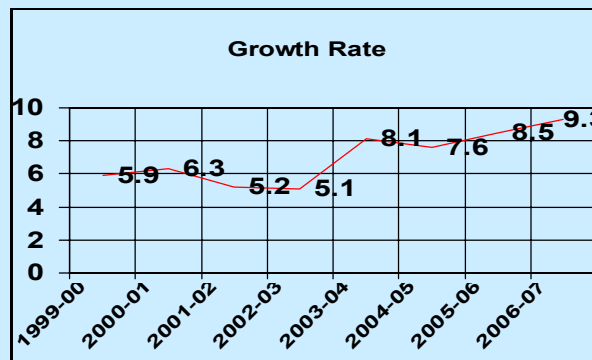
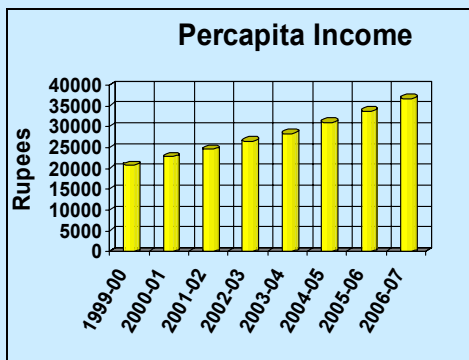
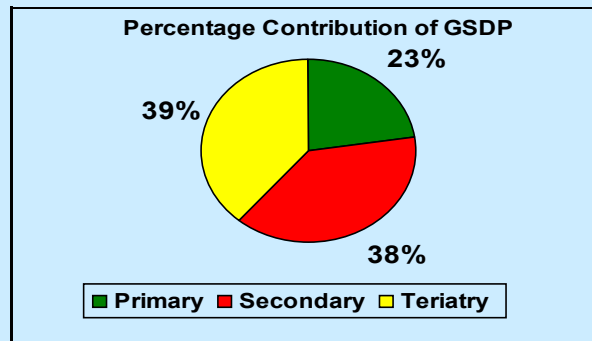
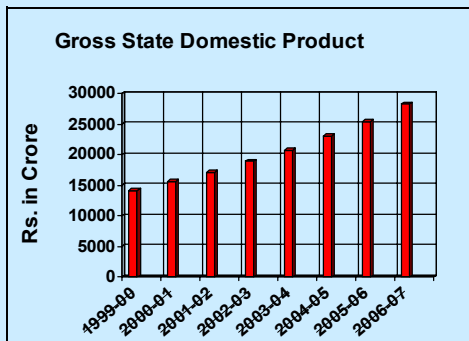


Gross State Domestic Product Of Himachal Pradesh (1999-2000 to 2006-07)



**Economics & Statistics Department
Government of Himachal Pradesh**

FOREWORD

The estimates of Gross State Domestic Product (GSDP) representing the value of all goods and services produced within the state is one of the important indicator used to measure the growth of the state's Economy. This issue presents the estimates of State Domestic Product from 1999-2000 to 2006-07 both at current and constant prices, under the new series with base year 1999-2000.

The publication documents in brief the various changes/improvements made in the new series, which have a direct bearing on the various macro-economic aggregates. The new series of national accounts adopted 199-2000 as the base year. The coverage of the new series has been improved by including certain activities, which could not captured in the earlier series. It has used the data on workers participation Rate (WPR) from the NSS 55th Round Quinquennial survey on employment and unemployment, conducted in 1999-2000. In the new series, the WPR data has been used in conjunction with population data of the Population Census, 2001. Concerted efforts have been made to implement the recommendation of SNA (System of National Accounts 1993) in preparing this publication in conformity with UN Systems of National Accounts.

The cooperation extended by various departments and Organisation functioning in the State of Himachal Pradesh, in the preparation of these estimates by providing required data is gratefully acknowledged. I hope that policy makers and research scholars may find this publication useful in the study of economic growth of H.P. state.

The publication has been prepared in the State Unit of Economics and Statistics Department and is the result of the sincere and painstaking work done by the officers and staff

Since there will always be a scope for improvements, I shall be thankful to receive suggestions from the readers in order to enhance the coverage, content and quality of the publication.

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Govt. Of Himachal Pradesh

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Part-I

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CHAPTER-I

GROSS STATE DOMESTIC PRODUCT OF HIMACHAL PRADESH (GSDP)-New Series

1. INTRODUCTION

1.1 The estimates of Gross State Domestic Product (GSDP), also generally referred as State Income and its derivative Per Capita Income (PCI), have assumed considerable importance in setting norms for interpreting level of economic development of the State.

1.2 The Gross State Domestic Product is defined as the aggregate of the economic value of all goods and services produced within the geographical boundary of the State counted without duplication with reference to a specified period of time usually a year.

1.3 The development of official estimates of national income and related began after Independence. Recognising the need for providing estimates of national income on a regular basis, the Government of India set up a High Powered Expert Committee in 1949 known as 'National Income Committee' under the Chairmanship of Prof. P.C. Mahalanobis. It was for the first time that this Committee provided the estimates of national income for the entire Indian Union. The estimates of national income and details of methodology adopted by the Committee were published in the First and Final reports of the National Income Committee brought out in April 1951 and February 1954 respectively. In accordance with the methodology and the pattern of presentation recommended by the National Income Committee, the first official estimates of national income were prepared by the Central Statistical Organisation (CSO) with base year 1948-49. These estimates at constant (1948-49) prices along with the corresponding estimates at current prices and the accounts of the Public Authorities were published in the publication, 'Estimates of National Income' in 1956.

1.4 With the gradual improvement in the availability of basic data over the years, a comprehensive review of methodology for national accounts statistics has constantly been undertaken with a view to updating the database and shifting the base year to a more recent year. As a result, base years of the National Accounts Statistics series have been shifted from 1948-49 to 1960-61 in August 1967, from 1960-61 to 1970-71 in January 1978, from

1970-71 to 1980-81 in February 1988 and from 1980-81 to 1993-94 in February 1999. In line with this practice, the CSO introduced the New Series of National Accounts Statistics with 1999-2000 as the base year, on 31st January, 2006 (hereinafter will be referred as New Series).

CHAPTER-II

2. GUIDING PRINCIPLES FOR NEW SERIES

The new series on Gross State Domestic Product with base year 1999-2000 has been prepared as per the guidelines of UN and Central Statistical Organisation (CSO), government of India after a comprehensive review of both the database and the methodology employed in the estimation of various aggregates. The coverage of the new series has mainly been guided by the following three considerations:

- a) Revision of base year to a more recent year (for a meaningful analysis of the structural changes in the Economy)
- b) Complete review of the existing data base and the methodology employed in the estimation of various macro economic aggregates as well as use of latest available data in the place of old Bench Mark Survey and
- c) To the extent feasible, implementing the recommendations of the System of National Accounts 1993(SNA, 1993)

Thus, the new series has been adopted after a comprehensive review of both the databases and the methodology employed in the estimation of various macro-economic aggregates at the state level. This will help in

- (i) **Improvements in coverage**
- (ii) **Improvements in the procedures of compilation**

Choice of 1999-2000 as the Base Year

2.2 In the past, National Accounts Statistics have mostly been revised decennially changing the base to a year synchronizing with the year of decennial Population Census. It was primarily because in the base year estimates, the information on work force has played an important role and workforce estimates were obtained from the Population Census which is conducted decennially in the years ending with 1. As a sequel to this sequence, the previous series of National Accounts Statistics should have been with the base year 1990-91. At that time, it was observed that the data on worker participation rate (WPR), captured by the National Sample Survey Organisation (NSSO) was better than the one estimated through the Population Census. Accordingly, the CSO used the workforce estimates based on

National Sample Survey (NSS) workforce participation rates from the NSS 1993-94 (50th Round) survey results, and revised the base year of national accounts to 1993-94.

2.3 In continuation with this practice, the new series of national accounts released on 31 January, 2006 adopted 1999-2000 as the base year, as it has used the data on WPR from the NSS 55th round Quinquennial survey on Employment and Unemployment, conducted in 1999-2000. In the new series, the WPR data has been used in conjunction with population data of the Population Census, 2001. After a detailed analysis of all these sources and with the approval of the Advisory Committee on National Accounts Statistics, it was decided to adopt, at 1-digit level of the National Industrial Classification (NIC) Work force.

Use of results of recent surveys and censuses and type studies

2.4 In the new series, efforts have been made to make use of as much current data as possible. Further, the results of latest available surveys have also been made use of. Some of the important sources of data, which have been utilised in the new series, are as follows:

- (i) Quinquennial Survey on Employment and Un-employment, 1999-2000 (55th round), NSSO;
- (ii) Survey on Unorganised Manufacturing, 2000-01 (56th round), NSSO;
- (iii) Survey on Services Sectors, 2001-02 (57th round), NSSO;
- (iv) Survey on Housing Conditions, 2002-03 (58th round), NSSO;
- (v) Livestock Census, 2002,
- (vi) Population Census, 2001, Registrar General of India;
- (vii) All India Census of Small Scale Industries, 2001-02, Development Commissioner, Small Scale Industries, Ministry of Small Scale Industries;

- (viii) Indian Horticulture Database 2004, brought out by the National Horticulture Board (NHB);
- (ix) Quinquennial Survey on Consumer Expenditure, 1999-2000 (55th round), NSSO;
- (x) All India Debt and Investment Survey (AIDIS) 1991-92, NSSO;
- (xi) Cost of Cultivation Studies(CCS);

2.5 Besides the above, economic activities like (i) other private communication, (ii) renting of machinery and other equipment without operator, (iii) computer related activities in unorganized segment, (iv) coaching centers, (v) social work with accommodation, and (vi) recreation and cultural and supporting activities, have been taken into account as per the latest available data from the NSS 55th and NSS 57th rounds.

These activities were not adequately captured in the earlier series, but are explicitly defined in the National Industrial Classification, 1998, according to which the NSSO collected the data in these Rounds.

Improvements in the procedures of compilation

2.6 The important procedural changes made in the new series are (i) introduction of a new basic material, 'fixtures and fittings' in the construction sector in addition to the existing 4 basic materials for estimating the value of output of construction sector; (ii) netting the retained reserves and dividends paid from the property income of mutual funds for the purpose of estimating the output of banking sector; (iii) domestic consumption of software (net of public sector purchases) and the expenditures incurred on construction of assets by the newly set up companies before they commence production, and (iv) treating the operating losses of departmental commercial undertakings as imputed subsidies, in line with the practice currently followed for irrigation.

Implementation of recommendations of 1993 SNA

2.7 While undertaking the new base year exercise, efforts have also been made to implement the recommendations of the 1993 System of National Accounts (1993 SNA) to the extent data are available. Some of the recommendations of the 1993 SNA which presently form part of the new series are:

- (i) valuation of non-market agricultural crops on the basis of prices of similar products made by market producers and their inclusion in the production boundary;
- (ii) inclusion of own-account production of housing services by owner-occupiers and of domestic and personal services produced by employing paid domestic staff;
- (iii) imputed value of own-account labour treated as mixed income of self-employed;
- (iv) expenditures on mineral exploration treated as capital expenditure;

- (v) allocation of financial intermediation services indirectly measured (FISIM) to the users of these services, as intermediate consumption to industries and as final consumption to final users;
- (vi) inclusion of expenditures on valuables, which are held as stores of value, and are treated as Gross Capital Formation;
- (vii) treatment of expenditures on software as Gross capital formation;
- (viii) inclusion of natural growth of livestock as Gross capital formation
- (ix) inclusion of expenditures made on few tree crops during the gestation period as Gross capital formation;
- (x) addition of capital expenditure incurred on installing the wind energy systems in the Gross Fixed Capital Formation
- (xi) estimation of consumption of fixed capital of all fixed assets including government buildings, roads, dams etc. as Perpetual Inventory Method (PIM);
- (xii) adopting the practice of changing base year every 5 years.

Estimation of workforce for use in New Series

2.8 In the absence of annual enterprise surveys, the *GSDP* estimates in respect of (i) unorganized segments of manufacturing and services sectors, and (ii) for some segments of private organized services sectors, are compiled through indirect methods, using the benchmark-indicator procedure. In this procedure, the benchmark *GSDP* estimates are initially prepared at detailed activity level for the base year of national accounts series using the estimated workforce engaged and the value added per worker (VAPW) 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 the base year.

2.9 Traditionally, the estimates of workforce used in the *GSDP* were from the Population Census. However, estimates of workforce are also available from other alternative sources, namely (i) large-scale household sample surveys on Employment and Unemployment conducted by the NSSO, which provide work force participation rates (WPR). These WPRs used in conjunction with the estimated population, provide work force estimates; (ii) Economic Census conducted by the CSO; and (iii) the follow-up enterprise

surveys of the Economic Census conducted by the CSO and the NSSO. While introducing the 1993-94 series, various sources were examined in depth for identifying the appropriate data source for use in national accounts compilation. After a detailed analysis of all these sources and with the approval of the Advisory Committee on National Accounts Statistics, it was decided to adopt, at 1-digit level of the National Industrial Classification (NIC), the WPRs (separately for rural/urban and male/female) available from the Quinquennial Survey on Employment and Un-employment, 1993-94 (50th round) of the NSSO and the estimated population for the period made available by the Office of the Registrar General of India (RGI). The estimates of workforce thus obtained at the 1-digit level with rural/urban and male/female break up were further distributed to 2 and 3-digit levels of NIC in proportion to the working force from Population Census.

2.10 For arriving at appropriate workforce estimates for use in the new series, DES should continue to use the data available from the following sources for estimating Labour input at the State level:

- Population Census(PC);
- Employment and Unemployment Survey (EUS) of the NSSO;
- Employment in the Organized Sector data of the DGET; and
- Annual Survey of Industries.

2.11 The estimates of overall workforce adopted in the new series for the compilation categories are presented in Annex-I. While the estimates of workforce in public sector and private organized sector are available annually from the DGET, those for the unorganized sector are derived as residual by deducting the organized sector workforce estimates from the total workforce of that compilation category.

Estimates of value added per worker (VAPW)

2.12 The estimates of VAPW for the unorganized and some private organized segments of manufacturing (non-SSI part) and services sectors have been compiled from the detailed data available from the NSS 55^h round (1999-2000) on informal non-agricultural enterprises, NSS 56^h round (2000-

01) on manufacturing enterprises in the unorganized sector, and NSS 57^h round (2001-02) on unorganized enterprises in service sector (excluding trade and finance). The estimates of VAPW at the compilation category level have been arrived at as a ratio of the gross value added to the total employees in the particular compilation category. The following adjustments have been made while processing the data for estimating the VAPW.

- (i) Rent on land and building has been treated as factor income, in the absence of data on rent on land;
- (ii) Wherever the survey results are for years other than 1999-2000, suitable adjustments have been made on the VAPWs using CPI-AL and CPI-IW to arrive at the estimates for the benchmark year 1999-2000.
- (iii) Wherever the unit level data has shown either zero or very low value of output, but has entries against inputs and salary and wages, the same have been assumed to be outliers and have been removed from the estimation of VAPW. However, the number of such records removed from the data processing were very low.

The compilation category wise estimates of VAPW are given at Annex-II

CHAPTER-III

3. CHANGES IN GSDP ESTIMATES, BY INDUSTRY

3.1 In this section, changes made in the new series in the methodology and in the choice of sources of data in compiling estimates of gross state domestic product by economic activity, have been discussed. The consequential impact in the estimates of other income aggregates like net state domestic product, per capita state income and growth pattern of income aggregates have also been discussed.

Overall Estimates of Gross State Domestic Product

3.2 The estimates of GSDP by economic activity for the year 1999-2000, according to the new series and the 1993-94 series, have been presented in Table 1 below. According to this Table, the overall GSDP at factor cost in the new series for the year 1999-2000 is estimated at Rs. 14172 crore as against the old series estimate of Rs. 12230 crore at current prices for the same year, thereby indicating that the level of GSDP has gone up by Rs. 1943 crore or 15.9 per cent, in the new series. This overall increase is the net result of upward/downward revisions in the estimates of various sectors. Out of the industries, maximum upward revision in GSDP data is witnessed in the 'construction, 'real estate, ownership of dwellings and business services' sector, which is on account of increase in the number of dwellings than what was earlier projected for the year 1999-2000, as per the data available from the Population Census, 2001.

Sectors showing increase in the levels of GSDP estimates in the new series are:

- agriculture (Rs. 66 crore);
- un-registered manufacturing (Rs. 16 crore);
- construction (Rs. 1085 crore);
- electricity, gas and water supply (Rs. 6 crore);
- trade hotel and restaurants (Rs. 77 crore);
- transport by other means (Rs. 15crore);
- communication (Rs. 10 crore);
- banking and insurance (Rs. 17 crore).
- real estate, ownership of dwellings and business services (Rs. 261 crore);

- public administration and defence (Rs. 9 crore); and
- Other services (Rs. 420 crore).

On the other hand, the GDP in the new series is lower in the following sectors:

- mining and quarrying (Rs. 9 crore);
- registered manufacturing (Rs. 18 crore);

Comparability of Gross State Domestic product Estimates of H.P. under 1993-94 and 1999-2000 Series

(Rs.in lakh)

Sr. no	INDUSTRY	NEW SERIES 1999-2000	OLD SERIES 1999-00	DIFF.	% Inc/ Dec.
1	Agriculture & Animal Husban	265298	258673	6625	2.56
2	Forestry & Logging	47745	47745	0	
3	Fishing	3055	3052	3	0.09
4	Mining & Quarrying	8197	9111	-914	-10.03
Sub Total -Primary		324295	318601	5694	1.79
5	Manufacturing	167893	169678	-1785	-1.05
a)	Registered	131991	135353	-3362	-2.48
b)	Un-registered	35902	34325	1577	4.59
6	Construction	270420	161874	108546	67.05
7	Electricity, gas & Water supply	70531	69945	586	0.84
Sub-Total Secondary		508844	401497	107347	26.74
8	Transport, Storage & comm.	50772	47976	2796	5.83
	Transport by other mean	37516	36026	1490	4.14
	Railways	798	798	0	
	Communication	12145	11103	1042	9.38
	Storage	313	49	264	538.78
9	Trade, Hotel & Restaurant	116056	108316	7740	7.15
Sub-Total Trpt, Comm, & Trade		166828	156292	10536	6.74
10	Banking & Insurance	53804	52122	1682	3.23
11	Real Estate, Ownership	72262	46130	26132	56.65
Sub-Total finance & Real Estate		126066	98252	27814	28.31

12	Public Administration	100529	99628	901	0.90
13	Other services	190649	148676	41973	28.23
Sub-Total-Community & Personal services		291178	248304	42874	17.27
TOTAL-GROSS STATE DOMESTIC PRODUCT		1417211	1222946	194265	15.89

The details of changes in the methodology/data sources by economic activity, alongwith the reasons, are discussed in the succeeding Chapter.

CHAPTER-IV

4. METHODOLOGY AND DATA SOURCE

Methods of Estimation

The particular method to be followed for estimation of state income depends upon the object of these estimates and the availability of data for the purpose. Basically state income can be estimated by any of these three approaches viz: (i) output approach (ii) Income approach (iii) Expenditure approach. For estimating the state domestic product, the methodology suggested by central statistical organization is followed as far as practicable. The economy for this purpose has been divided in to following 14 sectors:-

1. Agriculture including Animal Husbandry
2. Forestry and Logging
3. Fishing
4. Mining and Quarrying
5. Manufacturing Registered
6. Manufacturing Un-registered
7. Construction
8. Electricity, Gas and Water Supply
9. Transport, Storage and Communications
10. Trade, Hotel and Restaurants
11. Banking and Insurance
12. Real Estate, Ownership of Dwellings and Business Services
13. Public Administration
14. Other Services

In the estimates presented in this publication output approach has been followed for agriculture, forestry and logging. Fishing, mining and quarrying and manufacturing registered and un-registered sectors. Income approach is followed for the remaining sectors except for construction sector, where expenditure method has been used. The total state domestic product has been estimated by subsequent aggregation of All the results. Sector wise methodology used and changes in the new series are discussed in the following paragraphs.

CHAPTER-V

5. SECTOR-WISE DESCRIPTION

1. AGRICULTURAL

Agricultural is one of the important activities of state economy. A large proportion of the population depends upon agriculture for their livelihood. This leading sector of the economy, which comprises agriculture, horticulture and livestock production accounts for the largest single share in the state domestic product. The contribution of state domestic product from agriculture, horticulture and livestock production except government irrigation system is estimated by using the production approach which involves estimation of the gross value of products and by-products and ancillary activities and deduction of the value of inputs, services and consumption of fixed capital in the process of production to obtain the net value added. For irrigation, an income approach is used and the total factor incomes generated as a result of providing the irrigation services are measured. Separate estimates are prepared for gross value of output from agriculture crops, horticulture crops and livestock products while net value added estimates are worked out for the activity as a whole.

Estimates at current prices

Output from Agriculture/ Horticulture

For purpose of state income estimation all principal and minor crops, miscellaneous and unspecified crops and various by-products have been considered. Data on area and production of major crops in each district are made available by the Pradesh Directorate of Land Records, which are published in the brochure "Annual Season and Crop Report". The publication gives the outturn of principal crops only. For unspecified and miscellaneous crops, the value of output per hectare is arrived on the basis of weighted average value of output per hectare of related specified main crops in each category of the unspecified crops. The value of by-product, viz., straws & Sticks etc., are estimated by applying the value per hectare as available from the cost of cultivation studies.

The by-products which have some economic value included in the estimation are (i) stalks and straws of various cereals and pulses (ii) cotton sticks (iii) cane trash (iv) grass and (v) bagasse. The estimates of straws and stalks of various cereals and pulses, cotton sticks and cane trash have been prepared on the basis value of by products per hectare. The estimates of bagasse have been prepared by taking it as 22.5 percent of total gur production and the estimates of the production of grass are prepared on the basis of yield per hectare supplied by C.S.O in the combined area under (i) permanent pastures and grazing land (ii) miscellaneous tree crops and groves, (iii) cultivable waste (iv) fallow lands and (v) net area sown by adopting the weights 4:1:2:2:1 for combining these.

In case of fruits, the production and price data both for all kinds of fruits is obtained from the state Horticulture Department.

Evaluation of the output of agricultural crops has been done at the average whole sale price/farm harvest price prevailing in the primary market during the peak market period are taken. These prices are arrived at by averaging the whole sale price of a commodity in each district over the peak marketing season and which are collected by the District Statistical Officers of the Pradesh every month. In case of by-products. Except for bagasse, the value per hectare as supplied by C.S.O. were used which were the benchmark year price is moved with the price of firewood. The evaluation of fruits has been done with the price data made available by Pradesh Horticulture Department. The Gross income from the operation of Government irrigation system is culled out from the budget documents.

Changes in new series

In the new 1999-2000 series the changes in respect of agriculture sector refers to only extension of coverage on output side. The new series covers:

- (i) additional items of fruits and vegetable(not covered in old series),
- (ii) Floriculture and
- (iii) Foreyard and backyard cultivation or kitchen garden

The value of output of the production of crops fruits, vegetables, etc in foreyard / backyard of houses are estimated from the data on total area under kitchen garden works out to 0.22 percent of the total rural area operated in the state is taken. For deriving the value of output of crops in foreyard/backyard of houses, the value per hectare of fruits and vegetable crops is used. The percentage of the area is taken from the report of "Operational Land & Livestock holding survey" (53rd round of NSSO). However, in case of sugarcane, outturn excluding the quantity converted in to gur by cane growers is taken and gur is evaluated separately.

The differences in the estimates of value of output and value of inputs between old and new series at item level have been presented in Table 2.

Livestock

For estimation of gross value of output, all the livestock products have been classified in to seven broad groups viz.: (i) milk (ii) Meat and meat products (iii) hides and skins (iv) eggs and poultry meat (v) wool and hair (vi) dung and manure and (vii) other products. In addition, value of increment in stock of various categories of animals has also been included.

The quinquennial livestock censuses make available the data about the number of animals under various categories and sub-categories. The Directorate of Land Records, Himachal Pradesh, makes the results of these censuses available. For the present series, the count of animals of different categories has been taken from the livestock census conducted during 1997 and 2003. For inter censal and post censal years, using the compound growth rate observed for each category between these censuses has arrived at the estimates. The yield of four livestock product viz: milk, eggs, wool and meat has been estimated by using the yield rates thrown up by the Integrated Sample Survey for estimation of animal products conducted every year by the State-Directorate of Animal Husbandry and the corresponding population of livestock is estimated as explained above. In the case of other products and by-products no current direct information is available. The production of these items is estimated

by using the rates and ratios supplied by the Central Statistical Organization as per the study conducted in the Pradesh.

Increment in Stock

Increment in live stock during the year has been estimated separately. For each category of livestock by subtracting the total projected population of relevant category at the beginning of the current year from the total projected population at the beginning of next year.

Estimates of gross value of output have been obtained by aggregating the gross value of different livestock production which has been obtained by using the average wholesale prices prevailing in primary markets making due adjustment for rural urban differentials. The increment in stock has been evaluated at average prices of different types of livestock prevailing at selected centers off the Pradesh

Gross Value Added

To arrive at the estimates of gross/net domestic product from agriculture including livestock, various deductions have been made on account of current costs of inputs, market charges and consumption of fixed capital etc.

Inputs

- (i) **Seeds:** Seed rates are obtained from the cost of cultivation studies and State Agriculture Departments.
- (ii) **Manure:** The output of dung manure in livestock sector is taken as input in the agriculture sector. The estimates of consumption of chemical fertilizers are based on material wise distribution of chemical fertilizers to states by the Central Fertilizer Pool, Indian Potash Ltd. And the domestic manufactures.
- (iii) **Feed:** the entire value of cane fresh, fodder and grass and 95% of value of stalks and straw is considered as value of feed. The

- estimates of concentrates, salt and medicine are based on NSSO reports
- (iv) Market Charges: Data on market charges for various commodities from the respective markets in the districts received which at present is 2.38%.
 - (v) Electricity: The estimates are based on the information of quantity and price supplied by Central Electricity Authority in respect of electricity supplied to agriculture sector.
 - (vi) Diesel Oil: The estimates are based on consumption of diesel oil per engine/ tractor as collected through cost of cultivation studies.
 - (vii) Repairs and Maintenance: The estimates are prepared using 1991-92 All India Debt & Investment Surveys results.
 - (viii) Irrigation Charges: Obtained from the budget documents.

After deducting the value of all inputs viz; item no (i) to (vii) from the gross value of output and adding the income from the operation of Govt. irrigation system and further deducting the new concept Financial Intermediation Services Indirectly Measured (FISIM) the gross value added from agriculture Including horticulture, floriculture, forayed/backyard cultivation and livestock. To arrive at the net value added or net domestic product from this sector the consumption of fixed capital is deducted.

Estimates at constant (1999-00) prices

Estimates of gross value of output and net product at constant prices have been obtained by evaluating each item of output and input at 1999-2000.

2. FORESTRY AND LOGGING

The estimates of State Domestic Product from " Forestry and Logging " sector are prepared by following the production approach. For the purpose of estimation, all forest production are broadly classified into two groups viz: "major" and "minor" forest products. Major forest products included Industrial wood, fuel wood and charcoal while minor forests products include resin, bamboo, blabber grass, grass, medicinal

herbs and other miscellaneous items. The methodology adopted in estimating the domestic product from each of the produce has been discussed in the following paragraphs: -

Industrial wood

The production figures of industrial wood / timber are regularly supplied by the State Forest Department annually. The figures are given separately for each species of timber. After applying conversion ratio separately for each variety of timbers, converted volumes for different varieties are arrived at. These are then evaluated at the average whole sale prices of various species of timber prevailing at different sale depots of H.P. Forest Corporation in the state. In order to take into consideration the unrecorded production of timber, 10% of the total value of timber so arrived, is added as the value of un-recorded production. The total value is then adjusted by subtracting 10% of value as trade and transport margin.

Fuel wood and charcoal:

The estimated fuel wood data are as available from the results of NSS consumption expenditure surveys. The value of fuel wood data are as available from the results of NSS consumption expenditure surveys during 50th (1993-94) and 55th (1999-00) rounds. The fuel wood consumed (kg) per person for 30 days, separately for rural (17.70 kg.) and urban areas (5.34 kg.), are multiplied with the rural and urban population separately in the base year. Consumption of fuel wood per person for the base year is moved to further years with growth rates of 1.015301358 for rural and 0.97415139 for urban areas and the same are multiplied with respective year's 'population to arrive at total consumption of fuel wood in respective years. The estimates so arrived are reduced by the actual amount of agriculture by-products, namely, cotton sticks, arhar sticks, and bagasse which has been taken into account in the agriculture sector, to avoid double counting since these by products are consumed a fuel by the households. The estimates of fuel wood are then inflated by 1.06 percent to account for consumption of fuel wood by the industries and on funerals.

Minor Forest Products

Resin

The exploitation of resin is entirely in the hands of H.P. State Corporation. The quantity extracted and the prices are supplied by the Forest Department and the same are used for valuation of resin. The value is then adjusted by deducting 5% of value as trade and transport margin.

Other minor forest products.

In case of minor forest products other than resin, only royalty value is available from the State Forest Department. As per ratio, decided at the national level ten times of royalty value is taken to be the economic value of these products. However a sub-group on minor forest products constituted at national level is having a fresh look on the entire methodology of working out the estimates of Domestic Product from this sub sector and the norms are likely to be revised in near future.

Estimate at constant prices

To prepare the estimates at constant (1999-00) prices the quantity of major forest produce and resin is evaluated at 1999-00 prices. The value of other minor forest products at current prices is deflated on the basis of index of implicit prices of major forest products with 1999-00 as base to arrive at the estimate from these products at constant prices.

The gross value added, both at current and constant prices is worked out by subtracting 10% of gross value of output as repair and maintenance charges from the total gross value of output.

Net value added

In order to arrive at Net Value Added from Gross Value Added both at current and constant prices, the amount of consumption of fixed capital, as supplied by the Central Statistical Organization, govt. of India, is subtracted from gross value added.

3.FISHING

The income from Fisheries sector has been estimated by value added approach. Under this sector, both commercial and subsistence fishing in inland water viz.: fish from rivers, lakes, tanks and artificial ponds etc. is considered. Data from both production and prices of fish is obtained from the State Directorate of Fisheries.

Estimates at current prices

Gross value of output has been Estimated based on the production and prices of inland fish, category wise data of marine fish (soldin raw form), sun-dried fish, salted fish, frozen fish as furnished by State Directorate of Fisheries. For the category subsistence fish, the outturn is estimated 12.5 percent of the production of inland fish. The value of inputs and operational costs is taken as 22.5 %, 10%, 22.5%, 1% and 1% of the value of output for the items marine fish, inland fish, prawns, subsistence fish and salted fish respectively. To arrive at the net domestic product the gross value added from this sector is first determined by deducting the cost of repair and maintenance of boats, nets etc. and other operational costs. These deductions have taken as 6 percent of the gross value of the output. To arrive at the net fixed capital as supplied by C.S.O. is further deducted.

Estimates at constant prices.

The estimates of the value of output at 1999-00 prices have been worked out by evaluating the quantity of output of first during each year at 1999-00 prices and applying the same input ratios as have been used for the estimation at current prices.

4.MINING AND QUARRYING

This sector covers the economic activities of production of all minerals, which are extracted form soil as solid, liquid or gas. Estimates of GVA in this sector are compiled following the production approach by calculating the value of output of each mineral at state level and deducting the value of corresponding inputs and consumption of fixed capital used in the process of extraction etc. there from.

Estimates at current prices

For estimating the gross value of output of major and minor minerals have been prepared on the basis of data supplied by IBM Nagpur. These data have been used as such for estimating the gross value of output from this industry after deducting the input cost. For estimating the net value of output, the depreciation costs etc. are deducted from the gross value on the basis of the ratios worked out by Indian Bureau of Mines for each mineral.

Estimates at constant prices

The estimates of value of output of each mineral at 1999-00 prices have been worked out by valuating the quantity at 1999-00 prices and applying the same input ratios as have been used for the current prices series.

5. MANUFACTURING

Manufacturing activities are covered into two broad sectors registered and unregistered. The registered sector includes all factories covered under section 2m(i) and 2m(ii) of the Indian Factories act 1948 which respectively refers to the factories employing 10 or more workers using power and those employing 20 or more workers but not using power on any day of preceding 12 months . The manufacturing units not covered in registered sector, including household industries, form the 'unregistered' manufacturing sector.

Unregistered manufacturing covers all manufacturing which are not registered under the Indian Factories Act,1948,the estimate of value added from this sector are worked out by adopting production approach but the methodology differs under both the sectors as below:-

5.1 Manufacturing registered

The National Sample Survey Organization carries out annually a survey of industries known as Annual Survey of Industries.

Under this survey data regarding capital structure, employment, input, output, value added etc. are regularly collected and presented in the annual publication titled "Summary Results For Factory Sector" of annual Survey of Industries. The state wise estimates of Gross Value Added are prepared by adding the value added under the industry group existing in Himachal Pradesh on the basis of data thrown up by A.S.I. The information regarding estimated number of workers in non-responding factories in the factory sector, for the state is available in the ASI report.

Changes in new series

The changes made in this sector in the new series relate to (i) adoption of National Industrial Classification, 1998 (NIC 1998) in place of NIC 1987 which was followed in old series, (ii) inclusion of the activities of currency, coinage and mint units under public sector, and (iii) exclusion of industry group "repair services" (3-digit codes 394, 398 and 97 under NIC 1987) as a result of adopting the NIC 1998 classification. There is a time lag in availability of ASI data. For the years for which ASI data are not available, the growth observed in the value added estimates of state series are being super-imposed at the aggregate level. These estimates undergo change as soon as ASI results are available.

Estimates at constant prices

The estimates of gross/net value added at 1999-00 prices have been prepared by deflating the current price estimates with the help of All India Wholesale price Index for the industry group-wise manufacturing.

5.2 Manufacturing unregistered

Traditionally, the state wise estimates of GVA from manufacturing (Unregistered) are compiled through income approach i.e. product of work force and GVA per worker estimated from the follow-up surveys of Economic Census. However, **in the new series (base 1999-00)**, The estimates of GVA from un-registered manufacturing sector are obtained as a product of workforce and GVA per worker in terms of labour

productivity and labour input based on (i) estimates from the latest surveys on unorganized manufacturing and (ii) census of small scale undertakings. The *GVA* estimates for the new series for this sector for the base year 1999-2000 have been prepared separately for the two segments of the unregistered manufacturing sector, namely (i) the segment of Small Scale Industries (SSI) (other than those covered under the ASI), and (ii) the rest of the unorganized manufacturing sector, i.e. the manufacturing sector which is not covered under either the ASI or the SSI. The industry-group-wise estimates for these segments are presented in Table 5.

The *GVA* for the SSI segment for the new series 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* ratios 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.

The industry wise estimates for 1993-94 have been moved forwarded with the help of following indicators in order to obtain the estimates for the subsequent years.

- | | | |
|-------|---|--|
| (i) | Food and food products (20-21) | combined index of value of Output of rice, wheat, pulses, Sugar cane and oilseeds at current prices. |
| (ii) | Beverages and tobacco (22) | combined index based on the Value of output of apples, citrus fruits and tobacco at current prices. |
| (iii) | Textiles (23-26) | value of output of cotton, silk And wool as available in K.V.I.C. report and is usually taken as the ratio used at national level. |
| (iv) | Wood furniture etc.(27)
production- | Index based on the

of industrial wood under forestry sector. |
| (v) | Paper and paper products (28)
from | Index based on the GVA Paper and paper industry (All India white paper) |
| (vi) | Leather and leather products(29) | Index base on the production Of hides and skins under livestock products |
| (vii) | All other industries viz: Rubber
Chemical, basic metal machines,
Transport, Electricity and repair
Services etc. (30to 39) | Index based on gross value added under manufacturing registered sector. |

The *Gross Value Added* from all these above groups is clubbed together and after deducting consumption of fixed capital, net value added is obtained under this sub sector.

Estimates at constant prices

The estimates of net domestic product at constant prices (1999-00) for different years have been prepared by moving the estimates for 1999-00

with the help of appropriate index of value of output at constant prices for different industry groups.

6 .ELETRICITY, GAS AND WATER SUPPLY

This sector includes the activities of (i) generation, transmission and distribution of electric energy (ii) Manufacturing of gas including gobar gas and distribution through mains to household, industrial, commercial and other users and production of liquefied petroleum gas from crude oil and natural gas and (iii) activities associated with collection, purification and distribution of water excluding the operation of irrigation system. Estimates of state domestic product have been prepared separately for these activities. The methodology followed and source material used for these activities/ sub sectors are given in the following paragraphs.

Estimates at current prices

The value added in this sector is prepared using the income approach. This implies the measurement of aggregate factor income in the form of compensation to employees and operating surplus (interests, rent, profits and dividends). The economic classification of budgets provides the estimates of enterprises run departmentally and the analysis of profit and loss accounts provides the estimates for non-departmental enterprises and private companies. Similar contribution to the state domestic product of the pradesh from the projects under the control of National Hydel Power corporation is supplied by the Central Statistical Organization.. In the new series, the operating losses of departmental commercial undertakings (DCUs) have been treated as imputed subsidies The consumption of fixed capital is then deducted from this G.V.A. to arrive at the net domestic product.

Gas

In earlier series, the estimates of gas sub sector consisted of LPG, Gobar Gas and other gas data as supplied by GAIL. In the revised series it has been decided the activity of LPG production in the Manufacturing sector, however in Himachal Pradesh, there is no establishment engaged in the distribution of gas through mains and in the production of coal gas. The estimate of gobar gas is now compiled using data

from Ministry of Non-Conventional Energy Sources and KVIC. In the absence of input structure, the value of output of Gobar Gas is treated as value added. This is on the assumption that the value of gobar gas also results in equivalent value of by products in the form of indigenous fertilizers (manure). The estimates of GVA in respect of Gobar Gas are prepared by multiplying the total number of plants installed up to the current year, (as furnished by Ministry of Non- conventional energy sources) by value of production of per plant (estimates on the basis of KVIC data). There will not be any problem in estimating SDP of gobar gas as the number of Gobar Gas plants installed up to a particular year are available with the Ministry of Non- Conventional Energy Sources. In Himachal Pradesh the contribution from gas being very negligible, the gross and net value is taken as the same.

Water Supply

(i) **Public Sector:** The estimates of net value added from this sub-sector comprise the wages and salaries paid to the staff of the state Govt. and urban local bodies engaged in water supply. These figures have been obtained from the budgets of the Pradesh Govt. and urban local bodies.

(ii) **Private Sector:** The estimates of compensation of employees for the new series for this part have been prepared using the estimates of workforce and average compensation of municipal workers engaged in water supply services

Estimates at constant prices

For obtaining the estimates of net value added at constant prices, the estimates at current prices have been deflated with the help of All India consumer price index for Industrial workers.

7. CONSTRUCTION

The standard methodology adopted to work out value added from construction is based on the " Expenditure Approach". The estimates of gross value of output (expenditure on construction) are

prepared for each type of construction viz; rural, urban public and private separately. The construction sector comprises two components namely (i) accounted construction (pucca construction) and (ii) unaccounted construction (kutcha construction). The former is measured through the commodity flow approach, while the later through the expenditure approach. The broad methodology adopted in the new series for working out the total output, gross value added and the Gross Fixed Capital Formation from construction sector is more or less same as the one used in 1993-94 series except some minor modifications. The estimates of 'net value added' are derived by subtracting the estimates of consumption of fixed capital, from the estimates of gross value added.

Estimates at current prices

The estimates of value added from construction activity at the state level are prepared independently for the following categories.

(i) Public sector :

- (a) State Government Departments, Urban and rural local bodies and all state departmental enterprises .
- (b) Central Government Departments and Departmental Enterprises other than railways and communication and repair and maintenance expenditure in respect of defence services
- (c) Railways
- (d) Communication
- (e) Non-departmental commercial undertaking excluding air and water transport, banking and insurance (only capital expenditure)

The methodology adopted to estimate the domestic product from these sub-sectors is discussed in the following paragraphs:-

The data on expenditure on new construction and repair and maintenance of the state government administrative departments, local bodies and other departmental enterprises are directly available from the analysis of the relevant state budget documents. The data on expenditure on new construction and repair and maintenance of the central government administrative departments (except of Defence Services), local bodies and

other departmental enterprises except railways and communications are directly available from the analysis of the central budget documents and is being supplied by CSO. Regarding urban local bodies, data on expenditure on construction and repair and maintenance is culled out from the budget of these local bodies. Out of the total expenditure on construction 32% has been taken as contribution towards gross state domestic product and in case of repair and maintenance, 75% of the total expenditure has been taken as the contribution towards gross domestic product. For supra- regional sectors of railways, communication and central government administration departments, estimates of *gfcf* in the form of construction are prepared by CSO and there is no change in methodology.

The state estimates of expenditure on construction by non-departmental commercial undertakings of state government are based on the analysis of balance sheets and annual reports of these undertakings. In case of non-financial central government undertakings CSO has supplied the value during the year as allocated in proportion analyzed through their balance sheets and annual reports.

(ii) **Household sector**

The state estimates of expenditure on costs of new construction, repair and maintenance of public and private corporate sectors have been estimated independently from the budget documents/ annual reports. For the household sector, the results of AIDIS, 1991-92 have been used for compiling the estimates of construction in rural - urban residential and non-residential buildings, and other construction works by the households both in farm and non-farm business with minor adjustments, because of non-availability of the results of AIDIS, 2002-03. The revised norms used for apportioning the rural residential buildings into accounted and unaccounted constructions are 79:21 in the new series, in place of norms of 72:28 used in the old series and for urban residential buildings, they are 97:3, instead of 80:20, respectively. These norms have been adopted on the basis of results of NSS 58 Round survey on housing conditions. Other construction works taken up by households engaged in farm business has been treated as unaccounted construction and that in non farm business as accounted construction.

- (i) Rural residential buildings
- (ii) Urban residential buildings

- (iii) Rural non-residential buildings, urban non-residential building, and rural and urban other construction work in the household sector.
- (iv) Residual comprising of construction undertaken by private corporate sector, other private enterprises and private non-profit institutions including quasi corporate bodies, besides part of public sector namely, air and water transport, banking and insurance, public non-profit institutions including quasi-government bodies, repair and maintenance expenditure in respect of Defence Services and the entire repair and maintenance expenditure in respect of non-departmental commercial undertakings.

The estimate of Gross Value Added (GVA) from construction is compiled as sum of (i) factor payments in accounted construction and (ii) 75 per cent of output in unaccounted construction. From the total value of output, expenditure on repair and maintenance of construction assets is subtracted to derive the fixed capital formation from construction which means that only new construction forms part of the GFCF. From the above mentioned sources, it has been estimated that the factor payments account for 53.4 per cent of the total construction output, which incidentally is the same as that used in the old 1993-94 series. Therefore, the revised norms for basic materials, other materials and factor inputs used in new series for construction activity are 72.5 per cent, 27.5 per cent, and 53.4 per cent as against the norms of 70 per cent, 30 per cent, and 53.4 per cent, respectively in old series.

The item "fixtures and fittings" which was merged with the item "other materials" in 1993-94 series has been segregated from the item "other materials" in the new series, as this item plays an important role and makes significant contribution in construction activities. Further timber and round wood, the imports of wood and timber products and veneer plywood have also been included in the new series. In addition to these two changes, the detailed results of ASI, 1999-2000 have been used for finalising the item basket and estimates of value of output, at the 4-digit level of NIC 1998, separately for each of the 5 basic materials mentioned above.

The value of construction at state level for the categories not covered above namely, construction undertaken by (I) Private corporate sector, (II) Private and public non profit institutions including quasi government/ corporate bodies (III) Part of public sector namely, air and water transport, banking and insurance and repair and maintenance expenditure in respect of Defence Services .

In the old series, the unaccounted construction included kutcha construction undertaken in public sector, households sector and capital expenditure in cultivating three plantation crops (tea, coffee, and rubber). In the new series, the coverage under unaccounted (kutcha) construction has been extended to include civilian construction in installing wind energy systems and some additional plantation crops under cultivated assets. The capital expenditure incurred on cultivation of plantation crops during the gestation period is treated as output under kutcha construction of the 'Construction Industry' for that year

Estimates at 1999-00 prices

The estimates at current prices from all agencies except households are deflated with the help of index of CPI to arrive at the estimates at constant prices .

8.Trade, hotels and restaurants

Trade

The Trade sector includes wholesale and retail trade in all commodities whether produced domestically, imported or exported. It also includes the activities of purchase and selling agents, brokers and auctioneers. In the old series, the GDP estimates were prepared for the trade sector as a whole covering categories (NIC 1987 codes of 6, excluding 69, 840, 841, and 890). The bench mark year estimates of GDP for this sector in the old series were prepared separately for the public sector, private organized sector and private unorganized sector. While, estimates of GDP relating to public sector trading units were based on analysis of

accounts of public sector trading enterprises and budget documents, private organized segment had two components namely, private corporate and cooperatives. The estimates of private corporate sector were based on the results of Reserve Bank of India's (RBI) sample study (inflated by paid-up capital data obtained from the Ministry of Company Affairs), whereas the estimates for cooperative societies of organized trading activity were based on the data provided by the National Bank for Agriculture and Rural Development (NABARD). The private unorganized sector estimates were compiled using the estimates of the corresponding workforce separately for rural and urban areas and the estimate of value added per worker derived from Directory Trade Establishments (DTE) survey, 1996-97 and Non-Directory Trade Establishment (NDTE) survey, 1997. The workforce estimates were prepared using Employment-Unemployment Survey of 55 round (1993-94) along with Population Census, 2001. The workforce for private unorganized sector was obtained as a residual from the estimated workforce in trade sector, by subtracting the estimated employment in public sector (assumed to be only in urban areas) and private organized sector, data on both these segments is available from the Directorate General of Employment and Training (DGET).

In the new series, there is change in the coverage of trade sector. This sector now comprises the following five categories, as per NIC 1998 classification:

- (i) 502+50404, "Maintenance and repair of motor vehicles" (new item)
- (ii) 50-502-50404, "Sale of motor vehicles"
- (iii) 51+74991, "Whole sale trade except of motor vehicles + Auctioning activities"
- (iv) 526, "Repair of personal and household goods" (new item)
- (v) 52-526, "Retail trade (except motor vehicles)."

The GVA estimates of Trade sector have been prepared separately for:

- (i) **Public sector** having units engaged in retail and whole sale trade (except of motor vehicles) + Auctioning activities;
- (ii) **Private Organised sector** consisting of (a) Private Corporate units engaged in retail and wholesale trade (except of motor vehicles) +

Auctioning activities, (b) Trading Co-operative units engaged in retail and wholesale trade (except of motor vehicles) + Auctioning activities, (c) Maintenance and repair of motor vehicles and (d) Repair of personal household goods;

(iii) **Private Unorganised sector** having units engaged in all the five categories.

The revision in GSDP estimates of public, private and unorganized components in 1999-2000 in the new series has been due to the availability of latest data from different source agencies. For public sector trading units, estimates have been compiled by analysing the annual accounts of public trading enterprises and budget documents. Estimates for private organized (workforce from DGET source) part comprising private corporate sector and co-operative societies engaged in trade have been prepared for 1999-2000 using the results of the RBI study on company finances, total paid-up capital of companies available from Ministry of Company Affairs and information available from the NABARD publication entitled "Statistical statements relating to the Co-operative movement in India 1999-2000".

The contribution of the unorganized segment has been estimated as a product of workforce and value added per worker. The workforce estimates have been prepared using the results of NSS 55 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 and urban) has been obtained for the benchmark year 1999-2000, by subtracting the estimated workforce in public sector and the private organized segment, 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 used for the new series is that of 'all enterprises' category available in informal sector survey conducted in NSS 55th round (1999-2000).

It may be noted that in the new series for trading activity, the activities relating to NIC, 1998 codes, 502 and 526 have also been included for the first time. The estimates of GSDP for 1999-2000 for trade sector as a whole has gone up marginally

Hotels and restaurants

This sector comprises activities covered in the categories 551 and 552 as per NIC, 1998. In 1993-94 series, hotel and restaurants corresponded to category 69 of NIC, 1987.

The methodology followed for estimating GSDP of public, private organized and private unorganized in the new series is the same as that of 1993-94 series. The revision in GSDP estimates of public, private and unorganized components is due to latest data made available by different source agencies. For public sector, the estimates are based on analysis of annual accounts of public enterprises and budget documents. Estimates for private organized part 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. For private unorganized segment, in 1993-94 series, the GVA per worker was taken from Enterprise Survey of 1993-94 on 'Hotels, Restaurants and other lodging places'. The workforce estimates were prepared using EUS 50 round along with Population Census 1991. For the new series, GVA per worker from Enterprise survey conducted during 57th round (2001-02) of NSS and workforce estimates from Employment -Unemployment Survey, 1999-2000 along with Population Census 2001 have been used. As a result, the estimates of GSDP in hotels and restaurants for 1999-2000 have gone up .

Estimates at constant prices

The Gross Value Added estimates at current prices in respect of public sector and private organised sector has been deflated with All India wholesale price index number, whereas GVA in respect of unorganised sector of Base year (1999-00) is moved with help of Index of Gross Trading Income (GTI) of commodity producing sectors at constant prices

9. Transport by means other than railways and storage

The GSDP of Transport by other means and storage for the year 1999-2000 at current prices has been revised from Rs. crore in the old series to Rs crore in the new series. This upward revision in

the GSDP in the new series has been due to use of results of latest surveys. In the 1993-94 series, the GVA per worker was taken from Enterprise Survey of 1993-94, whereas for the new series, the GVA per worker has been taken from the Enterprise Survey of NSS-57 round (2001-02).

In the 1993-94 series, GVA estimation for services incidental to transport (sub sector of transport by other means) was on the basis of annual data on commissions paid to the booking agencies by shipping companies and air companies. Whereas in the 1999-2000 series, GVA estimate has been prepared by multiplying the workforce (duly adjusted for public sector) with GVA per worker available from the Enterprise Survey 2001-02 results for the respective NIC codes. The economic activities of Airport Authority were included under Air transport sub-sector in the 1993-94 series. This has now been shifted to the sub-sector 'service incidental to transport'. Similarly, supporting service to water transport which was part of water transport, has been shifted to 'service incidental to transport' in the new series.

Communication

Private Communication Services

The economic activities covered under this sector are (i) Courier activities (NIC-98, code-64120), (ii) Activities of the cable operators (NIC-98, code-64204) and (iii) Other communication (NIC-1998, code- 642 (-) 64204). In the 1993-94 series, initially the estimates of GVA of private communication services as a whole for the base year 1993-94 were prepared using NSS based estimates of workforce and value added per worker from the Enterprise Survey, 1991-92. The private sector work force was obtained after subtracting the public sector work force of communication services taken from DGET publication "Employment Review" from the total work force of communication services. The methodology was reviewed and latest available data were used from the year 1997-98 onwards keeping in view the activities covered under "Pvt. Communication" and separate estimates for cellular mobile, courier services, and public call office booths (PCOs) were compiled. Activity-wise methodology of estimation of GVA for the new series is given below.

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 57 round survey on services sectors, 2001-02 and workforce estimates mentioned in Section 2 above, separately for Rural/Urban/organized/un-organised segments. The organized sector estimate has been prepared using DGET workforce and corporate sector value added per worker from the results of NSS 57 round survey. The estimated *GVA* for the un-organised sector has been compiled by subtracting the estimated workforce in organized sector (DGET source) from the total workforce and the estimated *VAPW* for un-organised sector from the results of NSS 57 round. It appears that this activity continued to grow as a mixed activity of some other industries.

Activities of cable operators

The activities covered under this compilation category are the activities of cable operators, and the estimates of *GVA* for these services for the year 1999-2000 have been compiled using the estimated *VAPW* of rural/ urban from the NSS 57 round survey results and the estimated workforce in the economic activity. No separate estimates for this category were prepared in 1993-94 series.

Communication services other than those of couriers and cable operators

The activities covered under this compilation category are all communication activities in the private sector other than those of couriers and cable operators. This sub-sector covers the activities of cellular and basic telecom services, and the activities of PCOs. This category of activities corresponds to the 'PCO services and other communication services' of 1993-94 series of national accounts statistics (NAS).

The estimates of *GVA* for other communication services for the year 1999-2000 have been compiled using the estimated *VAPW* from NSS 57 round survey results and the estimated workforce in the activity, separately for Rural/Urban/organized/un-organised segments. The private organized sector estimates have been prepared using the data on estimated workforce (from the DGET source) and the estimated *VAPW* from NSS 57

round survey results in respect of corporate sector. In the old series the estimates were prepared only for PCOs and cellular mobile services. In the new series the economic activities of internet, cyber cafés, etc. have also been included. Moreover, the difference between the extrapolated workforce estimate used in old series for the year 1999-2000 and the latest data available from the NSS 55 round for the year 1999-2000 has also been quite high.

Estimates at constant prices

Railways, communications and storage:- The estimates for these supra-regional sectors have been worked out by central statistical organisation and made available to states.

Transport by other means (organised):- The estimates of gross value added at current prices have been deflated with the help of all India Consumer price Index number for Industrial workers.

Transport by other means(unorganised)

- (i) **Mechanized unorganised:-** The estimates have been obtained as the product of working force during different years separately for urban and rural areas and base year value added per worker.
- (ii) **Non- mechanised unorganised :-**The bench mark year estimates have been moved to other years with the help of Index of value off output off commodity producing sectors at constant prices.

10. Banking and insurance

The estimates of GSDP for the banking and insurance sector have changed significantly due to the change in the methodology in the new series. However, there has not been much overall impact on the state level estimates of GSDP, due to the corresponding reduction in the Financial Intermediation Services Indirectly Measured (FISIM), which in turn has led to higher GDP in user industries. The estimates both at current and constant (1999-00) prices are adopted as such as supplied by Central Statistical Organisation.

11. Real estate, ownership of dwellings, legal and business services

The economic activities covered in this sector are (i) ownership of dwellings (occupied residential houses), (ii) real estate services (activities of all types of dealers such as operators, developers and agents connected with real estate), (iii) renting of machinery and equipment without operator and of personal and household goods, (iv) computer and related activities, (v) accounting, book-keeping and related activities, (vi) research and development, market research and public opinion polling, business and management consultancy, architectural, engineering and other technical activities, advertising and business activities and (vii) legal services. The activity of ownership of dwellings 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 and, therefore, are not included in this sector.

In the new series, research and scientific services have been included under "real estate, ownership of dwelling and business services sector", whereas the same was part of "other services" sector in the old series.

The major data sources for estimating the *GVA* for this sector are, NSS 55 round survey on Employment and Unemployment, 1999-2000, and Population Census, 2001 for estimates of workforce and the results of NSS 57 round survey on services sector for estimates of VAPW, annual reports of software companies, The National Association of Software and Service Companies (NASSCOM) data on output of software services, Population Census, 2001 for information on residential houses in urban and rural areas, and the results of NSS 55 round on consumer expenditure for estimates on rent per household, and various price indices, namely, CPI (agricultural labourers), CPI (industrial workers) and CPI (urban non-manual employees).

Real estate

This sub-sector includes buying, selling, renting and operating of self-owned or leased real estate such as apartment building and dwellings,

non-residential buildings, developing and subdividing real estate into plots, etc. Also included are developments and sale of land and cemetery lots, operating of apartment hotels and residential mobile home sites. Purchase, sale, letting and operating of real estate - residential and non-residential buildings, developing and 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 *GVA* for these services in 1993-94 series were prepared using NSS 50 round results for work force and VAPW estimates from the Enterprise Survey, 1991-92 duly adjusted for 1993-94 prices, separately for rural and urban areas. The price indices, CPI (AL) and CPI (UNME) were used for rural and urban areas respectively for moving forward the 1991-92 VAPW estimates to 1993-94 prices.

The estimates of Value Added for the base year (1999-2000) from these services in the new series have been prepared using the estimates of VAPW from NSS 57 round and the estimated workforce from NSS 55 round separately for rural / urban /organized/unorganized sectors. Increase in the new series estimate for the year 1999-2000 has been due to the increase in workforce and the estimated VAPW.

Renting of machinery and equipment without operator

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 in the new series by using the estimated VAPW and workforce in the activity, from the results of NSS 57 round and NSS 55 round, respectively. This activity has been covered for the first time.

Computer and related activities in private sector

The activities covered under this compilation category are hardware consultancy, software consultancy and supply, data processing, database activities, maintenance and repair of office/ accounting/ computing machinery and other computer related activities. In the old series, *GVA* estimates for software activities in the private sector were prepared using data on production of software services made available by NASSCOM and

the value added ratio (*GVA* to output ratio) estimated from the analysis of annual reports of few software companies.

The estimates of *GVA* for the new series of NAS have been compiled for organized and unorganized segments, separately. The *GVA* estimates for organized sector have been prepared using NASSCOM's data on production of software services and the value added ratio estimated from the analysis of annual reports of few software companies. The estimates of *GVA* for the year 1999-2000 for the unorganized segment have been prepared using the data on workforce and VAPW from the results of NSS 55 round and NSS 57 rounds, respectively. The estimates were prepared separately for rural and urban areas. The increase is due to broader coverage in the new series.

Legal activities

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 these services in 1993-94 series were prepared using data obtained from the Bar Council of India on workforce and VAPW estimated from the results of Enterprise Survey, 1991-92 duly adjusted for 1993-94 prices, separately for rural and urban areas. The estimates of *GVA* for legal services in the new series for the year 1999-2000 have been prepared using the data on workforce and VAPW from the results of NSS 55 round and NSS 57 rounds, respectively, also separately for rural / urban/organized/ un-organised sectors. The change is due to difference in workforce of Bar-council used in the old series and the estimates of workforce adopted in the new series for the NSS 55 round.

Accounting, book-keeping and related activities in private sector

The activities covered under this compilation category are accounting, book-keeping and auditing activities and tax consultancy services. In the 1993-94 series, *GVA* estimates for activities of accounting and book-keeping etc. in the private sector for the base year were prepared using VAPW estimates of public administration and labour input estimates based on NSS Employment and Unemployment Survey, 1993-94 (50 round). The estimates of *GVA* for accounting and book-keeping services etc. in the private sector in the new series for the year 1999-2000 have been prepared

following the labour input method by using the data on workforce and VAPW from the results of NSS 55 round and NSS 57 rounds, respectively, separately for rural and urban areas.

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

This compilation category has been introduced after re-grouping the activities under business services and other services. 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 new series this activity has been included under 'business services'. Similarly, the GVA estimates of 'press agency activities' falling under NIC-87 code 897 were being compiled, though not exclusively, under the category of 'business services' in the 1993-94 series. Now, this activity falls under 'news agency activities', which is classified under NIC-98 code 922, and the GVA estimates for this activity have been included under 'other services' in the new series. Thus, the comparison of GVA estimates of 'business services' in the 1993-94 series, and the new series, has to be done keeping these aspects in view.

In the 1993-94 series, GVA estimates for these activities were prepared separately for organised and unorganized segments using labour input method (estimated workforce in the activity x average VAPW in the activity) separately for rural and urban areas. The estimates of GVA for this compilation category have been prepared separately for organized and unorganised segments and for rural and urban areas for the base year in the new series by using the data on workforce and VAPW from the results of NSS 55 round and NSS 57 rounds, respectively.

Ownership of dwellings

The economic activities covered in this sector are ownership of dwellings (occupied residential houses) including imputed value of owner occupied dwellings also. Services rendered by non-residential buildings are

considered to be a subsidiary activity of the industries, which occupy the buildings and therefore, are not included in this sector.

In the old series, the GDP estimates for the ownership of dwelling units was estimated as gross rental of the residential census houses less the cost of repairs and maintenance. The number of 1991 census residential houses in rural and urban areas was projected to get the estimates for the mid year 1993-94 by applying the average compound growth rates observed between 1981-1991 population censuses. The 1991 census residential houses (wholly/partially residential census houses) and rent per household obtained from the results of NSS 50 round were used to estimate the gross rental separately for rural and urban areas. Cost of repairs and maintenance was subtracted from the gross rentals to get the estimates of GVA in the base year.

In the new series, the data on dwellings and rent per dwelling, separately for rural and urban areas has been taken from the Population Census, 2001 and the results of NSS 55 round on consumer expenditure. The number of residential houses in rural and urban areas during 1999-2000, as per PC 2001 were lakh and lakh, respectively, as against the projected residential houses for the same year based on PC 1991 were lakh and lakh, respectively. The rent per dwelling in rural and urban areas as per NSS 55 round was Rs. and Rs. , respectively, whereas the respective rents for the same year as per NSS 50 round projections were Rs. and Rs. , respectively.

Estimates at constant prices

The estimates of real estate business services and legal services are prepared by using the estimates of workforce of current year Gross value added per worker of Base Year (1993-94). In the case of ownership of dwelling, the gross rental of the base year is evaluated with the ownership of dwelling of current year. The base year repairs & maintenance estimates have been moved to subsequent years with the help of Index of houses separately for rural and urban areas.

12. Other services

The economic activities covered under this sector are (i) coaching and tuition (NIC-98 codes 80903 and 80904), (ii) education excluding coaching and tuition (NIC-98 code 80 (-) 80903 (-) 80904), (iii) human health activities including veterinary activities, (iv) sewage and refuse disposal, sanitation activities (nic-98 code 90), (v) activities of membership organisations (+) social work (NIC-98, code 91+ 853), (vi) recreational cultural and sporting activities (NIC-98, code 92), (vii) washing and cleaning of textiles and fur products (NIC-98, code-9301), (viii) hair dressing and other beauty treatment (NIC-98, code 9302) (ix) funeral and related activities (NIC-98 code 9303+9309), (x) private households with employed person (NIC-98 code 95), (xi) custom tailoring (NIC-98, code 18105), and (xii) extra territorial organisations and bodies (NIC-98 code 99).

The method generally followed for estimation of value added for different categories of services in the non-public segment is the labour input method (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 and state governments and annual reports of public undertakings. For the private organized part, estimates of workforce are from the DGET source and the VAPW from the NSS 57round in respect of the enterprises recorded as companies. For the private unorganized part, estimates of workforce are from the NSS 55 round (total workforce in each economic activity), reduced by the workforce in the public and private organised sectors (available from the DGET), and the VAPW from the NSS 57 round in respect of enterprises recorded as non-corporate. Following are the major data sources used for the compilation of estimates of *GVA* in the new series:

- NSS 55th round (1999-2000) EUS
- Population Census, 2001
- DGET-Employment Review, annual data
- NSS 57th round (2001-02) on services
- Budget documents and annual reports for data relating to activities of these services under public sector
- Consumer price indices of agricultural laborers and industrial workers

Educational services

In the 1993-94 series, *GVA* estimates in respect of education were prepared separately for recognized and non-recognised educational institutions. The *GVA* for the recognised institutions under public sector was taken to be equivalent to the expenditure on salaries and wages of teaching and non-teaching staff of educational services as available from the budget documents of state. For the private recognised educational institutions, the estimates of *GVA* were obtained as a residual from the data on total salaries and wages paid to teaching and non-teaching staff of recognised institutions as available in the publication 'Education in India' for the year 1986-87, after subtracting the public part. For the private unorganised educational institutions, the method adopted for estimating the *GVA* in the old series was the labour input method. The estimates of work force in this activity was estimated as a residual from the total workforce by subtracting the workforce in the activity in the public and private organised sector and the estimates of VAPW were from the Enterprise Survey, 1991-92. The overall workforce was obtained from the NSS 50 round survey results. The procedure followed in the new series for the base year 1999-2000 is described-below:

Coaching and tuition

The activities covered under this compilation category are the activities of coaching centres and individuals providing tuitions. The estimates of *GVA* for coaching and tuition activities have been prepared for the year 1999-2000 following the labour input method using the results of NSS 55 round on employment and unemployment and NSS 57 round on services sectors.

Education excluding coaching and tuition

The activities covered under this compilation category are the activities of private education institutions, excluding those of coaching centres and individuals providing tuitions. The *GVA* estimates for education in the new series have been prepared separately for recognized and non-

recognised institutions. The *GVA* for the recognised institutions under public sector is taken to be equivalent to the expenditure on salaries and wages of teaching and non-teaching staff of educational services as available from the budget documents of state. The estimates for recognized institutions under private sector have been prepared following the labour input method using the data on workforce available from the DGET and the estimated VAPW from the NSS 57 round (corporate sector part).

The *GVA* estimates for private un-recognized institutions the year 1999-2000 have been compiled following the labour input method separately for rural and urban areas, using the results of NSS 55 round (after excluding the workforce in the organised sector) and the results of NSS 57 round on VAPW (unorganised part). The change in procedure has been necessitated due to the non availability of data on salaries and wages in recognised educational institutions after 1986-87.

Human health activities and veterinary activities

The activities covered under this compilation category are the activities of human health and veterinary services. In the 1993-94 series, *GVA* estimates for health and veterinary services were prepared separately for public, private organised and private unorganised sectors. The *GVA* for the public sector was taken to be equivalent to the expenditure on salaries and wages of medical personnel's obtained from the analysis of the budget documents. The *GVA* for private organised sector was prepared using work force estimates from DGET, and the VAPW estimate of public sector in health and veterinary services. For the unorganised segment, the labour input method was followed. The work force estimates were obtained by subtracting the organised sector workforce available from the DGET from the total workforce estimated from the NSS 50 round EUS results and the VAPW estimates were from the Enterprise Survey, 1991-92.

In the new series estimates of *GVA* in human health and veterinary services have been prepared separately for public, private organised and private unorganised sectors using the labour input method. The *GVA* for the public sector has been taken to be equivalent to the expenditure on salaries and wages of medical personnel obtained from the analysis of the budget documents plus the consumption of fixed capital. The

GVA for private organised sector has been estimated using workforce estimates from DGET, and VAPW of corporate sector estimated from the results of NSS 57 round survey on services sectors. For the unorganised segment, the labour input method was followed for estimating GVA for 1999-2000, with work force estimates in the unorganised sector compiled as a residual by subtracting the organised sector workforce (DGET source) from the total workforce as per NSS 55 round survey on employment and unemployment; and the VAPW for the unorganised segment estimated from the NSS 57 round survey results.

Sewage and refuse disposal, sanitation activities

The activities covered in this category are the sewage and refuse disposal, sanitation and similar activities. The estimates of GVA of these services in the 1993-94 series were prepared separately for public and private segments. The GVA for public sector was the sum of expenditure on salaries and wages of activities falling under NIC 910 covered under government and consumption of fixed capital. The private sector estimates were prepared separately for rural and urban areas using NSS work force and average compensation of municipal workers engaged in sanitary services. The private sector work force was obtained after subtracting the public sector work force, from the total work force in the sanitary services sub-sector.

The GVA estimates for these activities for the new series have also been prepared separately for public and private sectors. Public sector estimates are the sum of expenditure on salaries and wages of activities covered under government and consumption of fixed capital. The public sector workforce (WF) as obtained from DGET has been subtracted from the total EUS workforce estimate from NSS 55 round to get the WF estimates for private segment. Thus obtained private sector WF estimates have been divided into rural and urban areas and have been multiplied with VAPW of sanitary workers (data obtained from municipal returns) to get the GVA estimates for the base year.

Activities of membership organisations and social work

This sub-sector includes the activities of associations of writers, painters, lawyers, doctors, journalists and other similar

organizations, activities of trade unions, interested chiefly in the representation of their views concerning their work situation, activities of other membership organizations, activities of religious organisations, activities of political organizations, activities of other membership organizations, social work with accommodation, and social work without accommodation. The estimates of these services in the 1993-94 series of NAS were prepared using NSS 50 round estimates of work force and VAPW estimate from the results of Enterprise Survey, 1991-92 duly adjusted for 1993-94 prices, separately for rural and urban following the labour input method.

The *GVA* estimates in the new series for the base year (1999-2000) from these services have been compiled using NSS 57 round (2001-02) survey results for estimating the VAPW and NSS 55 round EUS survey results for estimating the workforce. This has been done separately for rural, urban areas and also by organized and unorganized sectors. This activity corresponds to community services of 1993-94 series. The increase in *GVA* in the new series has been due to broader coverage of the activity.

Recreational, cultural and sporting activities

The activities covered in this category are recreational, cultural and sporting activities. The estimates of these services in 1993-94 series were prepared separately for recreation and entertainment services and T.V. and Radio. The *GVA* estimates of recreation and entertainment services (other than Radio and T.V. broadcasting) were obtained on the basis of value of output of these services on year-to-year basis and the value added ratio as observed in the Enterprise Survey, 1991-92. In the old series, estimates of *GVA* for the public part of television and radio were obtained by analyzing the budget documents of Ministry of Information and Broadcasting. The estimates for private segment were compiled separately for rural and urban areas, following the labour input method, using the VAPW of public administration .

In the new series, however, the estimates of *GVA* for this activity have been compiled for the base year 1999-2000, separately for public,

private organized and private unorganized segments. While the estimates of GVA for the Public Sector are from the budget documents and annual reports of public undertakings, those of private organized and private unorganized have been compiled following the labour input method, with workforce data from the DGET and the NSS 55 rounds (total workforce), respectively, and the estimates of VAPW for these two segments from the NSS 57 round survey results. The increase in new series is due to broader coverage, change in the procedures and use of latest survey results.

Washing and cleaning of textiles and fur products

The activities covered in this category are washing and dry cleaning of textile and fur products. The estimates of GVA of these services in the 1993-94 series were prepared using NSS 50 round estimates of work force and VAPW estimate from the Enterprise Survey, 1991-92 duly adjusted for 1993-94 prices, separately for rural and urban areas. The GVA estimates for the base year (1999-2000) in the new series in respect of these services have been prepared using NSS 57 round (2001-02) survey results for the estimates of VAPW and the NSS 55 round EUS results for workforce, separately for rural and urban areas.

Hair dressing and other beauty treatment

The activities covered in this category are hairdressing and other beauty treatment. The estimates of GVA of these services in 1993-94 series were prepared using NSS 50 round estimates of work force and VAPW of the Enterprise Survey, 1991-92 duly adjusted for 1993-94 prices, separately for rural and urban areas. The VAPW was estimated for 1993-94 series based on the data of establishments (those employing at least one hired worker) only, and the data in respect of Own Account Enterprises (OAE) was not taken into account.

The GVA estimates for the base year (1999-2000) in the new series from these services have been prepared using NSS 57 round (2001-02) survey results for VAPW and NSS 55 round EUS results for the workforce, and following the labour input method, separately for rural and

urban areas. The increase in the new series has been due to broader coverage and use of latest survey results.

Custom tailoring

The estimates of these services in 1993-94 series of NAS were prepared following the labour input method using NSS 50 round estimates of work force and VAPW of manufacturing of readymade garments (estimated from the NSS 51 round survey, 1994-95 results). In the new series, the GVA for these services in the base year has been estimated using NSS 56 round (unorganized manufacturing) data on VAPW and NSS 55 round data on work force, separately for rural and urban areas.

Funeral and related activities

The activities covered in this category are funeral and related activities (NIC-98, code 9303) and other service activities, n. e. c. (NIC-98, code 9309). The estimates of GVA of these services in the 1993-94 series were prepared using NSS 50 round estimates of work force and VAPW estimate from the results of Enterprise Survey, 1991-92 duly adjusted for 1993-94 prices, separately for rural and urban areas. The VAPW estimates were based only on the Establishments data and Own Account Enterprises (OAE) were not taken into account. The GVA estimates for the base year (1999-2000) in the new series in respect of these services have been prepared using NSS 57 round (2001-02) results for the VAPW estimates and NSS 55 round EUS results for workforce, following the labour input method, separately for rural and urban areas.

Private households with employed person

The activities covered in this category are private households with employed persons. The estimates of GVA of these services in the 1993-94 series were prepared using NSS 50 round estimates of work force and VAPW estimates in respect of NIC-961 to 969 from the results of Enterprise Survey, 1991-92 duly adjusted for 1993-94 prices, separately for rural and urban areas (as a proxy). The VAPW used for 1993-94 series was based on the Establishments only and data in respect of Own Account Enterprises (OAE) was not taken into account.

Data on private households with employed persons was not collected in the NSS 57 round survey on services sectors, as it was not found to be feasible to identify such households as enterprises. The value added generated by this activity relates to wages paid to 'employed persons' by the households. Therefore, the VAPW for this activity in the new series for 1999-2000 has been estimated on the basis of wage data collected in the NSS 55 round Employment Unemployment Survey. The total weekly earnings of the workers falling under this category 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.

In the old series VAPW of personal services as a whole was taken as proxy which has been replaced by wage data of NSS-55 round estimate. Moreover, the estimated workforce is also less as per NSS 55 round in 1999-2000, as compared to the projected workforce estimate in the old series for the same year.

Extra territorial organisations and bodies

The activities covered in this category (NIC-98, Code 99) are extra territorial organisations and bodies including the activities of international organizations such as United Nations and its agencies, regional bodies etc., and of International Monetary Fund, World Bank, European Commission, etc. The estimates of GVA of these services in the 1993-94 series were prepared using the results of NSS 50 round workforce and thrice the VAPW of Public Administration and Defence (as a proxy), separately for rural and urban areas. There has been no change in the procedure of estimating the GVA for this activity in the new series for the base year 1999-2000, excepting that the estimates of workforce are from the NSS 55 round and DGET sources.

PUBLIC ADMINISTRATION

Estimates of net value added are prepared using the income approach, the compensation of employees being the only factor income. The economic & purpose classification of the budget of State Government and Local Authorities provides the estimates for administration departments

from which the Public Administration estimates are derived making use of estimates of government expenditure under various purpose categories. State wise estimates of NSDP from Central Government have been prepared by CSO by distributing the national level estimates among the states in proportion to the number of Central Government employees in the State as on 1st October (midyear) obtained from the Directorate General of Employment and training (DGE&T). The CFC ratio furnished by CSO is used to work out the estimates of GSDP of this sector.

Public services in quasi Government bodies (NIC903)

These activities basically cover the administration part of the quasi-permanent bodies such as CSIR, Medical Association, NCERT etc. The estimates have been prepared using estimated working force and value added per worker as obtained from the annual reports of the institutes of the research and scientific services (given by CSO). The CFC ratio furnished by CSO is used to work out the estimates of GSDP of this sector.

Estimates at constant prices

The current prices estimates have been deflated with the help of All India consumer price index number for industrial workers to arrive at the constant price estimates.