

# CHAPTER 1

## INTRODUCTION

### Background

A system of national accounts consists of a coherent, consistent and interrelated set of economic accounts for sectors or sub-sectors of the economy as a whole. It provides a set of concepts, definitions and classifications within a broad accounting framework. It is designed for purposes of economic analysis and policy-making, including the formulation and monitoring of economic programmes and development planning. Data of a scientific, technological or social nature can be systematically related to economic data within the framework of an overall system of accounts.

Work on the formulation of such a system started at individual research level well before the Second World War. The first United Nations System of National Accounts (SNA) was published in 1953. The UN recommended countries to compile their economic accounts within the SNA framework to achieve consistency and facilitate international economic comparison. However, the interest of policy-makers in relating the outcomes of various scientific and technological studies, plans and programmes to the socio-economic status of the population, encouraged the further elaboration of the system. This elaboration included the establishment of links with the distribution of income and consumption; stocks of tangible and non-tangible assets; a balance sheet; stock of human capital; and various other monetary and quantitative databases relating to different types of activities.

SNA has been revised several times to take account of these wider concerns. The latest version of the system was completed in 1993 and provides measures of production, income, consumption, savings, capital formation and their financing for individual sectors and for the economy as a whole. It also provides linkages with various monetary and quantitative databases relating to different types of activities through Satellite Accounts. SNA is a powerful and flexible tool to provide the detailed economic information required to meet analytical and policy needs.

The first estimates of national accounts of Pakistan were prepared by the Economic Advisor's Office in 1949. On the setting up of the Central Statistical Office (CSO) in 1950, the job was transferred to CSO, now Federal Bureau

of Statistics (FBS). Since then the FBS has been preparing different series of national accounts at current and constant prices.

For improvement of national accounts, several groups and committees were set up from time to time, the prominent being the national Income commission-1963 and IBRD Statistical Mission-1969. As a result the national accounts of Pakistan have undergone modifications and improvements at various stages with respect to timeliness, data availability, coverage and statistical techniques involved in their computation.

In 1972-73, FBS undertook an exercise for switching over the base from 1959-60 to 1969-70. These estimates were presented before the National Accounts Committee but could not be adopted due to inconsistencies in the estimates of manufacturing sector. The Committee directed the FBS to prepare estimates with 1975-76 base. A comprehensive work plan was then prepared for improving the existing data series and plugging the statistical gaps. Some surveys such as wholesale and retail trade, small and household manufacturing industries were conducted for this purpose. The estimates with base 1975-76, on improved data availability, concepts and methodology were prepared for the year 1975-76 through 1983-84 and presented before the Committee but could not be adopted by it due to persistent inconsistencies.

Despite successive efforts for the improvement of national accounting in Pakistan, the desired results have not been achieved. In particular the revised UN System of National Accounts-1968 could not be implemented even though nearly two decades have elapsed since their adoption.

While considering the Annual Plan for the year 1984-85 certain shortcomings in the compilation of National Accounts were brought to the notice of the National Economic Council. The Council decided to constitute a Committee under the chairmanship of Mr. A.G.N. Kazi, Governor, State Bank to look into the matter. Accordingly a Committee on National Accounts was constituted to review the present methodology for preparation of National Accounts and to propose improvements considered necessary by the Committee. The result was the 1980-81 base completed in 1988.

Efforts were made from time to time to shift the base from 1980-81 but due to one reason or the other, the work was postponed. Secretary Statistics Division constituted the committee comprising Mr. Ghulam Ahmed (DDG, NA), Mr. Arif Mahmood Cheema (Director, NA) and Mr. Mohammad Ishaque Rana (Director, NA) to expedite the work. Several internal meetings and the meetings of the NAC were held under the chairmanship of the secretary statistics division to change the base from 1980-81 to 1999-2000. Ultimately the NAC approved the rebased estimates in the meeting held on 22<sup>nd</sup> December 2003. List of the participants is annexed (annexure-44) This is the documentation of the methodology, data and results of the exercises.

## GROSS DOMESTIC /NATIONAL PRODUCT

The Gross National Product is the market value of all final goods and services made available in the economy during a year. GNP is measured in rupee terms rather than in physical units of output. Gross Domestic Product (GDP) quantifies the magnitude and composition of production in the economy. GDP may be derived in three ways or in combination of them.

**1: Product Approach:** It measures the contribution to output made by each producer. It is obtained by deducting from the total value of its output the value of goods and services it has purchased from other producers and used up in producing its own output. Total value added by all producers equals GDP.

Value Added = value of Output - value of intermediate consumption

**2: Income/Cost Approach:** In this approach, consideration is given to the costs incurred by the producer within his own operation, the income paid out to employees, indirect taxes, consumption of fixed capital, and the operating surplus. All these add up to value added.

**3: Expenditure Approach:** This approach looks at the final uses of the output for private consumption, government consumption, capital formation and net of imports & exports.

GDP in Pakistan is estimated as per guidelines provided by the SNA. For the purpose of GDP estimation by sectoral activities (current & constant prices), product, income and expenditure approaches are applied. The economy is divided into the following sectors.

### I) Production Sectors

#### i) Agriculture

- Major Crops

- Minor Crops
- Livestock
- Fishing
- Forestry

#### ii) Industry

- Mining & Quarrying
- Manufacturing
  - Large-Scale
  - Small-Scale
  - Slaughtering
- Construction
- Electricity, Gas and Water Supply

### II) Service Sectors

- Transport, Storage & Communications
- Wholesale & Retail Trade
- Finance and Insurance
- Ownership of Dwellings
- Public Administration & Defence
- Community, Social & Private Services

**Sectoral Estimates Of GDP/GNP:** GDP is computed by a combination of product, income and expenditure methods. Product method is applied to compute value added in agriculture, mining and quarrying, manufacturing, electricity & gas distribution, wholesale & retail trade and ownership of dwellings whereas income method is used to work out income accruing from transport, storage & communication, finance and insurance, public administration & defence and services sectors. Expenditure method is used to estimate value added in construction on the basis of investment made and the co-efficient of value added relating to investment.

The coverage, nature and sources of data used and the methodology followed in compilation of these estimates are explained under respective sectors. Comparisons, for the year 1999-2000 at 1999-2000 and 1980-81 bases, of the GDP/GNP estimates, sectoral shares and within sectoral shares have been given as tables 1, 2 & 3 and figures 1, 2, 3 & 4 highlight the salient features graphically.

### Gross Fixed Capital Formation

As per system of national Accounts SNA 1993 the gross fixed capital formation is measured by the total value of a producer's acquisitions, less disposals of fixed assets during the accounting period plus certain additions to the value of non-produced assets realized by the productive activity of institutional units. Fixed assets are tangible or intangible assets produced as outputs from processes of production that are themselves used repeatedly or continuously in other processes of production for more than one year.

There is substantial diversity in different types of gross fixed capital formation that may take place. The following main types may be distinguished:

- a. Acquisitions, less disposals, of new or existing tangible fixed assets, subdivided by type of asset into:
  - i. Dwellings;
  - ii. Other buildings and structures;
  - iii. Machinery and equipment;
  - iv. Cultivated assets - trees and livestock - that are used repeatedly or continuously to produce products such as fruit, rubber, milk, etc;
- b. Acquisitions, less disposals, of new and existing intangible fixed assets, sub-divided by type of asset into:
  - i. Mineral exploration;
  - ii. Computer software;
  - iii. Entertainment, literary or artistic originals;
  - iv. Other intangible fixed assets;
- c. Major improvements to tangible non-produced assets, including land;
- d. Costs associated with the transfers of ownership of non-produced assets.

The various components of acquisitions and disposals of fixed assets, as referred to in categories (a) and (b) above, are listed below:

- a. Value of fixed assets purchased;
- b. Value of fixed assets acquired through barter;
- c. Value of fixed assets received as capital transfers in kind;
- d. Value of fixed assets retained by their producers for their own use, including the value of any fixed assets being produced on own account that are not yet completed or fully mature;

Less

- e. Value of existing fixed assets sold;
- f. Value of existing fixed assets surrendered in barter;
- g. Value of existing fixed assets surrendered as capital transfers in kind.

The estimates of GFCF in Pakistan are primarily constructed separately for private and public sectors by economic activity as well as by capital assets. It comprises expenditure incurred on the acquisition of fixed assets, replacement, additions and major improvements of fixed capital viz. land improvement, buildings, civil and engineering works, machinery, transport equipment and

furniture and fixture. The methodology used to estimate GFCF in private and public sectors including general government is given in the succeeding paragraphs.

**Private Sector:** Estimates of private sector are computed by a combination of approaches i.e. commodity flow, expenditure (Survey Method) and financial. Commodity flow approach that uses the net availability of capital goods in value terms from domestic production and imports and exports, duly adjusted for various margins, is applied to the following three sectors.

- i. Agriculture
- ii. Construction
- iii. Transport

Expenditure approach (Survey Method) is applied to the following sectors:

- i. Mining & Quarrying
- ii. Large Scale Manufacturing (In-Production)
- iii. Small & Household Manufacturing Industries
- iv. Wholesale & Retail Trade
- v. Financial Corporate Sector
- vi. Ownership of Dwellings
- vii. Services

Financial approach is used to estimate GFCF in under-construction large scale manufacturing establishments, livestock farming, poultry farming and fishing supplemented by survey method.

**Public Sector:** The estimates of gross fixed capital formation in the public sector are compiled on the basis of data received from all the autonomous institutions by sub-sectors of the economy.

The **GFCF** for 1999-2000 amounts to **Rs 607410 million** compared to 1980-81 based estimates at Rs 452,280 million. Significant increase in fixed investment has been witnessed in agriculture (123%), manufacturing (37%), ownership of dwellings (38%) and services (64%) sectors. This increase was possible mainly through enhanced coverage and improved methodology as per SNA 1993. GFCF thus calculated is presented separately for private and public sectors in the tables 4 & 5 and figures 5 & 6 highlight the salient features graphically.

Table-1

**Comparative statement of GDP and GNP Estimates  
(1999-2000 And 1980-81 Base)**

(Rs. Million)

S. No.	Sectors/Sub-sectors	1999-2000		% Change
		1999-2000 Base	1980-81 Base	1999-00 B/ 1980-81 B
<b>A.</b>	<b>Agriculture Sector</b>	<b>923609</b>	<b>779692</b>	<b>18.5</b>
	1. <u>Crops</u>	467879	418048	11.9
	i) Major Crops	342200	309121	10.7
	ii) Minor Crops	125679	108927	15.4
	2. Livestock	417120	337300	23.7
	3. Fishery	15163	17168	-11.7
	4. Forestry	23447	7176	226.7
<b>B.</b>	<b>Industrial Sector</b>	<b>798190</b>	<b>676369</b>	<b>18.0</b>
	1. Mining and Quarrying	48377	17393	178.1
	2. <u>Manufacturing</u>	522801	447395	16.9
	i) Large Scale	338602	319616	5.9
	ii) Small Scale	132369	127779	3.6
	iii) Slaughtering*	51830	---	---
	3. Construction	87386	97517	-10.4
	4. Electricity, Gas & Water Supply	139626	114064	22.4
<b>A+B</b>	<b>Commodity Producing Sectors</b>	<b>1721799</b>	<b>1456061</b>	<b>18.3</b>
<b>C.</b>	<b>Services Sectors</b>	<b>1807546</b>	<b>1495927</b>	<b>20.8</b>
	1. Transport, St. & Communication	400983	311630	28.7
	2. Wholesale & Retail trade	621842	443934	40.1
	3. Finance & Insurance	132454	90255	46.8
	4. Ownership of Dwellings	110425	135518	-18.5
	5. Public Admn. & Defense	220291	249832	-11.8
	6. Social, Community & P. Services	321551	264758	21.5
<b>D.</b>	<b>Gross Domestic Product (GDP)</b>	<b>3529345</b>	<b>2951988</b>	<b>19.6</b>
<b>E.</b>	Net Factor Income from Abroad	-47956	-44906	
<b>F.</b>	<b>Gross National Product (GNP)</b>	<b>3481389</b>	<b>2907082</b>	<b>19.8</b>
<b>G.</b>	Population (Million Numbers)	137.5	136	
<b>H.</b>	<b>Per Capita Income (Rs.)</b>	<b>25314</b>	<b>21376</b>	<b>18.4</b>

\* In the existing estimates slaughtering is included in livestock, whereas in revised base it is part of manufacturing sector.

Table-2

**Comparative statement of GDP, GNP Estimates and Sectoral Shares**  
(1999-2000 & 1980-81 Base)

(Rs. Million)

S. No.	Sectors/Sub-sectors	1999-2000			
		1999-2000 Base		1980-81 Base	
		Estimate	% Share	Estimate	% Share
<b>A.</b>	<b>Agriculture Sector</b>	<b>923609</b>	<b>26.2</b>	<b>779692</b>	<b>26.4</b>
	1. <u>Crops</u>	467879	13.3	418048	14.2
	i) Major Crops	342200	9.7	309121	10.5
	ii) Minor Crops	125679	3.6	108927	3.7
	2. Livestock	417120	11.8	337300	11.4
	3. Fishery	15163	0.4	17168	0.6
	4. Forestry	23447	0.7	7176	0.2
<b>B.</b>	<b>Industrial Sector</b>	<b>798190</b>	<b>22.6</b>	<b>676369</b>	<b>22.9</b>
	1. Mining and Quarrying	48377	1.4	17393	0.6
	2. <u>Manufacturing</u>	522801	14.8	447395	15.2
	i) Large Scale	338602	9.6	319616	10.8
	ii) Small Scale	132369	3.8	127779	4.3
	iii) Slaughtering*	51830	1.5	---	
	3. Construction	87386	2.5	97517	3.3
	4. Electricity, Gas & Water Supply	139626	4.0	114064	3.9
<b>A+B</b>	<b>Commodity Producing Sectors</b>	<b>1721799</b>		<b>1456061</b>	
<b>C.</b>	<b>Services Sectors</b>	<b>1807546</b>	<b>51.2</b>	<b>1495927</b>	<b>50.7</b>
	1. Transport, St. & Communication	400983	11.4	311630	10.6
	2. Wholesale & Retail trade	621842	17.6	443934	15.0
	3. Finance & Insurance	132454	3.8	90255	3.1
	4. Ownership of Dwellings	110425	3.1	135518	4.6
	5. Public Admn. & Defense	220291	6.2	249832	8.5
	6. Social, Community & P. Services	321551	9.1	264758	9.0
<b>D.</b>	<b>Gross Domestic Product (GDP)</b>	<b>3529345</b>	<b>100.0</b>	<b>2951988</b>	<b>100.0</b>
<b>E.</b>	Net Factor Income from Abroad	-47956		-44906	
<b>F.</b>	<b>Gross National Product (GNP)</b>	<b>3481389</b>		<b>2907082</b>	
<b>G.</b>	Population (Million Numbers)	137.5		136	
<b>H.</b>	<b>Per Capita Income (Rs.)</b>	<b>25314</b>		<b>21376</b>	

\* In the existing estimates slaughtering is included in livestock, whereas in revised base it is part of manufacturing sector.

Table-3

**Comparative statement of GDP, GNP Estimates and Within Sectoral Shares**  
(1999-2000 And 1980-81 Base)

(Rs.Million)

S. No.	Sectors/Sub-sectors	1999-2000			
		1999-2000 Base		1980-81 Base	
		Estimate	% Share	Estimate	% Share
<b>A.</b>	<b>Agriculture Sector</b>	<b>923609</b>	<b>100.0</b>	<b>779692</b>	<b>100.0</b>
	1. <u>Crops</u>	467879	50.7	418048	53.6
	i) Major Crops	342200	37.1	309121	39.6
	ii) Minor Crops	125679	13.6	108927	14.0
	2. Livestock	417120	45.2	337300	43.3
	3. Fishery	15163	1.6	17168	2.2
	4. Forestry	23447	2.5	7176	0.9
<b>B.</b>	<b>Industrial Sector</b>	<b>798190</b>	<b>100.0</b>	<b>676369</b>	<b>100.0</b>
	1. Mining and Quarrying	48377	6.1	17393	2.6
	2. <u>Manufacturing</u>	522801	65.5	447395	66.1
	i) Large Scale	338602	42.4	319616	47.3
	ii) Small Scale	132369	16.6	127779	18.9
	iii) Slaughtering*	51830	6.5	---	
	3. Construction	87386	10.9	97517	14.4
	4. Electricity, Gas & Water Supply	139626	17.5	114064	16.9
<b>A+B</b>	<b>Commodity Producing Sectors</b>	<b>1721799</b>		<b>1456061</b>	
<b>C.</b>	<b>Services Sectors</b>	<b>1807546</b>	<b>100.0</b>	<b>1495927</b>	<b>100.0</b>
	1. Transport, St. & Communication	400983	22.2	311630	20.8
	2. Wholesale & Retail trade	621842	34.4	443934	29.7
	3. Finance & Insurance	132454	7.3	90255	6.0
	4. Ownership of Dwellings	110425	6.1	135518	9.1
	5. Public Admn. & Defense	220291	12.2	249832	16.7
	6. Social, Community & P. Services	321551	17.8	264758	17.7
<b>D.</b>	<b>Gross Domestic Product (GDP)</b>	<b>3529345</b>		<b>2951988</b>	
<b>E.</b>	Net Factor Income from Abroad	-47956		-44906	
<b>F.</b>	<b>Gross National Product (GNP)</b>	<b>3481389</b>		<b>2907082</b>	
<b>G.</b>	Population (Million Numbers)	137.5		136	
<b>H.</b>	<b>Per Capita Income (Rs.)</b>	<b>25314</b>		<b>21376</b>	

\* In the existing estimates slaughtering is included in livestock, whereas in revised base it is part of manufacturing sector.

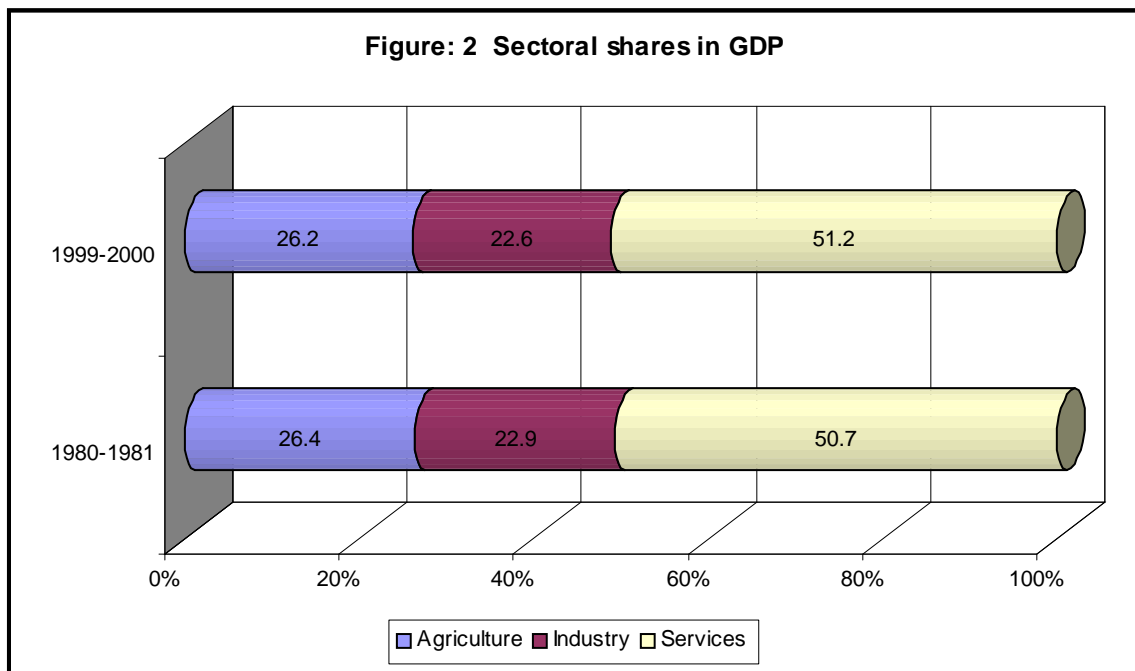
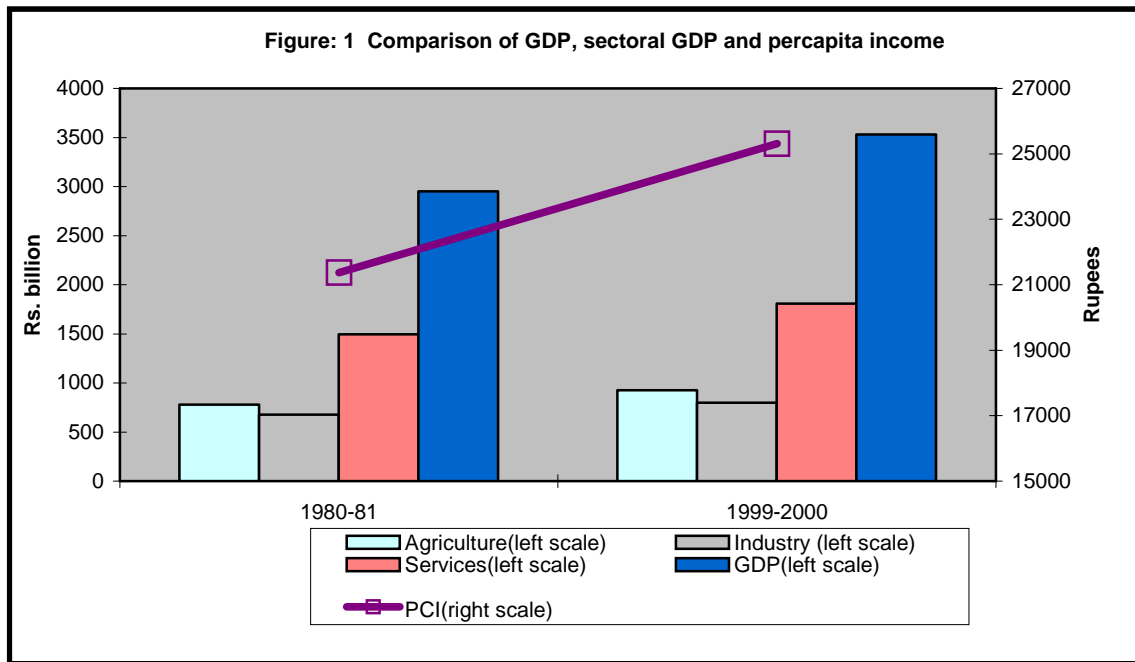
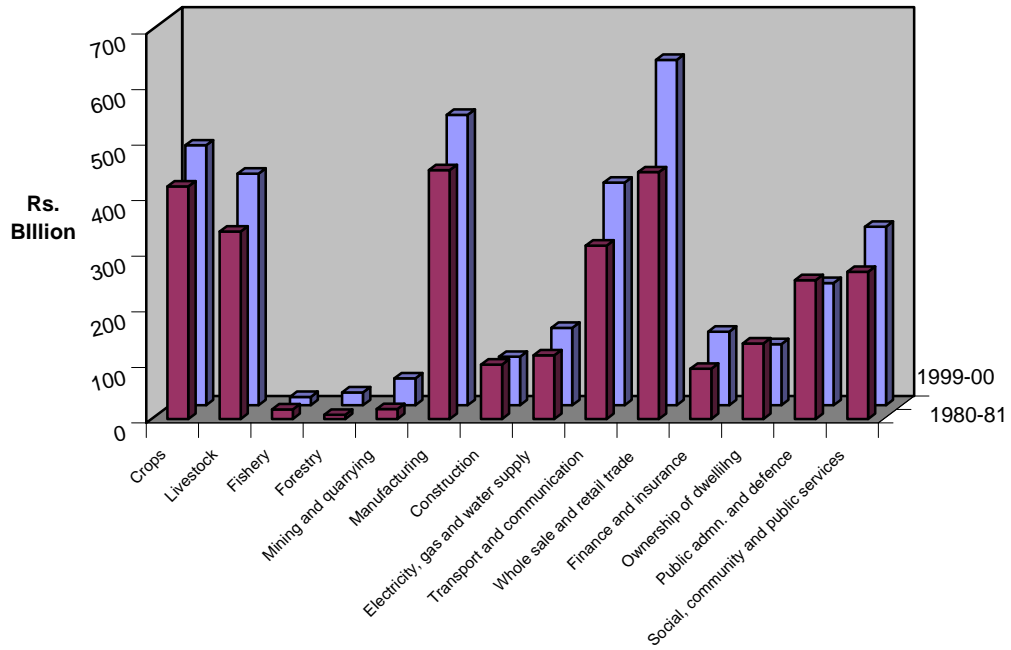


Figure: 3 Comparison of subsectoral GDP





**Figure: 4 Comparison of subsectors of GDP**

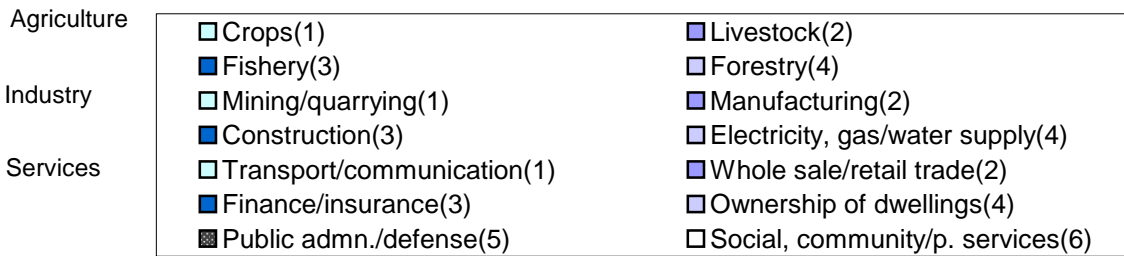
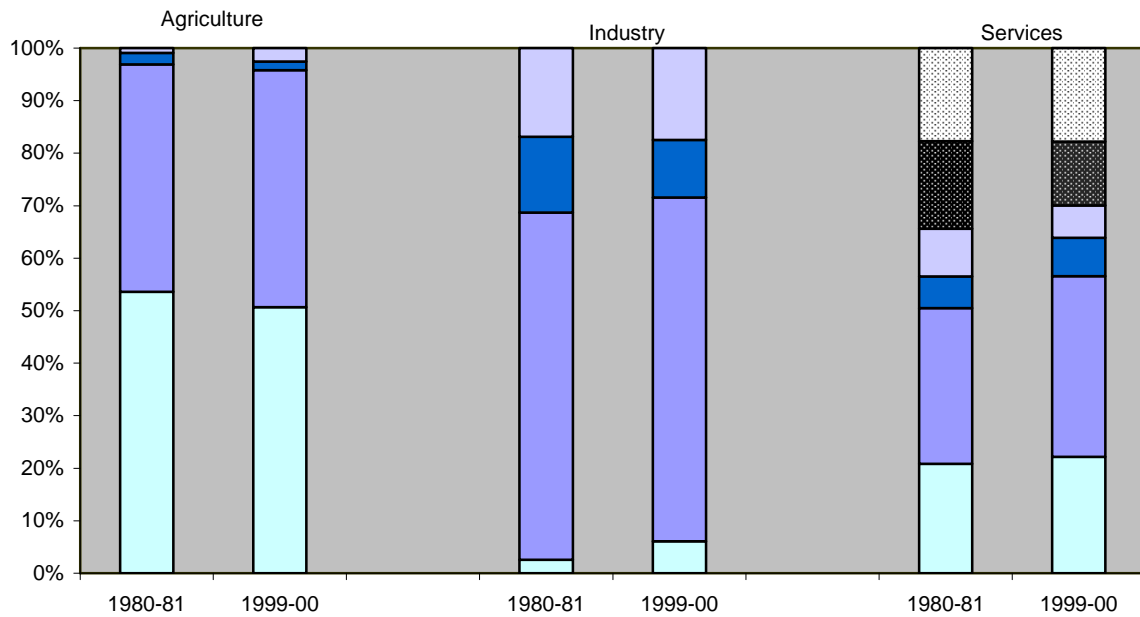


Table-4

**Gross Fixed Capital Formation, 1999-2000**  
**(Private and Public & General Government Sectors, By Economic Activity)**

(Million Rupees)

S. No.	Sectors/Sub-sectors	1999-2000 Base	1980-81 Base	Change %
<b>A+B</b>	<b>Total GFCF</b>	<b>607410</b>	<b>452280</b>	<b>34.30</b>
<b>A</b>	<b>Public and Private Sector</b>	<b>541661</b>	<b>387600</b>	<b>39.75</b>
	Agriculture	75434	33806	123.14
	Fixed Assets	57652	33806	70.54
	Cultivated Assets	17782		100
	Mining and Quarrying	18221	8405	116.79
	Manufacturing	140345	102727	36.62
	Large Scale	120532	84688	42.33
	Small Scale	19732	18039	9.39
	Slaughtering	81	--	100
	Construction	15117	14629	3.33
	Electricity & Gas	67354	50315	33.86
	Transport and Communications	80082	75778	5.68
	Wholesale and Retail Trade	7110	6517	9.10
	Finance & Insurance	9992	8685	15.04
	Ownership of Dwellings	77973	56309	38.47
	Services	50033	30429	64.43
<b>B.</b>	<b>General Government</b>	<b>65749</b>	<b>64680</b>	<b>1.65</b>
	Federal Government	24980	24966	0.06
	Provincial Governments	31763	30708	3.44
	Local Bodies	9006	9006	0

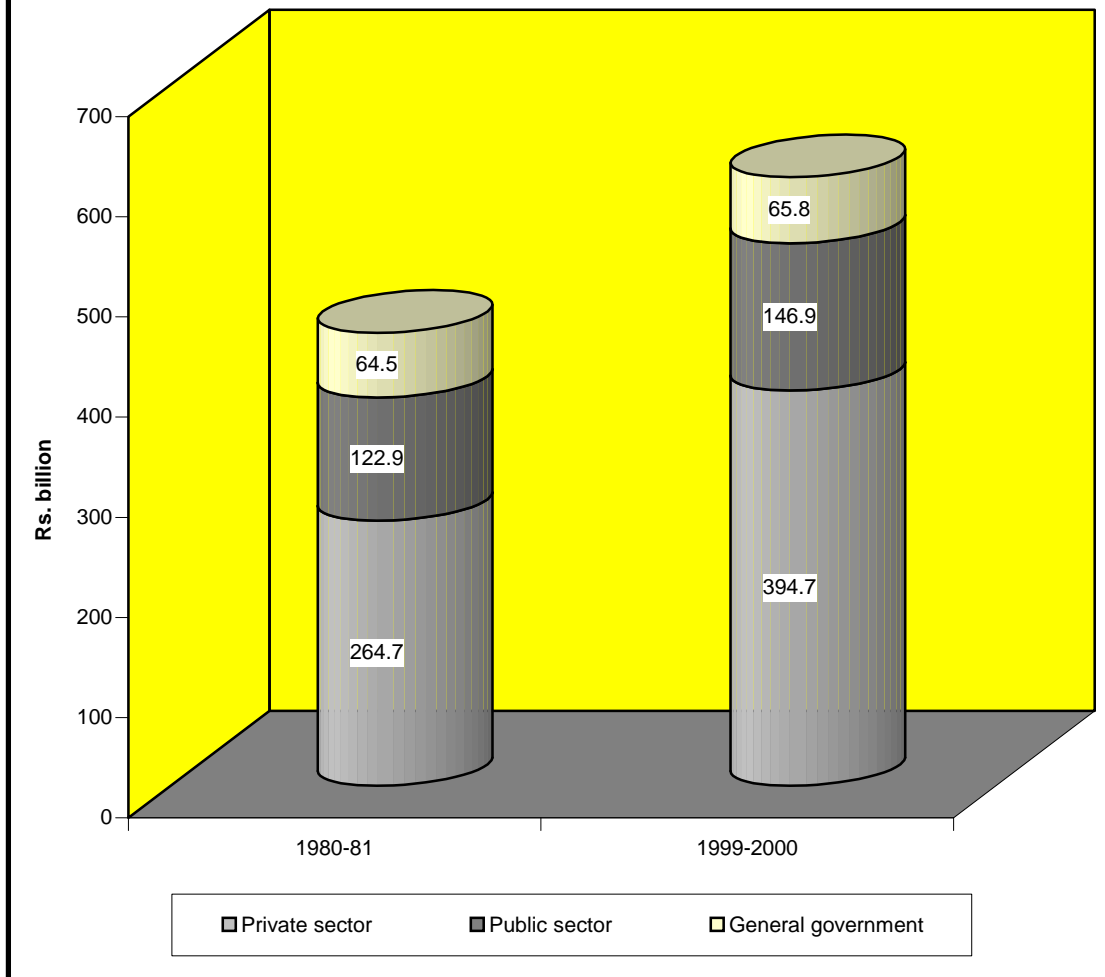
Table-5

**Gross Fixed Capital Formation, 1999-2000**  
**(Private, Public & General Government Sectors, By Economic Activity)**

(Million Rs)

S. No.	Sectors/Sub-sectors	1999-2000 Base	1980-81 Base	Change %
	<b>Private Sector</b>	<b>394749</b>	<b>264681</b>	<b>49.14</b>
1	Agriculture	72513	30885	134.78
	Fixed Assets	54732		
	Cultivated Assets	17782		
2	Mining and Quarrying	13108	5756	127.73
3	Manufacturing	119158	77729	53.30
	Large Scale	99345	59690	66.43
	Small Scale	19732	18039	9.39
	Slaughtering	81	--	100.00
4	Construction	12373	11886	4.10
5	Electricity & Gas	15169	13352	13.61
6	Transport and Communications	23867	28125	-15.14
7	Wholesale and Retail Trade	7110	6517	9.10
8	Finance & Insurance	6311	6562	-3.83
9	Ownership of Dwellings	77973	56309	38.47
10	Services	47164	27560	71.13
	<b>Public Sector (Autonomous/Semi-Aut. Bodies)</b>	<b>146912</b>	<b>122919</b>	<b>19.52</b>
1	Agriculture	2921	2921	0.00
2	Mining and Quarrying	5113	2649	93.02
3	Manufacturing	21188	24998	-15.24
4	Construction	2743	2743	0.0
5	Electricity, Gas & WWS	52185	36963	41.18
6	Transport and Communications	56213	47653	17.96
	Railways	369	457	-19.26
	Post Offices & PTCL	27437	19761	38.84
	Others	28407	27435	3.54
7	Financial Institutions	3680	2123	73.34
8	Services	2869	2869	0.00
	<b>General Government</b>	<b>65749</b>	<b>64680</b>	<b>1.65</b>
	Federal	24980	24966	0.06
	Provincial	31763	30708	3.44
	Local Government	9006	9006	0.00
	<b>Total</b>	<b>607410</b>	<b>452280</b>	<b>34.30</b>

Figure: 5 Comparison of GFCF by sector



**Figure: 6 Comparison of GFCF of public and private sector by subsectors**

