated integral parts into bridges storages & warehouse facilities etc. are also included in this group.

Source: -

9.2 1) All India Debt & investment Survey 2002-03 report for investment in rural & urban residential buildings.

2) Population Census 2001 for no. of dwellings.

3) NSSO 58th Round, results on "Housing conditions in India".

4) State Budget & Central Budget documents for outlays on construction.

5) Local bodies budget.

This sector comprises two components i.e.

(i) Pucca construction (ii) Kutcha construction.

The pucca construction is measured through the commodity flow approach while the kutcha construction through the expenditure approach.

Public Sector

9.3 i) Central Administration & Departmental Commercial Undertaking (DCU) excluding Railway and Communication.

ii) State Administration & DCU and local bodies.

iii) Non Departmental Commercial Undertaking, (NDCUS) (State + Central)

iv) Plan Schemes

Supra Regional Sector

9.4 i) Railways

ii) Communication

Household Sector

9.5 i) Rural Residential Building (RRB)

ii) Urban Residential Building (URB)

iii) Non-Residential Building & other Construction work

Private Corporate Sector (Residual)

9.6 Residual includes private commercial banks, Quasi (both private & public), plantations, new companies under setup & other. Government Kutcha Construction is included in public sector Administration.

9.6.1 The data available on expenditure on new construction and repairs & maintenance in the budget/annual account of the state Government administrative department, local bodies & their departmental enterprises, Non-Departmental commercial undertaking (NDCUS) are used to estimate GVA.

9.6.2 For railways, communications and central administration excluding railways & communications, the estimates are prepared by Central Statistical Organisation (CSO) at national level and apportioned to the states on the basis of certain indicators.

9.6.3 The household sector, estimates of new construction and repair & maintenance for i) Rural residential building (RRB) ii) Rural non-residential buildings iii) Urban residential buildings and iv) Urban non-residential & other construction works are prepared initially for the benchmark year using the results of All India Debt & Investment (AIDIS) 2002-03. These benchmark year estimates are extrapolated with various indicators such as norms derived from various housing census & other survey results, and composite price indices for compiling the estimates for subsequent years.

9.6.4 These estimates are further apportioned to accounted & unaccounted construction using the norms derived from the results of relevant NSSO surveys.

Accounted Construction

9.7 The commodity flow approach is followed to estimate the output & GVA of the accounted construction. The accounted constructions include both new construction and repairs & maintenance. The approach covers the cost of basic materials & factor payments such as labour cost, rent/rentals, interest etc. It captures the construction costs incurred on five basic materials used in construction activity. The basic materials considered for construction include i) cement & cement production ii) Iron & Steel, iii) bricks & tiles, iv) timber & round wood and v) fixtures & fittings.

9.7.1 From the results of NSS 58th round survey on housing conditions it has been estimated that the five basic material groups account for 72.5 percent of the total construction materials while the remaining 27.5 percent is 'other materials'. Once the estimate of value of output of accounted construction from basic materials has been obtained, the output on account of 'other materials' is estimated using these ratios. It has been estimated that the factor payments account for 53.4 percent of the total construction output. The norms

for basic materials other materials and factor inputs used for construction activity are 72.5 per cent, 27.5 per cent & 53.4 per cent.

Unaccounted Construction

9.8 The coverage under unaccounted (kutchra) construction has been extended to include civilian construction in installation wind energy system and 7 additional plantation crops viz. coconut, areca nut, cashew nut, mango, sapota, grapes & citrus fruit under cultivated assets. The capital expenditure incurred on cultivation of plantation crops during the gestation period is treated as output under kutchra construction of the 'Construction Industry' for that year. In respect of wind energy, 8.7 per cent of the total expenditure incurred in constructing the wind energy system, which include wind mills, aero-generators and wind turbines, has been treated as new construction in un-accounted (Kutchra) construction, based on the cost structures of the projects undertaken.

9.8.1 The costs of new construction, repair & maintenance of public & private corporate sectors have been estimated independently from the budget documents / annual reports. For the household sector and other construction works by the households both in farm & non farm business the results of AIDIS 2002-03 have been used for compiling the estimates of construction in rural-urban, residential & non-residential buildings. The revised norms used for apportioning the rural residential buildings into accounted & unaccounted constructions are 79:21 and urban residential builders, they are 97:3. These norms have been adopted on the basis of results of NSS 58th round survey on housing condition.

At constant prices

9.9 The geometric average of cost of construction index of rural & Urban are used as deflation factor to workout constant price estimates

of public sector, Residual & central administration & DCU'S. The growth rates of rural & urban residential building are used to move 1999-2000 construction expenditure to further years. The construction expenditure of rural & urban non-residential building are being moved to later years with the help of weighted index of constant price value of output from Agriculture excluding livestock & registered manufacturing.

Revision : -

9.10 i) In the New series (base 1999-2000)

under pucca construction fixtures & fittings is added in earlier item like cement & cement products iron & steel, bricks & tiles, timber & round wood as raw material.

ii) The coverage of kutcha construction has been extended to civil construction like installation of wind energy & 7 additional plantation crops (coconut, Areca nut, cashew nut, mango, sapota, Grapes & citrus fruits) under cultivated assets.

Chapter - 10

Electricity, Gas & water supply

Coverage :

Electricity :

10.1 The economic activities included under “Electricity” are generation & transmission of electric energy & its distribution to households & industrial, commercial & other uses

Gas :

10.2 This activity includes manufacturing of gas in gas works & output of Liquefied petroleum gas (LPG), a by-product of petroleum refineries & distribution through mains to households and to other users are retained in the manufacturing sector. The Supply of gas cylinders to households is accounted for under wholesale & retail trade. The production of gobar gas and other gas are included in this sector.

Water Supply :

10.3 The activity of ‘water supply’ includes collection, purification & distribution of water to domestic & industrial consumers. The operation of irrigation system is included under agriculture.

Source :-

10.4 1) Electricity

Annual Reports of NDCU’s

Central :-

- a) Nuclear power corporation of India
- b) Power gride corporation

State :-

- (a) MSEB
- (b) Private Companies
 - i) Tata power company
 - ii) Mula-pravara electric co.
 - iii) Mumbai Suburban Electricity supply Co.

2) Gas -

a) Ministry of Non-Conventional energy for no. of bio gas plants.

b) Khadi & village industries commission (KVIC) for value of production

c) Gas Authority of India Ltd. (GAIL) for output & input

d) Indraprastha Gas Ltd.

3) Water - supply

a) Budget documents of center & state DCU’s for data on salaries & wages

b) Data from municipal corporation, municipal councils and cantomant board for data on salaries & wages.

At Current Prices :-

A) Electricity -

10.5 The GVA estimates prepared by using the income approach. The Economic classification of budget provides the estimates for enterprises run departmentally & the analysis of profit & loss account provides the estimates for non-departmental enterprises MSEB & Private Companies. The value added estimates of Central undertaking viz. NTPC & Power Grid Corporation are made available by CSO. The operating losses of departmental commercial undertaking (DCU’s) has been treated as imputed subsidies. The GVA at current prices are prepared by adding up the factor payments and depreciation reported by those companies.

B] Gas –

10.6 The estimates of Gobar Gas are compiled by using the data from collected Ministry of Non-conventional Energy sources & Khadi & village industry commission (KVIC). In the absence of input structure, the value of output of Gobar Gas is treated as value added, the year wise estimates of other gas are workedout on the basis of Gas Authority of India Ltd (GAIL) supplied by C.S.O.

10.6.1 The state wise estimates of GVA in respect of Gobar Gas is prepared on the basis of value of production per plant.(estimated on the basis of KVIC data) multiplied by total no. of plants installed up to the current year.

C] Water Supply -

10.7 The estimates are prepared separately for public & private sector. The estimates of public sector are culled out from Budget analysis of state Government & Local Bodies. The estimates of private part are prepared separately for Urban & rural areas.

i) Urban areas- The per worker emolument of workers engaged in water supply is worked out from the data on emoluments collected from Municipal Corporations, Municipal Councils & cantonment boards during the year. This per worker emolument along with the projected working force (urban) is used to workout total emolument from water supply for urban areas at current prices.

ii) Rural areas - Per worker emolument is worked out from the data of Municipal Councils & Cantonment Boards whose population is below 50,000. This per worker emoluments along with the projected working force is used to workout total emoluments from water supply per rural areas at Current Prices.

iii) Operating Surplus - The data regarding factor incomes other than emoluments are collected from ASI tabulation for various years.

At Constant Prices

10.8 **A] Electricity -** The GVA for the year 1999-2000 is moved to other years on the basis of the total consumption of electricity in Maharashtra reported for different years.

10.9 **B] Gas -**

I] GAIL- The WPI of petrol, crude & natural gas are used as a deflation factor to workout constant price estimates.

II] Gobar Gas- The GVA is prepared on the basis of value of production per plant 1999-2000 multiplied by total no. of plant installed up to the current year.

C] Water Supply -

10.10 **1] Public Part -** The All India Consumer Price Index (Industrial Workers) are used as a deflation factor to workout constant price estimates.

2] Private part - The estimates of total emoluments for rural & urban separately are prepared on the basis of per worker emoluments of rural & urban for the year 1999-2000 along with the projected working force of rural & urban.

3] Operating Surplus - The WPI of electricity is used as a deflation factor to workout operating surplus at constant prices.

Chapter - 11

Transport by other means & Storage

Coverage :

11.1 This sector includes

Transport by other means

11.1.1 Road Transport: -

a) Mechanised Road Transport

- i) 6021 passenger transport by bus services
- ii) 60221 passenger transport by other than bus
- iii) 60231 Freight transport by motor vehicles.

b) Non- mechanised Road Transport

i) 60222- Other non scheduled passenger land transport viz- Hockney carriages, bullock cart, Ekkas, Tangas

- ii) 60232- Freight Transport
- iii) 63-6302- Supporting & auxiliary transport activity

Water Transport :-

11.1.2 Ocean & Coastal water transport

Services incidental to Transport

a) Public

- i) Dredging corporation
- ii) Port pilotage
- iii) Mumbai Port Trust
- iv) Jawaharlal Nehru port Trust
- v) Air transport

b) Private

- i) Water & land transport

Air Transport

11.1.3 62- Air transport

Source

11.2 1] Annual Accounts

NDCU

- i] MSRTC

b) DCU's

- i) BEST ii) PMT iii) PCMT iv) SMT v) KMT
- vi) TMT vii) KDMT viii) NMMT

2] NSS 55th round (1999-2000) survey result & population census 2001 for workforce estimation.

3] NSS 57th round (2001-02) survey's result for value added per worker.

4] Annual Accounts of BPT & JNPT for services incidental to transport.

5] Annual Accounts of MSWC & CWC for storage.

At current prices

11.3 The estimates of SDP are prepared by income approach. The G.V.A. of this sector is estimated separately for organized & unorganized sector.

Organised (Road Transport and Water Transport)

11.3.1 The estimates is based on the analysis of annual Accounts and the information relating to wages and salaries, depreciation and operating surplus of :

Road Transport

- i) MSRTC
- ii) BEST
- iii) PMT
- iv) SMT
- v) KMT
- vi) PCMT
- vii) KDMT
- viii) NMMT

The GVA at current prices are prepared by adding up the factor payments and depreciation, which are culled out from analysis of annual account.

Machanised Road Transport: -

11.3.2 The estimates of GVA have been worked out category wise by multiplying working force with GVA per worker for the respective years.

The total workforce for the base year 1999-2000 of the categories (6021,60221 & 60231 of NIC 98) of machanised Road Transport has been moved to subsequent years with the help of indicators of no. of total private buses under 6021, trucks under 60221 & total vehicles excluding bus & trucks under 60231. The employees of MSRTC, BEST, PMT, SMT, KMT, PCMT, KDMT and NMMT is treated as organized working force and it is subtracted from the total workforce to get the private sector workforce for respective years.

The GVA per worker for the respective categories for 1999-2000 is worked out on the basis of results of enterprise survey 1999-2000 for rural and urban areas separately. The per worker GVA has been taken from the enterprise survey of NSS 57th round (2001-02) for rural and urban areas separately and moved forward with the help of state consumer price index (Urban Non manual employees Transport & communication sub-group) for urban areas & CPI of agricultural labours for rural area.

Air Transport -

11.3.3 The economic activities of Airport authority were included under Air-transport in 1993-94 series. In present series this has been shifted to the sub-sector "Services Incidental to Transport". CSO, estimates the GVA at National level & apportion it among for the states based on certain suitable indicators.

Water Transport -

11.3.4 61-Ocean & costal water transport. The GVA is provided by CSO which is worked out from the analysis of Annual report & accounts of the companies and allocated to state using reliable indicators.

Services incidental to transport

11.3.5 i) Public part

It includes Dreading Corporation, port pilotage, Air Transport and Mumbai Port Trust & Jawaharlal Nehru Port Trust. The GVA is workedout from Budget documents for DCU's & Annual reports of NDCU'S and analysis of Administrator report and Annual report of MbPT & JNPT.

ii) Private Part - Road, water and air transport -

11.3.6 It includes non-machanised road transport (NIC 6022,60232 & 6302) supporting services to land transport and private un-organised water transport & services incidental to transport such as supporting services to water transport and economic activities of Airport authority.

The estimates of GVA for benchmark year 1999-2000 are prepared categorywise using 1999-2000 workforces & corresponding GVA per worker. GVA per worker is obtained from NSS 57th round (2001-02) enterprise survey results. The benchmark year estimates of GVA for subsequent years are workedout by carring forward the base year estimates with the help of relevant index of gross value of output of commodity producing sector at current prices.

AT Constant Prices

11.4 Organised sector - (Road & water transport)

11.4.1 The following indicators are used to move 1999-2000 estimates to other years.

<u>Item</u>	<u>Indicator</u>
MSRTC	
BEST	Total passenger K.m.
PMT	
PCMT	
SMT	Total no. of Passenger
KMT	
KDMT	
NMMT	

MbPT & JNPT - Total traffic handled during the year.

Mechinsed Road Transport –

11.4.2 The consumer price index no. for rural & urban Maharashtra are used as deflation factor to work out constant price estimates separately for rural & urban area.

Air Transport –

11.4.3 All India current & constant price estimate ratio of transport by other means sector is used to workout constant price estimate.

Water transport & services incidental to transport

11.4.4 The current price estimates are deflated by consumer price index number for industrial worker to arrive of constant (1999-2000) price estimate. In case of MbPT & JNPT, the base year (1999-2000) estimated moved to other years with help of total traffic handled during the year.

Storage- At Current price

11.5 The GVA is estimated by following the income approach.

a) Organised part -

11.5.1 The GVA by central warehousing corporation & state warehousing corporation are estimated separately by analysis of annual account & for cold storage ASI data is used.

b) Un-organised part –

11.5.2 The estimates have been prepared using work force 6302 industry group & value added per worker of NSS 57th round enterprise survey 2001-02 separately for rural and urban areas. For subsequent years the estimates of workforce have been prepared using the inter survey exponential

growth rate of quinquennial employment & un-employment NSSO survey & value added per worker have been moved to subsequent years using the index of Agricultural labour for rural sector & CPI (IW) for urban sector.

Storage At Constant Price –

11.6 The estimates of Maharashtra state warehousing corporation (MSWC) & central warehousing corporation (CWC) for the year 1999-2000 is moved to subsequent year using the index of total capacity & number of employment for cold storage.

The estimates of un-organised part are prepared by using the estimates of workforce of current & GVA per worker of base year (1999-2000)

Revision : -

11.7 i) In year 1993-94 series, GVA estimates for services incidental to transport was on the basis of annual data on commission paid to the booking agencies by shipping & air companies whereas in the 1999-2000 series GVA estimate has been prepared on the basis of GVA per worker available from the enterprise survey 2000-01 & workforce.

ii) The economic activities of Airport authority were included under sub sector Air transport in the 1993-94 series. This has now been shifted to the sub sector “Services Incidental to Transport”.

iii) Similarly, supporting services to water transport has been shifted to “services incidental to transport” in the new series.

Chapter - 12

Communication

Coverage :

12.1 It includes public and private communication. Activities covered under private communication are (i) Courier activities (NIC – 98, code – 64120) (ii) Activities of the cable operator (NIC –98, code – 64204) & (iii) other communication (NIC-98, code – 642 (-) 64204).

Public Communication –

12.2 Public communication services rendered by the post & telegraph department & Overseas communication services are covered in this section. Due to non-availability of statewise data in respect of this public sector, the allocation of SDP shares of the state from the national totals as communicated by the CSO is taken to represent the income at current prices.

Private Communication Services-

12.2.1 i) Courier services -

The estimates of GVA for courier services for the year 1999-2000 have been compiled using the estimates of value added per worker (VAPW) from the results of NSS 57th round survey on services sectors 2001-02, Employment & Un-employment Survey data from NSS 55th round - 1999-2000 & Population Census 2001 estimates for workforce separately for Rural & Urban segment.

ii) Activities of cable operators-

The estimates of GVA have been compiled using the estimated VAPW of rural & urban from

NSS 57th round survey results & the estimated workforce in the economic activity.

iii) Communication services other than couriers & cable operators. -

The activities covered under this compilation category are all communication activities in the private sector other than those of couriers & cable operators and Internet, cyber cafes etc. This sector covers the activities of cellular and basic telecom services and the activities of PCO's.

The estimates of GVA for other communication services for the year 1999-2000 have been compiled using the estimated VAPW from NSS 57th round survey result & the estimated workforce (deducting public sector workforce received from DGET source) separately for rural and urban segment.

At constant prices -

12.3 The estimates prepared at current prices for different years are deflected separately, for rural and urban areas by using the Consumer Price Index, agricultural labour and industrial worker respectively.

Revision: -

12.4 The economic activities like other private communication have been taken into account as per the latest available data from NSS 57th round.

Chapter - 13

Trade, Hotels & Restaurants

Coverage :

13.1. Trade :

The trade sector includes wholesale & retail trade in all commodities whether produced domestically, imported or exported. It is also includes the activities of purchase & selling by agents, brokers & auctioneers. This sector comprises the following five categories as per NIC 1998 classification.

- 1] 502 + 50404 “Maintenance & repair of motor vehicles”
- 2] 50-502-50404 “Sale of motor vehicles”
- 3] 51 + 74991 “ Whole sale trade except of motor vehicles + Auctioning activities”.
- 4] 526 “ Repair of personal & household goods”
- 5] 52-526 “Retail trade (expect motor vehicle)”.

Hotels & restaurants :

13.1.2 This sector comprises activities covered in the categories 551 (Hotels, camping sites etc) & 552 (Restaurants, bars & canteens) as per NIC 98.

Source

- 13.2 1] Employment & un-employment survey data from NSS 55th round.
- 2] Population Census 2001 estimate of work force.
- 3] Enterprise survey of NSS 57th round for value added per worker.
- 4] Ministry of industry for WPI for various sub groups.

Method of Estimate

13.3 Trade

13.3.1 The estimates of gross value added for trade sector have been prepared separately for

public & private sector by following income approach in respect of :-

- i) Public sector having units engaged in retail & wholesale trade (except of motor vehicles) + auctioning activities.
- ii) Private organized sector consisting of
 - a) Private corporate units engaged in retail & wholesale trade (except of motor vehicles) + auctioning activities.
 - b) Trading co-operative units engaged in retail & wholesale trade (except of motor vehicles) + auctioning activities.
 - c) Maintenance & repair of motor vehicles &
 - d) Repair of personal household goods.
- iii) Private un-organised sector having units engaged in all the above five categories.

For public sector trading units, estimates have been compiled by analyzing the annual accounts of public trading enterprises & Budget documents. Estimates for private organized (DGET definition) part comprising private corporate sector & co-operative societies engaged in trade have been prepared for 1999-2000 using the results for the RBI study on company finances, total paid-up Capital of companies available from Ministry of company affairs & information available from the NABARD publication entitled “statistical statement relating to the co-operative movement in India 1999-2000”.

Un-organised segment has been estimated as a product of workforce & value added per worker. The workforce estimates have been prepared using the result of NSS 55th round survey on Employment- Unemployment (WPRS), 1999-2000 along with the data on population from the Population Census 2001. The estimates of workforce of private unorganized part for all five categories (rural & urban) has been obtained for

the benchmark year 1999-2000, by subtracting the estimated workforce in public sector. The private organized sector available from DGET (assuming that DGET workforce includes the workforce of co-operative as well) from the total workforce of the sector. The GVA per worker is that of all enterprises category available in informal sector survey conducted in NSS 55th round (1999-2000).

Hotels & Restaurants –

13.3.2 For public sector the estimates are based on analysis of annual accounts of public enterprises & budget documents. Estimates for private organized part have been prepared for 1999-2000 by using the results for the RBI study on company finances, total paid-up capital of companies available from ministry of Company Affairs.

For private un-organised sector the GVA per worker was taken from enterprise survey conducted during NSS 57th round (2001-02) & workforce estimates taken from employment – unemployment Survey 1999-2000 along with population census 2001 have been used.

The benchmark year estimates have been prepared separately for private unorganized sector of trade & hotels and restaurants have been moved for subsequent years with the help of Index of Gross Trading Income (GTI) of commodity producing sectors.

At Constant Price –

13.4 The Gross Value Added estimated in respect of public sector and private organized sector at current prices has been deflated with All India WPI (Mfg product) whereas GVA in respect of unorganized sector of base year (1999-2000) of trade, hotel & restaurant sector has been moved to other years with the help of index of Gross Trading Income (GTI) of commodity producing sectors and constant prices.

Revision –

The following new items are included in the new series.

- 1] 502 + 50404, “ Maintenance and repairs of motor vehicles”.
- 2] 526, “ Repairs of personal and household goods”.

Chapter - 14

Real Estate, Ownership of Dwelling, Business services & Legal services.

Coverage :

14.1 The economic activities covered in this sector are

- i) Ownership of dwelling (occupied residential houses)
- ii) Real estate services (activities of all types of dealers such as operators, developers & agents connected with real estate)
- iii) Renting of machinery & equipment without operator & of personal & household goods.
- iv) Computer & related activities.
- v) Accounting, book-keeping & related activities.
- vi) Research & development, market research & public opinion polling, business & management consultancy, architectural, engineering & other technical activities, advertising & business activities.
- vii) Legal services

The activity of ownership of dwelling includes the imputed value of owner occupied dwellings. Services rendered by non-residential buildings are considered to be a subsidiary activity of the industries, which occupy the buildings & therefore are not included in this sector.

Source

- 14.2 i) Employment & Unemployment survey data for NSS 55th round & Population Census 2001 estimates of workforce.
- ii) Value added per worker from Enterprise Survey 57th round.
- iii) CPI (AGL.), CPI (IW) & CPI (UNME)
- iv) 2001 census residential houses in rural & urban area.
- v) NSS 55th round results for rent per household separately for rural & urban areas.

Method of estimation

14.3 Real estate –

14.3.1 This sub-sector includes buying, selling, renting & operating of self-owned or leased real estate such as apartment building & dwelling non-residential building, developing & subdividing real estate into plots etc. Also included are developments & sale of land & cemetery lots. Operating of apartment hotels & residential mobile home sites, purchase, sale, letting & operating of real estate residential & non-residential buildings, developing & subdividing real estate into lots, lesser of real property, real estate activities with own or leased property, real estate activities on a fee or contract basis.

The estimates of value added for the base year 1999-2000 from these services have been prepared using the estimates of VAPW from NSS 57th round & the estimated workforce from NSS 55th round, separately for rural / urban / organized & un-organised sectors.

Renting of machinery & equipment without operator.

14.3.2 The activities covered under this compilation category are the activities of renting of machinery and equipment without operator and personal and household goods.

The estimates of GVA for these activities have been compiled separately by using the estimated VAPW & workforce in the activity from the results of NSS 57th round and NSS 55th round respectively.

Computer & related activities in private sector -

14.3.3 The activities covered under this compilation category are hardware consultancy software consultancy & supply, data processing, database activities, maintenance & repairs of

office / accounting / computing machinery & other computer related activities.

The estimate of GVA has been compiled for organized and unorganized segments separately. The GVA estimates for organised sector received from C.S.O.. The estimates of GVA further year 1999-2000 for the unorganised segment have been prepared using the data on workforce & VAPW from the results of NSS 55th round & NSS 57th round, respectively. The estimates were prepared separately for rural & urban areas.

Legal Activities –

14.3.4 The activities covered in this category are legal services such as those rendered by advocates, barristers, solicitors, pleaders, mukatiars etc.

The estimates of GVA for legal services for the year 1999-2000 have been prepared using the data on workforce & VAPW from the results of NSS 55th round and NSS 57th rounds respectively, also separately for rural / urban / organised / unorganised sectors.

Accounting, book-keeping & related activities in private sector-

14.3.5 The activities covered under this compilation are accounting, book-keeping & auditing activities & tax consultant services.

The estimates of GVA for accounting & book-keeping services etc. in the private sector for the year 1999-2000 have been prepared following the labour input method by using the data on workforce & VAPW from the results of NSS 55th round & NSS 57th rounds respectively, separately for rural & urban areas.

Research & development, market research & public opinion polling, business & management consultancy, architectural, engineering & other technical activities, advertising & business activities n.e.c. excluding auctioning-

14.3.6 In the old (1993-94 base) series “Research & scientific services” were included

under “other services”. In the new series all these activities have been included under ‘business services’. The estimates of GVA for this compilation category have been prepared separately for organised & unorganized segments & for rural & urban areas for the base year 1999-2000 by using the data on workforce & VAPW from the results of NSS 55th round NSS 57th rounds respectively.

Ownership of dwellings -

14.3.7 The economic activities covered in this sector are ownership of dwelling. (Occupied residential houses) including imputed value of owner occupied dwelling also. Services rendered by non-residential buildings are considered to be a subsidiary activity of the industries, which occupy the buildings & therefore are not included in this sector.

The data on dwellings & rent per dwelling, separately for a rural and urban area has been taken from the population census 2001 & the results of NSS 55th round on consumer expenditure. The GSDP estimates for the ownership of dwelling units was estimated as gross rental of the residential census houses less the cost of repairs & maintenance. The number of 2001 census residential houses in rural & urban areas were projected to get the estimates for the mid year 1999-2000 by applying the average compound growth rates observed between 1991-2001 population censuses. The 2001 census residential houses (wholly /partially/ residential census houses) & rent per household obtained from the results of NSS 55th round were used to estimate the gross rental separately for rural & urban areas. Cost of repairs & maintenance is subtracted from the gross rentals to get estimates of GVA in the base year 1999-2000.

At Constant (1999-2000) price estimate -

14.4 The estimates prepared other than ownership of dwelling at current prices for different years are deflected separately for rural and urban areas by using the CPI (Agriculture) for rural and CPI (IW) for urban Maharashtra.

In case of ownership of dwellings the constant (1999-2000) price estimates for rural and urban are obtained by multiplying the base year rent per household (Rural & urban with the projected residential census houses.)

Revision –

14.5 i) Research & scientific services have

been included under this sector, which was the part of other services in the old (1993-94) series.

ii) Renting of machinery & other equipment without operator & computer related activities in un-organized segment have been taken into account as per the latest available data from the NSS 55th & NSS 57th rounds. These activities were not adequate captured in the earlier series.

Chapter - 15

Public Administration

Coverage :

15.1 Public Administration & Defence covers services rendered by the administrative department of the general Government i.e. central & State Government, Union Territories, Municipal Corporations, Municipalities, Housing Boards, Improvement Trusts, Zilla parishads. District & local bodies & Panchayati Raj Institutions.

These services are related to the organs of State, collection of taxes, other fiscal services, interest payments & servicing of debt, defence services, and administrative services (such as external affairs, police, jail, supplies & disposals pensions) Social & community services. (Viz. social security, welfare & relief on account of natural calamities) & economic services (e.g. agriculture, animal husbandry, industries & community development). Estimates of Net Value added of Public Administration are prepared using the income approach. The factors of payment like compensation of employee's, rent, interest and consumption of Fixed Capital also has been imputed and made available from CSO taken into account. As far as defence is concerned only the expenditure on civil defence are covered here. All other defence expenditure are covered at the national level.

The estimates are prepared separately for state Government administration, central Government administration & Local bodies, cantonment boards, Zilla parishads, Panchayat samitites & Village panchayats. These estimates are added to arrive at the aggregate estimates for the sector.

Method of estimation

15.2 In the case of administrative departments besides expenditure on public administration & defence, expenditure on education, medical & public health, water supply, sanitary services & Construction, which was part of other industries like construction, other services etc are also included in the factors of payments. The value added from public administration & defence is therefore obtained by subtracting the factor payments of all other activities, which are not part of public administration & defence.

State Government –

15.2.1 The economic & purpose classification of state budget provides information on income originating from the state Government services. The value added is directly obtained from the derived sheets.

Central Government –

15.2.2 The State's share in the income generated from central government administration is worked out by CSO & furnished to this office annually.

Local bodies –

15.2.3 The estimates of staff & emoluments are prepared by analyzing the budgets of all local bodies. The information regarding staff & their emoluments are annually collected from different local bodies on sample basis. These sample data are used as an indicator for moving the benchmark year estimates (1999-2000) to other years. These estimates will be replaced when the results of analysis of the budget of all local bodies would become available.

At Constant prices –

15.3 All India consumer price index no. for industrial worker are used as the deflation factor for working out constant price estimates. The GVA at constant prices are worked out by adding depreciation at constant price supplied by CSO to NVA.

Revision –

15.4 i) In the case of departmental undertakings losses, which are not compensated for by subsidies, are transferred to the income and outlay account of general government as negative operating surplus. ii) Rebate on the sale of handloom cloth, loss on the sale of fertilizers, improved seeds, pesticides and agricultural implements and loss suffered by the co-operative societies etc. are treated as subsidies. iii) The losses by the Departmental Commercial Undertakings e.g. irrigation, electricity & village & small industries etc. are to be treated as imputed subsidies.

Chapter - 16

Other services

Coverage :

16.1 The economic activities covered under this sector are –

- a) Coaching & Tuition.
- b) Education excluding coaching & Tuition.
- c) Human health activities and veterinary activities.
- d) Sewage & refuse disposal, sanitation activities.
- e) Activities of membership organisation & social work.
- f) Recreational, cultural & sporting activities.
- g) Washing & cleaning of textiles & fur products.
- h) Hair dressing & other beauty treatment.
- i) Funeral & related activities.
- j) Private households with employed person.
- k) Custom tailoring.

- 1) Extra territorial organization and bodies.

The method generally followed for estimation of value added for different categories of services in the non-public segment is the labour input method i.e. estimated workforce multiplied by the average value added per person in the activity.

For the public sector part, estimates are compiled by analyzing the budget documents of central & State Governments & annual reports of public undertakings.

For the private organised part, estimates of workforce are from the DGET source & the VAPW from the NSS 57th round in respect of the enterprises recorded as companies.

For the private unorganized part, estimates of total workforce in each economic activity are from the NSS 55th round reduced by the workforce of the public & private organized sector and the

VAPW from the NSS 57th round in respect of enterprises recorded as non-corporate.

Source –

- 16.2 1] Budget document & Annual report for data relating to activities of these services under public sector.
- 2] Employment & Un-employment survey data from NSS 55th round & Population Census 2001 estimates of workforce.
- 3] Value added per worker from enterprise survey NSS 57th round.
- 4] Consumer Price Indices of agriculture labourers and industrial workers.
- 5] DGET workforce – Employment Review, annual data.

Method of estimation

16.3 Coaching and tuition: -

16.3.1 The activities covered under this compilation category are the activities of coaching centers & individuals providing tuitions.

The estimates of GVA have been prepared for the year 1999-2000 following the labour input method using the result of NSS 55th round on employment & Un-employment & NSS 57th round on services sector.

Education excluding coaching & tuition –

16.3.2 The activities covered under this sector are the activities of private education institutions, excluding those of coaching centers & individual providing tuitions. The estimates have been prepared separately for recognized & non-recognized institutions.

The GVA for the recognized institutions under public sector is taken to be equivalent to the expenditure on salaries & wages of teaching & non-teaching staff of educational services as available from the budget documents of center &

states. The estimates for recognized institutions under private sector have been prepared following to labour input method using the data on workforce available from the DGET & the estimated VAPW from the NSS 57th round.

The GVA estimates for private un-recognized institutions the year 1999-2000 have been compiled following the labour input method separately the rural & urban areas using the results of NSS 55th round (after excluding the workforce in the organized sector from the DGET sources) & the result of NSS 57th round on VAPW.

Human health activities & veterinary activities –

16.3.3 The activities covered under this compilation category are the activities of human health and veterinary services. The GVA have been prepared separately for public, private organized & private un-organized sector using the labour input method. The GVA for the public sector has been taken to be equivalent to the expenditure on salaries & wages of medical personnel obtained from the analysis of the budget documents plus the consumption of fixed capital.

The GVA for private organized sector has been estimated using workforce estimates from DGET & VAPW of corporate sector estimated from the results of NSS 57th round survey on services sectors.

For the private un-organized segment, the labour input method was followed for estimating GVA for 1999-2000, with workforce estimates in the un-organized sector compiled as a residual by subtracting the public and private organized sector workforce (DGET Source) from the total workforce as per NSS 55th round survey results on Employments & Unemployment & the VAPW for the un-organized segment estimated from the NSS 57th round survey results.

Sewage & refused disposal, sanitation activities-

16.3.4 The GVA have been prepared separately for public & private sectors. Public sector estimates are the sum of expenditure on salaries & wages of activities covered under Government

& consumption of fixed capital. The public sector workforce as obtained from DGET has been subtracted from the total employment & un-employment survey workforce estimate from NSS 55th round to get the workforce estimates for private segment. Thus obtained private sector workforce estimates have been divided into rural & urban areas and have been multiplied with average compensation of Municipal workers engaged in sanitary services. The compensation of all the 5 types of Municipalities according to population size viz. i) 5 lakhs and above ii) 1 lakh to 5 lakhs iii) 75,000 to 1 lakh, iv) 50,000 to 75,000 and v) below 50,000 was used for urban areas. The smallest Municipalities were taken as the proxy for rural sectors on the assumption that these Municipalities were close to the rural areas.

Activities of membership organisations & social work –

16.3.5 This sub-sector includes the activities of associations of writers, painters, lawyers, doctors, journalists & other similar organisations, activities of trade unions, interested chiefly in the representation of their views concerning their work situation, activities of other membership organisations, activities of religious organisation activities of political organisations, activities of other membership organisation, social work with accommodation & social work without accommodation.

The GVA have been compiled using NSS 57th round survey results for estimating the VAPW & NSS 55th round Employment & Un-employment survey results for estimating the workforce. This has been done separately for rural & urban areas & organized & un-organized sectors.

Recreational, cultural & sporting activities.

16.3.6 The activities covered in this category are recreational, cultural and sporting activities. The estimates of GVA have been compiled for the base year 1999-2000 separately for public, private organized & private un-organized segments. While the estimates of GVA for the public sector are given by CSO every year. Private organized & private un-organized have been compiled following the

labour input method, with workforce from the DGET & the NSS 55th round (total workforce) respectively & the estimates of VAPW for these two segments from the NSS 57th round survey result.

Washing & Cleaning of textiles & products.

16.3.7 The activities covered under in this category are washing and dry cleaning of textile and fur products. The GVA have been prepared using 57th round survey results for the estimates of VAPW & the NSS 55th round EUS results for workforce separately for rural & urban areas.

Hair dressing & other beauty treatment –

16.3.8 The activities covered in this category are hair dressing & other beauty treatment.

The GVA estimates have been prepared using NSS 57th round survey results for VAPW & NSS 55th round EUS results for the workforce & the following, the labour input method, separately for rural & urban areas.

Custom tailoring -

16.3.9 The GVA for these services in the base year has been estimated using NSS 56th round (unorganized manufacturing) data on VAPW & NSS 55th round data on workforce separately for rural & urban areas.

Funeral & related activities-

16.3.10 The activities covered in this category are funeral and related activities (NIC-98, code 9303) and other services activities n.e.c. (NIC –98, code 9309). The GVA estimates have been prepared using NSS 57th round results for the VAPW estimates & NSS 55th round EUS results for workforce, following the labour input method separately for rural & urban areas.

Private households with employed person –

16.3.11 The activities covered in this category are private households with employed persons. The value added generated by this activity relates to wages paid to employed persons by the

households. Therefore the VAPW for this activity has been estimated on the basis of wages data collected in the NSS 55th round EWs results. The total weekly earning of the workers falling, under this have been divided by the number of workers to arrive at weekly wages / salaries. The GVA estimates in respect of these services have been compiled using average weekly wage per unit of labour input (adjusted for annual wages) separately for rural and urban areas in the base year.

Extra territorial organisation and bodies-

16.3.12 The activities covered in this category (NIC-98 code 99) are extra territorial organisations and bodies including the activities of international organisations such as United Nations and its agencies, regional bodies etc. and International Monetary Fund, World Bank, European commission etc.

The GVA have been prepared using the results of NSS 55th round and DGET workforce and thrice for VAPW of public administration and Defence (as a proxy) separately for rural and urban areas.

At Constant Prices -

16.4 The estimates prepared at current prices for different years are deflated separately for rural and urban areas by using the Consumer Price Index for rural and urban Maharashtra.

Revision -

16.5 1] In the 1993-94 series, the estimates of Research and scientific services (NIC 87 code 922) were included under 'other services'. In NIC-98, this activity is classified under code 73, which is under business services and as such in the 1999-2000 services this activity has been included under business services.

2] The economic activities like i) coaching centers ii) recreation and cultural and supporting activities have been taken into account as per the latest available data from 57th round.

Chapter - 17

Supra Regional Sector

Railway, Air Transport, communications, banking & insurance & central Government Administration:

Coverage :

17.1 The economic activities covered in these industries are

- i) Transportation by railways viz Government & non- Government.
- ii) Air Transport
- iii) Communication services rendered by the posts & telegraph Departments & overseas communication services
- iv) Commercial Banks, Banking department of RBI, public non-banking financial corporation, organised

non-banking financial companies such as Stock Exchanges, saving in post offices , Chit funds, non-organised, non- banking financing undertakings such as professional money lenders, pawn brokers, including operations concerning cumulative Time Deposit & National savings services, co-operative credit societies & Life & non-life insurance activities.

v) Services rendered by the Administrative Departments of the central Government in Maharashtra State.

At Current & Constant (1999-2000) Prices –

17.2 Due to non-availability of data share of the communicated by the C.S.O. is used for the estimation of current & constant prices.

Chapter -18

Workforce

18.1 The GSDP estimates in respect of (i) Un-organized segments of manufacturing & services sectors & (ii) for some segments of private organized services sectors are compiled through indirect methods, using the benchmark – indicator procedure due to absence of annual enterprise surveys. In this procedure the benchmark GSDP estimates are initially prepared at detailed activity level for the base year of State income series using the estimated workforce engaged & the value added per worker in the activity. For subsequent years, the GSDP estimates are extrapolated with appropriate indicators relevant to the economic activity. Therefore for estimating the GSDP for these segments of the economy, data on workforce and VAPW are required for base year.

18.2 The estimates of workforce in various compilation categories are prepared, using the data available from the NSS 55th round and population census 2001. The workforce (no. of workforce) in each of the economic activities as labour input, which is also the job count in these activities. The data on total number of jobs performed in each economic activity is not directly available. The available data on employment from the NSSO is through household enquiry method, which gives data on number of workers. The difference between the number of workers and the no. of jobs is the multiple job performed by employed persons.

Source for estimating labour input.

- i) Population Census (PC)
- ii) Employment & Unemployment Survey (EUS) of the NSSO.
- iii) Employment in the organized sector data of the DGET and
- iv) Annual Survey of Industries.

Methodology-

18.3 The method described below is meant for restricted application only to the segments of the

economy comprising the manufacturing and service – producing activities.

i] In the first step – The mid-year population taken from the population Census (PC) for the rural male, rural female, urban male and urban female for four segment of the population.

ii] In the second step – The activity specific rates of labour input as the labour input per thousand population estimated from EUS for each identified compilation category. The survey based estimate of labour input would be arrived at as the sum of EUS estimates of (a) persons reporting principal capacity employment & (b) Persons reporting subsidiary – capacity employment (usual status) in the respective manufacturing and service-producing activities for the four population segments.

iii] Third Step – Applied the rates of labour input, as obtained in step (ii) on the male & female populations of rural & urban areas, as obtained in step (i), to get the required estimates of labour input in each of the four segments of the population, separately for each of the compilation categories.

iv] Fourth step – The base year estimates of labour input for each of the compilation categories had been worked out as the sum of the respective estimates of labour input in the four population segments.

v] Fifth step – The base year estimate of labour input extrapolated for each compilation category using the respective growth rate in labour input observed between the two most recent EUS to arrive at estimated labour input for the subsequent years.

vi] Sixth step – The base year as well as the subsequent years, estimates of un-organised

segment labour input in the identified compilation categories obtained using the Employment Market Intelligence (EMI) data of the DGET of respective years.

The estimates of total labour-input for the recommended compilation categories obtained by applying steps (i) to (iv) mentioned above are provided by CSO. The labour input for the mid-financial years of 1993-94 & 1999-2000, based respectively on the EUS of the 50th & 55th rounds of the NSSO Population Census based population projections, & also the annual compound growth rates derived from these estimates are used for the compilation categories.

18.4 Estimates of workers for some compilation categories were done, using the limited single-digit (industry) level (NIC 1998) workforce data obtained from the RGI & the same was compared with the NSS 55th round data obtained from the NSSO. While comparing two sets of data the number of workers in both sources was adjusted to bring them as on 1st October 1999.

The adoption of alternative sets of data complied using the NSS & Population Census 2001 based workforce data [for individual activities, the NSS data was multiplied by 1-digit (NIC 1998) level ratio of workforce from Population Census to the

workforce from NSS] was restricted to the doubtful cases in addition to few others. These compilation categories are

- (i) Sale of motor vehicles
- (ii) Wholesale trade except for motor vehicles & auctioning activities.
- (iii) Storage & warehousing
- (iv) Sewage & refuse disposal, sanitation & similar activities.
- (v) Activities of membership organisation, n.e.c. & social work with accommodation.
- (vi) Recreational, cultural & sporting activities &
- (vii) Private households with employed persons and the workforce estimates for these 7 categories are from the Population Census – 2001 based workforce data at 1 digit level, distributed to these compilation categories on basis of the distribution of NSS workforce data.

18.5 The estimates of workforce in public sector & private organized sector available annually from the DGET, those for the unorganized sector are derived as residual by deducting organized sector workforce estimates from the total workforce of respective compilation category.