EXPLANATORY NOTES

1. AGRICULTURE

1.1   This section presents information about land utilization, number and area of farms by size, area and production of agricultural crops, vegetables and fruit, cropwise use of fertilizers, imports of fertilizers, acreage covered by plant protection operations, area irrigated, area classified by water table, output of forest and fishing in Pakistan.

1.2   The indices of acreage, quantum and value of important crops including food, fibre and other crops are prescribed in tables 1.2. These indices have been calculated using the following formula:

Area $\dfrac{\Sigma An}{\Sigma Ao}$ **Index $I_{an} =$ x 100   =   Index**

Quantum $\dfrac{\Sigma qn}{\Sigma qo}$ **Index $I_{qn} =$ x 100 =   Index**

Value $\dfrac{\Sigma pnqn}{\Sigma p_o q_o}$ **Index $Iv_n =$ x 100   =   Index**

Where: **pn is current year price**
po is base year price
qn is current year quantity.
qo is base year quantity
An is current year area
Ao is base year area

1.3   Provincial Agriculture Departments prepare area and production estimates for all crops. Pakistan Bureau of Statistics collects these crop estimates checks the validity consolidates the same at the national level and then release these estimates at national level after obtaining the approval of competent authority.

1.4   Three estimates of seven crops (Wheat, cotton, rice, sugarcane, gram, potato and onion) are released. Two estimates of thirteen other important crops, (maize, bajra, jowar,

sesamum other kharif pulses, other rabi pulses, mung, mash, barley, R&M seeds, tobacco, mattar and masoor) are released. For rest of the crops only one estimate is released.

1.5 In the Punjab and Khyber Pakhtoonkhwa province first and second acreage estimate of crops for which three estimates are prepared and first acreage estimate of crops for which two estimates are prepared are based on sample surveys. However, final acreage estimates in these provinces are based on the complete count (Khasra Girdawari) undertaken by the Provincial Revenue Departments. In Sindh all acreage estimates are based on sample survey technique. In Balochistan province acreage estimates are prepared on the basis of information supplied by the officials of Agriculture Department.

1.6 The traditional method of estimating production of minor crops consists of multiplying area sown with its estimated yield, which is determined through subjective judgement of the reporting staff. The yield is estimated keeping in view the normal yield fixed on the basis of crop cutting experiments undertaken by the Provincial Agriculture and Revenue Departments during specified period and condition of crop during its growth ascertained from the farmers or based on their own personal judgement. This method for major crops such as wheat, rice, cotton, sugarcane and maize has been replaced in Punjab, Sindh and Khyber Pakhtoon Khwa by objective technique known as crop cutting surveys based on probability sampling technique.

2. BALANCE OF PAYMENTS

2.1 <u>Pakistan's Balance of Payments:(Table 2.2)</u> The statistics shown in the table are compiled from the State Bank of Pakistan's publication entitled "Pakistan's Balance of Payments." The presentation of the data has been revised from July 2003 based on the I.M.F.'s Manual (5th edition). The table comprises four major categories viz (1) Current Accounts (2) Capital and Financial Accounts (3) Errors and Omissions and & (4) Exceptional Financing. Errors and omissions indicate the outcome of change in "suspense account" and is in the nature of balancing entry.

2.2 <u>Gold and foreign exchange reserves of Pakistan: (Table 2.1).</u> The statistics shown in the table are received from State Bank of Pakistan. This table shows total Rupee value of Gold and foreign exchange reserves.

3. CLIMATE

3.1 Temperature and rainfall data are collected from the Pakistan Meteorological Department. Table 3.1 and 3.2 provide monthly data on temperature and rainfall for selected stations respectively. Mean maximum and mean minimum temperatures are the arithmetic means of daily maximum and minimum temperatures recorded during the month.

3.2   Climatically, Pakistan enjoys a considerable measure of variety. North and northwestern high mountain ranges are extremely cold in winter while the summer months from April to September are very pleasant. The vast plains of the Indus Valley are extremely hot in summer and have cold weather in winter. The coastal strip in the south has a temperate climate. There is general deficiency in the rainfall. Rains are monsoonal in the origin and fall late in summer. Average rainfall is 762 millimetres per annum.

3.3   Table 3.3 and 3.4 provide data of normal temperature and rainfall at selected centres respectively.

4. CO-OPERATIVES

Co-operative Societies:-

4.1   With the liquidation of Federal Bank for Co-operatives there is no uniform system of cooperatives in the country. Provincial level cooperative banks are functioning at different levels of efficiency. The Co-operative Societies function under the Registar, Cooperative Societies at the provincial level.

4.2   Co-operative society means a society registered in Pakistan under the law in force for registration of co-operative societies and a primary co-operative society means such a society of which no other society is a member.

5. DEVELOPMENT AND PLANNING

Since the source of data in Tables 5.1-5.3 is Planning and Development Division (P&DD), the lengthy explanatory notes for various line items are documented in the publications at the   website:-http://www.pc.gov.pk/wp-content/uploads/2014/05/Manual-for-development-projects.pdf   Tables 5.4-5.6 are a joint effort of P&DD and PBS. The methodology for calculating GNP/GDP and definition of terms are given in explanatory notes titled "15. National Accounts".

6. EDUCATION

6.1   Statistics pertaining to Education have been compiled from the data made available to this Bureau by Provincial Bureaus of Statistics and Academy of Educational Planning and Management Islamabad.

6.2   Time Reference: Data presented in these tables pertain to the academic year mentioned therein. Primary Education covers 1 to 5 Classes, Middle Education includes classes from 6 to 8. Secondary Education   covers   High Schools and Secondary Vocational Institutions ,Whereas, professional Colleges cover Agricultural, Engineering,

Medical, Commerce, law, Home Economics, Education and other (Tibb, Fine Arts, Homeopath and Computers.)

6.3   Enrolment by subject and level: **Data regarding enrolment by subject, level and sex for different courses have been supplied by Allama Iqbal Open University, Islamabad.**

6.4 & 6.5   Result Statistics: **Data regarding number of candidates appeared/passed by sex for matriculation and intermediate level has been supplied by Boards of Intermediate & Secondary Education.**

7. ENERGY & MINING

A) Electricity

7.1   Monthly electricity generation data are collected from public undertakings (WAPDA, KESC, KANUPP, CHASNUPP) and private under-takings (KAPCO & HUBCO etc.). Annual data published in this book is based on financial year (July-June).

7.2   Three series of indices of electricity generation have been computed so far by taking 1975-76, 1980-81 and 1999-2000 as base, using the Laspayer's formula:

$$I = \frac{q_i}{q_o} \times 100$$

Where I is the Index, q_i is the generation of electricity for the current year, and q_o is the generation of electricity for base year.

B)   Mining

7.3   Yearly production data in respect of 24 selected mineral items for the last ten years beginning from '2004-05' have been published in table 7.2 for Pakistan and in table 7.3 the same data has been given with provincial break up. Monthly mineral production data in respect of four provinces is received from provincial Directorates of Mines and Mineral Development, Pakistan Mineral Development Corporation and Director General of Petroleum Concessions, Ministry of Petroleum and Natural Resources which is aggregated to from the annual figures.

8. FOREIGN ECONOMIC ASSISTANCE

Since the source of data in Tables 8.1-8.10 is Economic Affairs Division (EAD), the lengthy explanatory notes for various line items are documented in various UNSD, World Bank, OECD and IMF publications.

9. FOREIGN TRADE

9.1   **Foreign Trade Statistics refer to the movement of goods into and out of the customs area of Pakistan includes imports, re-imports, exports and re-exports carried through sea, land and air routes. The source documents of information were the shipping bills and bills of entry which has now been modified/revised as good declaration (G.D.) for sea, air and land borne trade filed by the exporters and importers or their agents with custom authorities but after the automation of the trade data by the PRAL & CARE system F.B.S. is getting the soft copy of the data. FBS is downloading the imports/exports data from their system on daily/weekly & monthly basis.**

9.2   **Import Statistics represent the arrival of goods from foreign countries released by customs either directly or from bonded ware-houses and intended for home consumption or for re-export. Imports are exclusive of, imports into bond, defence stores, gold and silver coins or bullion and currency notes, articles of personal baggage of passengers and trade in-transit through Pakistan.**

9.3   **Export statistics represent movement of goods out of Pakistan to foreign countries. Re-export statistics represent imported goods subsequently exported to foreign countries without further processing. In export statistics, bunker fuels supplied to ships are included as per its flag. Exports by parcel post are also included. Exports do not include personal effects of passengers and trade-in-transit through Pakistan.**

9.4   **The valuation in respect of exports and imports are based on F.O.B. and C.I.F. respectively. The data relating to quantity are those which are given in the G.Ds. The weight recorded is the weight net of packing or container. Quantity figures in some cases are either not reported or expressed in non-standard units with the result that quantity data remain, incomplete and are estimated.**

9.5   **Commodities of export & import were classified on the basis of Pakistan Standard Trade Classification which is an adaptation of UN Standard International Trade Classification. This Classification was revised and updated from time to time. Latest revision PSTC-R3 was introduced from July, 1989 and upto June, 2002 External Trade Statistics were compiled and published on the basis of PSTC-R3.**

9.6   **In pursuance of recommendation of UN Statistics Division for adoption of Harmonized Commodity Description and coding System(HS) for compilation and dissemination of external trade statistics by member countries and to cater the needs of users, Pakistan Bureau of Statistics in co-operation with Federal Board of Revenue, Pakistan Custom, Ministry of Commerce and Trade Development Authority of Pakistan has prepared Alpha Register of 6050 HS Codes at 8 digit level which was compatible with PCT 2002-2003 but now HS 2002 has been amended by the WCO (World Custom Organization) during the year 2007. FBR has also revised the PCT 2007-2008 which contain 6,913 (HS) PCT codes at 8 digits level. In 2009 -10 PCT contain 6,806 (HS) codes.**

9.7   **For direction of trade, countries have been mainly classified by geographical areas.**

10. HEALTH

10.1   Data regarding the number of Hospitals/Dispensaries/Maternity and Child Health Centres, sanctioned, beds and registered medical personnel in Pakistan and its provinces are made available by Ministry of Health Services, Regulation and Coordination. Statistics pertaining to health facilities have been compiled province-wise.

10.2   Data on Dental Doctors:- The data on Registered Dental Doctors supplied by the Pakistan Medical and Dental Council, Islamabad show the number of doctors registered during the year, but do not show the actual number of doctors in the country.

10.3   Data on Immunization:- The Provincial Immunization Programmes on the whole were started during 1979.

BC.G. Vaccination	**=**	**It provides protection against T.B.**
POLIO Vaccination	**=**	**It provides protection against poliomyelitis.**
D.P.T. Vaccination	**=**	**Given in three monthly doses to the children below the age of 5 years, it provides protection against Diphtheria Pertuss (Whooping Cough) and Tetanus.**
T.T. Vaccination	**=**	**Tetanus Toxoid is given to pregnant ladies to prevent Neonatal Tetanus.**
H.B.V.	**=**	**Hepatitis B Vaccine**
COMBO	**=**	**Combination of Help-Band and DPT**
PENTAVALENT	**=**	**DPT + HBV + Diphtheria Pertuss + HIB (Haemoinfluenza – Type B)**

11. INSURANCE AND JOINT STOCK COMPANIES

As the supply of data series from 2003 onwards in Tables 11.5-11.9 has been discontinued by SBP, PBS is looking into the option to replace them by more relevant data series from the SECP database. Otherwise the existing Tables 11.5-11.9 will be dropped from future publications.

12. LABOUR

12.1   Labour Force Sample Surveys form a regular feature of Pakistan Bureau of Statistics and are conducted on quarterly basis in selected sample areas covering both rural and urban population of Pakistan. The first series of these surveys was conducted during July, 1963 to June, 1964 The next survey was conducted during 1974-75 and 1978-79. In 1982-83 the survey was conducted on a limited scale, concentrating on current employment

and unemployment levels. The latest survey was conducted in 2013-14. The sourced data of latest Labour Force Survey is correctly tabulated and incorporated in Table Nos. 12.1 to 12.4. The data series in tables 12.5-12.19 were provided by the Labour and Manpower Division, who in turn compiled the data received from the provincial labour departments. Since its devolution to the provinces in 2010-11, the latest data series of relevant tables is not shared with PBS.

12.2 Pakistan Standard Industrial Classification (PSIC-1970) was adopted from 1970-71 upto 2007-08. In Labour Force Series from 2008-09 to 2010-11, PSIC 2007 was used. The LFS surveys 2012-13 and onward are based on new industrial classification PSIC 2010.

12.3 From the year 1971-72 revised Pakistan Standard Classification of Occupations (PSCO-68) and Pakistan Standard Industrial Classification of all Economic Activities (PSIC-70) have been adopted which differ slightly from PSCO-65 and PSIC-68 at one digit level.

12.4 The revised Pakistan Standard Classification of Occupations (PSCO) 1994 has been adopted since 1996-97 and onwards. Similarly the new Pakistan Standard Industrial Classification of all Economic Activities (PSIC-2010) has been developed and used in LFS for 2010-11 and onwards. The third revision PSCO 2015 has been developed on the basis of ISCO 2008 and will be used for future classifications.

13. MANUFACTURING

Updated series of Quantum Index of Manufacturing (QIM) to 2013-14 is provided in Table 13.1 below.

13.1 Table No.13.1 contains series of quantum Index Numbers of Large-Scale Manufacturing Industries (QIM) for Pakistan, The index series from 2005-06, cover 112 items contributing 70.332 % of value added with base year 2005-2006.

13.2 A brief description about the scope, sources of data, weighting system, formula used for computation of the index series is given below:-

   a) <u>Scope:</u> **The index is designed to measure changes in physical out put for the Large Scale Manufacturing Industries.**

   b) <u>Sources of Data:</u> **The production data used for the computation of indices are received from Ministry of Industries, Provincial Bureaus of Statistics and OCAC.**

   c) <u>Weights:</u> **The weights have been derived on the basis of 2005.06 CMI value added at factor cost (gross value of production less industrial cost less indirect taxes plus subsidies). In deriving the weights the total value added for Pakistan has been taken to be 100 and the weights at industry level have been taken as percentage of this total whereas weights at items level have been derived on the basis of their relative value of production in the industry to which these items belong.**

However, in case where only one item has been selected the whole weight of that industry has been assigned to that selected item only.

d) <u>Formula used:</u> Laspeyre's formula has been used for the computation of index numbers which is given below:-

$$I_n = \frac{\Sigma\, q_n p_o}{\Sigma\, q_o p_o} \times 100 = \frac{\sum \frac{q_n}{q_o}\, p_o q_o}{\Sigma\, q_o p_o} \times 100 = \frac{\sum \frac{q_n}{q_o}\, w}{\Sigma\, w} \times 100$$

Where I_n = quantum index number for current period, q_o and p_o represent the quantity and prices respectively of the items in the base period, q_n is the quantity in the current period, W is the weight of an item and $\Sigma W = 100$.

13.3 Table 13.2 contains production data of selected manufacturing items. Production data are collected through voluntary co-operation of various Government and non-government agencies. Since the data collected through non-government agencies takes considerable time for reconciliation of the data therefore, up-to date figures in respect of many items cannot be published in time. However, PBS is trying its level best to reduce the time-lag in publishing of data by taking different measures. Sometimes, the data received from source agencies are revised without the knowledge of PBS. Moreover, there is a possibility in some cases, the data published by PBS may vary from those published by original sources.

13.4 Table Nos. 13.3 to 13.6 cover the data regarding Census of Manufacturing Industries. CMI is conducted under the Industrial Statistics Act, 1942 and covers those establishments which are engaged in manufacturing activities whether for whole or part of the year with single or joint ownership or control and registered under Factories Act, 1934. Factories which are liable for registration have also been covered. If, however, an establishment is engaged in more than one activity and separate accounts are maintained by the establishment for each activity, then separate returns are collected for each such activity. The defence and government workshops though engaged in manufacturing activities and registered under Factories Act are, however, excluded.

13.5 The last CMI was conducted in 2005-06 and covered the variables such as (i) Number of Reporting Establishments (ii) Value of Production (iii) Industrial Cost (iv) Census Value Addition (v) Value of Fixed Assets (vi) Average Daily Person Engaged.

13. MANUFACTURING

13.1   Quantum Index Numbers of Large-Scale Manufacturing Industries

Year	Over all Manufac-turing	Selected Items									
		Vegetable Products	Tea Blended	Cigare-ttes	Cotton Yarn	Cotton Cloth	Jute Goods	Paper & Board	Fertilizers	Cement	Auto-mobiles
					(2005-06=100)						
2005-06	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00
2006-07	109.48	102.45	96.14	102.87	111.73	108.18	112.97	97.40	97.24	122.49	106.88
2007-08	116.06	98.73	108.62	105.16	114.46	112.46	123.47	92.46	100.43	144.10	107.34
2008-09	109.14	92.07	103.33	117.89	114.41	112.52	131.49	92.82	102.02	152.88	70.56
2009-10	109.55	93.34	100.61	101.80	109.46	111.69	101.67	94.05	105.67	168.92	95.41
2010-11	111.14	94.81	103.43	101.97	115.43	112.89	89.16	95.79	96.29	154.69	103.80
2011-12	112.44	95.76	118.91	96.60	116.03	113.23	90.03	116.64	96.37	159.22	107.31
2012-13	117.35	98.88	141.83	105.05	120.16	113.86	98.39	135.35	92.49	167.29	93.54
2013-14	123.68	102.92	160.00	100.54	130.52	114.64	97.34	150.82	107.75	169.24	91.15

Note: The indices are base on 112 items with base year 2005-06.

QUANTUM INDEX OF LARGE SCALE
MANUFACTURING IINDUSTRIES

Over all Manufacturing
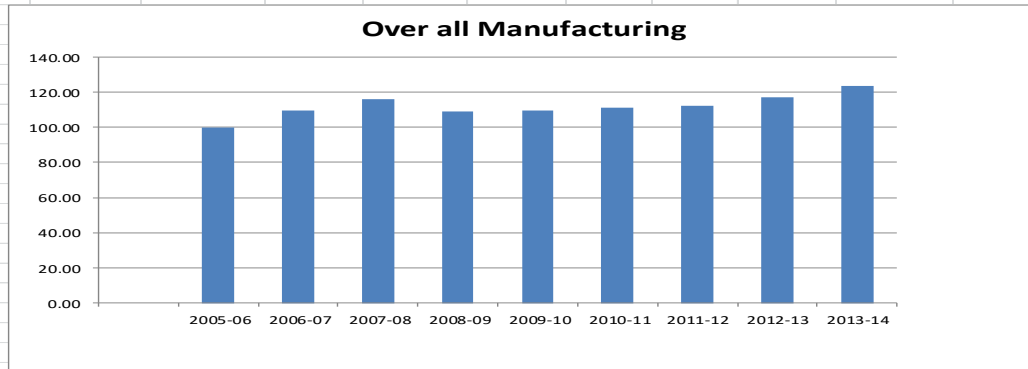
14. MONEY & CREDIT

14.1   State Bank of Pakistan-assets of issue department: (Table 14.1) The figures relating to assets of the State Bank of Pakistan are based on the statutory weekly statement of affairs of the issue department. The table provides information in respect of foreign assets, domestic assets, and assets held with Reserve Bank of India. Foreign assets include gold, approved foreign exchange and Government of India notes. Domestic assets include Government of Pakistan securities and coin rupees, internal B.E. and commercial paper.

14.2   State Bank of Pakistan-liabilities and assets of the banking department: (Table 14.2) The figures relating to assets and liabilities of the State Bank of Pakistan presented in this table are based on the statutory weekly statement of affairs of the banking department in pursuance of Section 40 (i) of the State Bank of Pakistan Act, 1956. The Table provides information in respect of liabilities including deposits of Federal government, Provincial governments, banks and other liabilities and assets including notes, government debtor balance, loans and advances, investment, balance held outside Pakistan and other assets.

14.3   Scheduled Banks-Pakistani and Foreign: (Table 14.3) The table   provides information in respect of number of scheduled banks, both Pakistani and foreign, working in Pakistan with their branches.

14.4   Consolidated position of Scheduled Banks-selected items: (Table 14.4) Scheduled Bank is a bank having paid-up capital and reserves of Rs. 5 lakhs or more and declared to be as such under Section 37 (2) (a) of the State Bank of Pakistan, Acts 1956. To meet statutory requirements, schedule banks submit to the State Bank of Pakistan a weekly statement of their important assets and liabilities, as on Saturday, which is released to the press by the State Bank of Pakistan in a consolidated form. Data presented in Table 8.4 have been derived from the weekly statements.

14.5   Classification of scheduled banks advances by economic group borrowers:(Table 14.5) Table 14.5 provides information on scheduled banks advances by economic group borrowers from 1988 onwards.

14.6   Monetary Statistics: (Table 14.6) These statistics are derived from monthly bulletin of the State Bank of Pakistan. Monetary assets include (i) currency in circulation (ii) demand and time deposits of scheduled banks (iii) other deposits with State Bank of Pakistan and Resident Foreign Currency deposits. Scheduled banks demand and time liabilities exclude inter bank borrowings and inter bank deposits and deposits of central and provincial governments and foreign constituents. Other deposits with State Bank of Pakistan exclude counterpart fund, deposits of foreign central banks, foreign government and international organizations. As from July, 1980 the computation of monetary assets is being made on IMF basis. The revised definition of monetary assets conforms to the concept of domestic liquidity as used by the IMF.

14.7   Bank credit to private and public sector: (Table 14.7) The data presented in this table is annually received from State Bank of Pakistan and indicates the loans advanced to private and public sectors separately by the banks. Total bank credit includes scheduled banks advances (excluding inter banks advances but including foreign currency loans of ADBP and IDBP) and bills purchased and discounted. Public sector refers to the advances given by scheduled banks to government for financing commodity operations.

14.8   Gross/net Investment in National Savings Schemes (Table 14.8)   National Saving Scheme at present in operation include Saving Certificates, Saving Accounts, Prize Bonds and Postal Life Insurance.

14.9   Clearing house returns: (Table 14.9) Data on clearing house returns show the total amount of cheques passed through the clearing houses at different cities of Pakistan.

14.10 Loans sanctioned and disbursed by House Building Finance Corporation:(Table14.10) The Table shows the number of loans and the amount sanctioned by House Building Finance Corporation. These loans are extended by Corporation for the construction/ purchase of low, medium and upper cost residential houses. Maximum limit of the amount of loan sanctioned is upto Rs.20,00,00/-. The table also shows the total amount disbursed against the loans for the corresponding period on Pakistan basis which also includes Azad Kashmir and Northern Areas.

14.11 Loans disbursed by the Zarai Taraqiati Bank Limited:(Table 14.11) This table provides statistics on net amount of loans by type provided to the agriculturists for agricultural purposes as indicated below:-

    i)   **Short term loan** is sanctioned for a period of 18 months or less and is intended to meet seasonal agricultural requirements like seeds, fertilizer and labour, etc.

    ii)   **Medium term loan** is sanctioned for a period exceeding 18 months but less than or equal to 5 years and is intended to meet purchase of seasonal inputs those of small farm equipments, e.g. boats, plough, etc.

    ii)   **Long term loan** is given for the period exceeding five years, for development needs of agricultural items e.g. tractors, tube wells, power pumps, etc; and those of cottage industry, fisheries, orchards, etc.

15. NATIONAL ACCOUNTS

A)   Gross Domestic Product (GDP)

15.1   GDP in Pakistan is estimated as per guidelines provided by the System of National Accounts(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 economic sectors.

> **a)   Production Sectors**
> > **i)   Agriculture**
> > > **a)   Major Crops**
> > > **b)   Minor Crops**
> > > **c)   Livestock**
> > > **d)   Fishing**
> > > **e)   Forestry**
> > **ii) Industry**
> > > **a)   Mining & Quarrying**
> > > **b)   Manufacturing**
> > > > **- Large-Scale**
> > > > **- Small-Scale**
> > > > **- Slaughtering**
> > > **c)   Construction**
> > > **d)   Electricity and Gas Distribution**
>
> **b)   Services Sectors**
> > **a)   Transport, Storage & Communication**
> > **b)   Wholesale & Retail Trade**
> > **c)   Finance and Insurance**
> > **d)   Ownership of Dwellings**
> > **e)   Public Administration & Defence**
> > **f)   Community, Social & Personal Services**

15.2   GDP is also sub-classified according to expenditure approach comprising the following elements:
> **a)   Private Final Consumption Expenditure**
> **b)   Government Final Consumption Expenditure**
> **c)   Gross Fixed Capital Formation**
> **d)   Change in Stocks**
> **e)   Exports of Goods & Services and**
> **f)   Imports of Goods & Services**

SECTORAL ESTIMATES OF GDP/GNP

15.3   GDP from production side 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, transport, storage & communication, wholesale & retail trade, finance and insurance, and ownership of dwellings whereas income method is used to work out income accruing from 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.

15.4   The coverage, nature and sources of data used and the methodology followed in compilation of these estimates are explained under respective sectors.

Agriculture

15.5   Agricultural sector covers the activities of growing of crops, fruits & vegetables, harvesting & threshing, growing of trees & logging, fishing, breeding and rearing of animals and poultry, production of milk, eggs, dung, raw wool etc. For the purposes of computation of value added estimates, the sector has been divided in to the following four sub-sectors.

> **i) Crops**
> **ii) Livestock**
> **iii) Fishery**
> **iv) Forestry**

Crops

15.6   The contribution to the Gross Domestic Product (GDP) of agricultural crops has been estimated through product approach. It involves estimation of gross value of products and by-products, estimation of inputs like seed, fertilizer, pesticides, water and cost incurred on ploughing & planking and transport cost on intermediate inputs.

15.7   Gross Output and Valuation of Crops: The production estimates of major and minor crops are obtained from the Provincial Departments of Agriculture, Crop Reporting Services that are coordinated in Pakistan Bureau of Statistics and released by the Ministry of Food and Agriculture. The estimated output of by-products of major crops is obtained as percentages of the respective crops products collected as subsidiary information through objective crop cutting surveys supplied by Provincial Directorates of Agriculture and Directorates of Crop Reporting Services. The corresponding harvest prices have been obtained from the Provincial Departments of Agriculture, Department of Agriculture Extension, Directorate of Crop Reporting Services, Provincial Economic and Marketing

Departments. For some of minor crops, where no harvest prices from any source were available, wholesale prices compiled and issued by Agricultural and Livestock Marketing & Grading Department and Provincial Departments of Economics and Marketing have been used after netting out the effect of trade and transport margins. Trade and transport margins are based on the Study on Wholesale and Retail Trade 1999-2000.

15.8 The revised-base Gross Value Added (GVA) has been computed on the basis of enlarged coverage and improved methodology. A number of vegetables and fruits have been added to the output which was not accounted for in the earlier bench mark series. The valuation of flowers and foliage is also estimated and included in the estimates of crops sector; the data have been made available by the Provincial Agriculture Departments.

15.9 The gross value of crops and their by-products is based on province-wise production of crops multiplied by the corresponding harvest prices. In case of wheat and sugarcane, procurement prices have been used for the part of production procured by federal and provincial governments or sold directly to mill sector on government fixed prices.

15.10 Intermediate Inputs: The detailed discussion on the sources and methodology used for estimation of intermediate inputs is as under.

    a) **Seed: The value of seed is worked out on the basis of crop-wise area sown in each province and per acre use of seed. The seed rates have been compiled on the basis of information made available by the Provincial Departments of Agriculture and Agriculture Extension, Crops Reporting Services, Agriculture Price Commission and Agriculture Seeds and Supplies Corporation. The quantity of seed by crops so derived has been multiplied by the corresponding prices. PBS has collected the prices from the Provincial Agriculture Departments, Provincial Economics and Marketing Departments, Departments of Crop Reporting Services. For the certified seed, data of Federal Seed Certification and Registration Department have been used. For wheat, rice, cotton and sugarcane the information contained in the reports of Agriculture Prices Commission have been utilized. For the minor crops valuation of seed has been estimated on Pakistan basis.**

    b) **Fertilizer: The value of off-take of fertilizer has been estimated on the basis of data on variety-wise quantity and value of fertilizer sold to the farmers. The National Fertilizer Development Centre (Planning and Development Division), Department of Fertilizer Imports (Ministry of Food and Agriculture), Fertilizer Development Cell, Agriculture Seed and Supplies Corporation, Provincial Bureaus of Statistics, have supplied the information on sale, stock and consumption of fertilizer. The information on off take/consumption of fertilizer in product tonnes and nutrient tonnes, and its value have been compiled on provincial basis by source of availability. The new benchmark estimates have been obtained from National**

Fertilizer   Development   Centre,   which they have worked out for each item separately.

c) **Pesticides: The cost incurred on plant protection has been estimated on the basis of actual sale of various types of pesticides and insecticides to the farmers. The data on the quantity and value are supplied by Department of Plant Protection, Government of Pakistan and Pakistan Agricultural Pesticides Association.**

d) **Water: The cost of water has been estimated separately for canal water and tube well water. Canal water data have been obtained from Indus River System Authority (IRSA), Ministry of Water and Power; Agriculture Water Management Department Punjab; Irrigation and Power Department, Sindh; Provincial Agriculture Departments of NWFP and Baluchistan; Agriculture Prices Commission, Ministry of Food and Agriculture. Data/Information available with**

e) **Provincial Boards of Revenue, and WAPDA was also reviewed for reconciliation of the data between the different sources.**

f) **Cost of ploughing and planking: The cost of ploughing and planking through tractor and animals (draught power) has been estimated on the basis of per acre cost by crops derived from the Study on Agriculture conducted by FBS and different studies conducted by Agricultural Prices Commission. Due to non-availability of appropriate data on ploughing and planking for minor crops, average cost per hectare of all major crops has been used.**

Livestock

15.11 The livestock sub-sector includes the value of livestock products and the value of draught power.

     The sub-sector has been divided in to the following broad categories.

     i. **Net sale of animals (for slaughtering)**
     ii. **Natural growth of animals**
     iii. **Livestock Products**
         a. **Milk Production**
         b. **Draught Power**
         c. **Dung and Urine**
         d. **Wool and Hairs**
     iv. **Poultry Products**

     The data have been taken from Ministry of Livestock and Dairy Development.

Valuation of Livestock Products

15.12 Each item has been valued separately. The gross output of the livestock sub-sector is valued at producers' prices and is equivalent to the total production of the livestock products multiplied by their respective prices.

15.13 Net Sales of Animals: The net sales were previously ignored in the livestock but presently these are being incorporated as per 1993 SNA recommendation. Following estimation procedure has been adopted to arrive at the final figures of net sales:

Net Sales = Sale of animals - Purchase of animals in livestock activity = Sale for slaughtering

15.14 Natural Growth of Animals: The animals in livestock are divided as under, according to their age specific groups:

    a) **Adult**
    b) **Young Males and Females**

      As the adult are concerned they make part of work in progress and their value is accordingly imputed in net sale. For few categories, young males and females having age up to three years are taken as part of natural growth. Generally the animals, which are of age one year and below, have been taken as a part of natural growth.

15.15 Livestock Products: For the valuation of milk, dung & urine, wool & hairs, the quantities have been taken from Ministry of Food and Agriculture and Livestock Division, whereas the prices have been taken from Agricultural and Livestock Products Marketing and Grading Department.

15.16 Poultry and Poultry Product: Number of birds and eggs has been taken from Food, Agriculture and Livestock Division. Prices are taken from Agricultural and Livestock Products Marketing and Grading Department. Prices for chicks and other inputs have been collected from Poultry Research Institute (PRI).

15.17 Draught Power: Draught power has been subject to decreasing trend due to mechanization of agriculture sector and replacement of non-mechanized road transport with light transport vehicles like Auto Rickshaws and Motor Cycle Rickshaws. However the use of animal for ploughing and planking is in practice. The estimate of services of draught power has been developed by comparing the output with the equivalent work done by mechanized power.

15.18 Intermediate Inputs: The inputs of livestock are mainly derived from Agriculture sector. Emphasis on better rearing and catering, intensive use of medicines and health care services, and commercialization of dairy farming has led to diversification of input structure. The shift-in farming structure has brought about the use of expensive fodder and other inputs. For the intermediate consumption, green & dry fodder, medical care,

transportation, interest, value of chicks, poultry feed etc. have been taken into consideration.

Fishery

15.19 The fishing activities cover commercial and subsistence fishing in ocean, coastal and offshore waters and inland waters. This includes catching, tackling and gathering of fish from rivers, canals, lakes, fish farms, ponds and inundated tracts.

15.20 Output: The data on quantity and value of commercial and subsistence fishing (inland and marine) have been obtained from Marine Fisheries Department, Ministry of Food & Agriculture, and from the Provincial Fisheries Departments. The value of marine fish catch is reduced by 6.5 percent for auction charges so as to arrive at the value at factor cost. The auction value of inland fish is doubled to cover the underreporting in inland

fishing as recommended by Kazi Committee constituted for improvement of National Accounts of Pakistan. The doubling of inland fish demands an objective estimate. The estimates are based on annual catch of inland and marine fishing and their respective base year prices.

15.21 Inputs: The use of 36 percent as input cost for marine fishing has been continued. This provides basis for estimation of GVA at constant factor cost. The value at current factor cost is derived from the current data on quantity and value of fish-catch. The cost of inputs at 16 percent, due to fish farming, have been used for inland fishing as recommended by the FBS inland fishing survey.

Forestry

15.22 The Forestry sub-sector covers the activities of logging and gathering of uncultivated forest products, which are classified into two large groups.

   a) **Major products comprising industrial wood such as timber and firewood.**
   b) **Minor forest products including a large number of heterogeneous items such as ephedra, grazing, resin, medicinal herbs etc.**

15.23 In minor forest products only resin is gathered by the Forest Department, other forest products are gathered by the local population and sold in the market.

15.24 Estimates of Gross Value Added

   i. **Timber: The estimates of timber have been developed from the consumption side. In this exercise 35 percent is used as trade and transport margin to convert the purchasers' prices into producer's price. 25 percent is deducted for smuggling. 25 percent input costs have been taken in respect of timber and firewood.**

ii. **Firewood: The major user of firewood is household sector. Firewood is also used in large and small scale manufacturing sectors. The estimates of firewood have been developed from the consumption side taking all possible care of avoiding double counting and in line with the recommendations of 1993 SNA. The value of firewood used by households has been checked from expenditure approach from the results of Household Integrated Economic Survey for 1998-99.**

iii. **Minor Products of Forests: For the minor products, the estimates have been prepared using the results of the Study on Forestry 1999-2000.**

Mining and Quarrying

15.25 The value added in the mineral sector is concentrated in three principal minerals, i.e. coal, natural gas and crude oil. The value added estimates for bench mark year 1999-2000 and for onward estimates, the mining and quarrying sector has been classified according to ISIC Rev 3.1 and PSIC. The composing elements of the sector are as under:

   a) **Coal Mining**
   b) **Crude Oil Mining**
   c) **Natural Gas Mining**
   d) **Other Minerals**
   e) **Surface Minerals**
   f) **Allied Services**

15.26 Product approach is used for estimating the value added in coal, crude oil, natural gas, other minerals & surface minerals and allied services establishments. For the year 1999-2000 and onward, the separate input cost ratios of mineral items, surface minerals and allied services have been calculated. For the purpose of estimates, gross output is calculated at producers' prices for each mineral category and intermediate cost at purchasers' prices.

Manufacturing

15.27 The manufacturing sector comprises of following three sub sectors:

   i. **Large Scale Manufacturing**
   ii. **Small Scale Manufacturing**
   iii. **Slaughtering**

i) **Large Scale Manufacturing Industries (LSMI)**

Large Scale Manufacturing covers the establishments registered under Section 2 (j) and 5 (i) of the Factories Act, 1934, whereas Small Scale Manufacturing includes all such manufacturing establishments not covered there under. Section 2 (j) refers to the factories which employ 20 or more workers on any working day during the year and use power in their manufacturing operation. Section 5 (i) pertains to factories wherein a manufacturing process is carried on or ordinarily carried on whether with or without the use of power wherein ten or more workers are working there in or have worked there on any day of the 12 months immediately preceding.

There are two sources of data on large scale manufacturing. One is the Census of Manufacturing Industries (CMI) and the other is Quantum Index of Manufacturing (QIM). The Census of Manufacturing Industries is conducted on quinquennial basis and has been used to derive the base year estimates (1999-2000). Due to financial constraints, CMI cannot be undertaken every year; therefore for extrapolation an indirect method is

presently being used to project the year to year value added at constant prices (factor cost) on the basis of QIM. The estimates at constant factor cost are converted into current factor cost by applying a specifically constructed Inflator (Producers' Prices Index) which covers the items of manufacturing and their respective weights. In the absence of any reliable data on depreciation, a flat rate of 7.50 percent of gross fixed capital formation is applied to arrive at net value added.

ii) **Small Scale Manufacturing**

The estimates for the base year 1999-2000 are based on the findings of the Study on Small Scale and Household Manufacturing Industries in Pakistan conducted by Quaidian Economic Consultants, Quaid-e-Azam University, Islamabad for change of base of National Accounts. For subsequent years a fixed growth rates of 7.51 percent is applied as per recommendation of the study until a new survey is undertaken to authenticate the growth rate. The estimates at constant factor cost are converted into current factor cost by applying a specifically constructed Inflator (Producers' prices Index) which covers the items of manufacturing and their respective weights. In the absence of any reliable data on depreciation, a flat rate of 4.5 percent of gross fixed capital formation is applied to arrive at net value added.

iii) **Slaughtering**

According to the latest classification the slaughtering industry relates to manufacturing whereas the livestock is a part of agriculture sector. The products i.e., meat, hides, skins, bones and blood etc. constitute slaughtering. Quantities of beef, mutton and poultry meat have been taken from the published data of Ministry of Food and Agriculture (Agricultural Statistics of Pakistan). Data on net sale of animals in the livestock sub-sector is taken as input for slaughtering. Number of animals, sold for slaughtering is provided by Livestock Division. The output of slaughtering sub-sector consists of meat and by-products like fats, hides/skins, bones, blood, edible offals etc. Prices of livestock and livestock

products are based on survey data and   prices made available from Department of Marketing & Grading. The value added in slaughtering industry has been derived by product approach. For the estimation of poultry meat, data in terms of quantity and prices of meat have been obtained from the Poultry Research Institute and Livestock Division. The prices of output and some inputs used in estimates are recorded in major cities of Pakistan by the Department of Marketing & Grading.

The bench mark estimates for 1999-2000 have been derived from the results of Study on Slaughtering Industry conducted for the change of base of National Accounts. For subsequent years the estimates are extrapolated by applying the growth rate of meat which is supplied by the Ministry of Livestock and Dairy Development Division. The estimates are converted into current factor cost by applying the specifically constructed inflator (PPI) which covers the items of meat & chicken & their respective weights.

Construction

15.28 This sector covers land improvement and construction of all type of buildings, roads, bridges, railway lines, utility lines (telecommunication lines, power lines, pipe lines) waterways, dams as well as repairs and maintenance of such infrastructure. The estimates of the sector have been developed on the basis of the expenditure, incurred by the establishments undertaking the construction or the contractors or the sub-contractors purchasing the construction material.

15.29 The data on expenditure on construction of these activities have been obtained from data set of GFCF of all sectors of economy by applying commodity flow approach. The input structure and the coefficients of the value added components have been used to derive the GVA of all activities of construction separately provided by the Study on Construction 1999-2000 has been applied. The coefficient of Gross Value Added are based on data collected from concerned agencies such as WAPDA, CAA, Railways, PWD, KPT, KDA, Irrigation Departments, Development Authorities and Construction Companies. PPI of construction material applied to convert these estimates into constant price figures.

Electricity, Gas and Water Supply

15.30 This sector covers the whole range of electricity generation, transmission, distribution and gas transmission & distribution. Moreover, according to SNA-1993 classification, water works and supply is also covered in this sector. Following is the sub-classification and coverage of the sector:

   i.   Electricity transmission and distribution by WAPDA & KESC and generation by:

        a. WAPDA, KESC, KANUPP,
        b. Independent power plants (IPPs)
        c. Captive power plants (CPPs)
        d. Small hydel power units

ii.   Gas transmission and distribution

iii.   Water works & supply

i.   Electricity generation, transmission and distribution

15.31   Water & Power Development Authority (WAPDA) and the Karachi Electric Supply Corporation (KESC) are the biggest sources of energy generation and distribution. Pakistani as well as multinational companies also work as Independent Power Plants (IPPs) units under the license by the Government of Pakistan. The IPP units generate electricity and sell their product to WAPDA and KESC, which distribute with their networks. The small hydel dams/micro hydel projects are situated in NWFP. These units are covered for the first time in the national accounts estimates.

ii.   Gas transmission and distribution

15.32   The activities in the Gas Sub-sector are the transmission and distribution of the natural gas. For the existing estimates the data is collected from Sui Northern Gas Pipelines Limited (SNGP), Sui Southern Gas Company Limited (SSGC). Up till now these two companies were considered as the sole distributors of the natural Gas. Oil & Gas Development Company Limited (OGDCL), Mari Gas Company Limited and Pakistan Petroleum Limited (PPL) have been included in the estimates as they are selling some of their output directly to industries using gas as bulk users..

iii.   Water works &Supply:

15.33   For the purpose of Value Added estimates, the sub-sector has been divided into three parts.

> a) **Irrigation Water (Canal and Tube well water)**
> b) **Domestic Water (For household consumption)**
> c) **Commercial/Industrial Water**

15.34   The estimates of gross value valued added for bench mark year 1999-2000 are based on the results of Study on Water conducted by FBS. For subsequent years value added is calculated for each part separately, which is aggregated to derive the estimates of the sub-sector. The value of irrigation water used as intermediate consumption in crops is assumed as value added of irrigation water (Canal and Tube well water). The value added of domestic and commercial/industrial water is estimated on the basis of growth of ownership of dwelling and large scale manufacturing respectively.

Transport, Storage and Communications

15.35   The economic activities covered are transportation by Pakistan Railways, Water transport (Coastal, Ocean & inland), Air transport, Oil Pipeline Transport, Road

Transport (Mechanized & Nonmechanized), Storage and Communication Services rendered by Pakistan Post Office, Courier Services, Telecom companies/Corporations, Internet Services Providers, Mobile phone companies and Public Call Offices. The estimates of value added are measured through production approach. The requisite data is collected from source agencies. The estimates of mechanized road transport are based on survey conducted in major cities and Study on Intercity Transport, while the estimates of non-mechanized road transport are based on the data collected from town committees. Initially the estimates are derived in current factor cost. The current factor cost estimates are converted into constant by applying unit value indices of passenger & tonnage kilometer for Railways, passenger and tonnage kilometer for air transport and cargo handled at sea ports for water transport. Federal Bureau of Statistics collects data from all source agencies. Similarly unit value indices of postal and telecommunication services are prepared and applied.

15.36 To prepare the estimates on Transport and Communication in accordance with latest accounting framework, studies were conducted on intercity road transport, freight container services, travel agents, courier services & inland water transport and shipping, clearing & forwarding agents. The report on intercity road transport was discussed and finalized with the assistance of the experts of National Transport Research Centre (NTRC). A survey was conducted to determine GVA per boat in different areas of the country and the findings have been applied to the inland water transport sub-sector. Un-registered part of non-mechanized road transport has been adjusted according to the number of animals of respective categories.

Wholesale and Retail Trade

15.37 The activities included in this sector are:

  a) Wholesale and retail trade including imports
  b) Purchase & sale agents and brokers
  c) Auctioning
  d) Hotels and restaurants

15.38 The study on wholesale and retail trade, hotel and restaurants conducted for the bench mark year 1999-2000 have provided complete data set for bench mark estimates and trade margins and marketable surplus by commodity and imports for estimation of subsequent year's value added. The trade margins provided in the study are exclusive of transport margins and calculated on the gross value of commodities except large and small scale manufacturing sub-sectors, which are based on gross value added due to non-availability of gross value of industrial output. This estimation approach provided marketable surplus and trade mark-ups for the estimates. The study has provided separate data and estimates for hotels and restaurants sub-sector, which were incorporated in the sector for overall value added.

Finance and Insurance

15.39 This sector consists of the following sub-sectors

     i.   **State Bank of Pakistan**
    ii.   **Other Depository Corporations**
   iii.   **Other Financial Intermediaries**
   iv.   **Insurance Corporations and pension funds**

i. State Bank of Pakistan

This sub-sector consists of the central bank. The data on different components of output, inputs, wages & salaries, depreciation and GFCF has been collected from the State Bank of Pakistan. The gross value added of State Bank of Pakistan has been compiled using production approach. Intermediate consumption includes expenditures incurred on stationery, printing, utility bills, rental and maintenance of premises, running of vehicles, bank charges, legal and auditing fee, insurance etc. The data on current factor cost supplied by source agency provide basis for estimation in nominal values. In order to compute constant cost estimates, CPI has been applied.

ii. Other Depository Corporation

This subsector consists of deposit money corporations and others. The Deposit Money Corporations consist of Nationalized Pakistani Banks, Private Pakistani Commercial Banks, Specialized Pakistani Banks and Foreign Commercial Banks. The others consist of Cooperative Banks, Development Financial Institutions (DFIs), Investment Banks and Leasing Companies. The finance sector is one of the well established sector and all the banks, DFIs, leasing companies provide complete data on their output, intermediate cost, wages & salaries, depreciation and GFCF. Annual reports of all the institutions are also obtained to fill up the data gaps if any and or as alternate source for estimation of the gross value added where data has not been received. Production approach is applied in the sector.

iii. Other Financial Intermediaries

The institutions included in other Financial Intermediaries are Discount & guarantee houses, Housing Finance Companies, Venture Capital Companies, Investment Companies, Modaraba Companies, Exchange Companies (Money Changers) and Mutual Fund Companies etc. In Pakistan most of these companies are privately operated. For the collection of data through all the institutions covered in Other financial Intermediaries, National Accounts, FBS launches a regular survey through mail on a prescribed questionnaire. Annual/quarterly reports are also obtained from the institutions. The

estimates of Gross Value Added in this sub-   sector are compiled on the same lines and approach as used for State Bank of Pakistan and Other Depository Corporations.

iv. Insurance Corporations and Pension Funds

Insurance companies are generally incorporated entities and provide life, accident, sickness, fire, casualty or other forms of insurances. Data regarding the balance sheet, the revenue and profit and loss accounts available from the annual reports of the insurance companies coupled with data collected through survey mail enquiries have been used for preparation of the GVA. The estimates of GVA of Employees Old-Age Benefit Institution (EOBI) have also been included in this sub-sector. The gross value added EOBI has been calculated adding wages & salaries and depreciation. This institution is working as a government welfare department. The data on Postal Life Insurance has also been collected and included in the sub-sector.

Ownership of Dwellings

15.40 According to the international recommendations and practices the estimates of value added in this sector are measured by the rent accruing from ownership of dwellings rented as well as of self-occupied. This requires cumulative increase of houses and their respective rent. To prepare estimates of value added, the number of occupied privately owned houses in urban and rural areas has been taken from the Housing Census, 1998. The estimates of annual average rentals for urban and rural areas have been derived from the rent survey of 1998 conducted by PBS. As no data was available for the bench mark year 1999-2000, the results of the Housing Census been inflated by the annual geometric growth between the Housing Census 1998 and the earlier Housing Census, same methodology has been applied on FBS survey. The intermediate consumption by the type of houses has been estimated through special survey undertaken by National Accounts in August 2002. For the subsequent years, the GVA at constant factor cost has been estimated on the basis of extrapolation of base year estimation by the incremental growth of houses during the respective year.

Public Administration and Defense

15.41 National Accounts estimates on General Government are based on wages & salaries and other compensations in cash and kind of government employees. The data is provided in detail in budgets under current expenditure (non-development) and development expenditure heads. These are regularly published by Federal, Provincial and District Government, Tehsil Municipal Administration (TMAs) and Cantonment boards in their budgets. As per new reclassification in line with System of National Accounts 1993, Pension, uniforms and liveries, bonus and cash awards for meritorious services have been valued and included in estimates of wages and salaries. Depreciation at rate of 5 percent on gross fixed capital formation (GFCF) is added in the estimates to work out the gross value added of the sector. Consumer Price Index has been applied on gross value added at current factor cost to derive estimates at constant factor cost.

Social, Community and Personal Services

15.42 Income approach has been applied to estimate the contribution of services sector in national economy which involves collection of data on number of service establishments

classified by type of service and data on   components of value added. Income arising in the Social Community & Personal Services sector consists of persons engaged in business; private education; health & social work; community, social & personal services; recreational & cultural services; private household employees etc.

15.43 FBS had carried out a Study on Community, Social, Personal and New Emerging Services in Pakistan in March 2001 for the rebasing of National Account for the year 1999-2000. The study has covered all the important service establishments namely computer and related institutions, business, education, medical & health, advertising, accounting, auditing & book keeping and recreational services which provide valuable data on various components on per worker value added. The persons employed in services sector by occupational group had been derived from the tabulation of Population Census 1998.

15.44 To compute the value added estimates for subsequent years, as per recommendation of study an indicator based on bench mark value added coefficient of each service category has been developed. For extrapolation of next year estimates annual change in size of employment in each number of service categories has been applied. Data on employment, number of enrolment in education, registered medical practitioners and paramedical staff, and change in membership of sports and other activities is annually collected from the service establishments and organization. In the absence of any reliable annual information on the activities of private household employees in the sector, annual growth of population is being used. CPI general is being used as deflator to derive the estimates at current factor cost.

B) ESTIMATION OF EXPENDITURE ON GNP

15.45 Gross National Product (GNP) viewed from the expenditure side is the sum of the value of final uses of goods and non-factor services measured in purchasers value less the c.i.f. value of imports of goods and services. The equation of the expenditure on GNP is under:

GNP (Expenditure) = C + G + K + S + X − M + R

Where C is private consumption expenditure
G is government final consumption expenditure
K is gross fixed capital formation (GFCF)
S is change in inventories (stocks)
X is export of goods and services
M is imports of goods and services
R is net factor income from rest of the world

PRIVATE CONSUMPTION

15.46 The aggregate comprises value of final consumption of goods & services of households and private non-profit institutions serving households (NPISHs). It is made up of outlays on new durable and non-durable goods & services reduced by net sales of second

hand goods, scraps and wastes estimated at   purchaser's value. It is measured either through commodity flow approach or on the basis of data of Household Integrated Economic Survey (HIES). At present owing to insufficient data required for commodity flow approach, it is derived as the residual of the GNP.

GENERAL GOVERNMENT CONSUMPTION

15.47   Government consumption is the output of the government which is not sold on the market. The activities of the government are classified into two distinct categories, first as administrative (non-market) and second as enterprise. The activities of the government which are purely of administrative nature are termed as general government consumption. It measures the current expenditure on goods and services incurred by the federal,

provincial and districts governments, tehsil municipal administrations and cantonment boards. It comprises compensation of employees including pensions and intermediate consumption from enterprises and the rest of the world. A deduction is made on account of sales of goods & services, other than surplus stores, to enterprises and households. Sales of surplus stores are treated as a decrease in government consumption. To bring the estimates at constant prices the component of compensation of employees is deflated by CPI whereas wholesale price index (WPI) is used to deflate the intermediate consumption.

APPROACHES FOR GROSS FIXED CAPITAL FORMATION (GFCF)

15.48   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 equipments and furniture and fixture. Estimates of investment are computed by a combination of approaches i.e. commodity flow, expenditure (survey method) and financial.

> Commodity flow approach 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 and
> 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) **Ownership of dwellings**
vi) **Banking & insurance**
vii) **Real estate and**
viii) **Other services.**

Financial approach is used to estimate GFCF in under construction of scale manufacturing.

i) **Large Scale Manufacturing establishment.**
ii) **Live Stock farming, farm poultry & fishing supplemented by the survey method.**

15.49 Sector wise methodology is presented below.

Agriculture

15.50 Main components of private investment in agriculture sector are:

i. **Imports and domestic production of agricultural machinery**
ii. **Tube wells (electric and diesel) installed**
iii. **Land improvement**
iv. **Farms buildings and sheds**
v. **Wells and bundats**
vi. **Farm transport**
vii. **Water courses**
viii. **Orchards and**
ix. **Non-monetized investment.**
x. **Cultivated assets**

15.51 To estimate investment expenditure on farm machinery and implements, the "commodity flow approach" is applied, using net availability of agricultural machinery and implements, adjusted for imports and exports. Trade Margins on imported machinery & equipment and domestic production are taken from study of Wholesale & Retail Trade 1999-2000. Handling charges @ 3 percent have been applied total value of imports (inclusive of all taxes). Trade margins are also based on Study of Wholesale and Retail Trade 1999-2000. Based on survey result of study a flat rate of 43.7 percent of total (other) monetized investment has been taken for non-monetized investment.

Crops

15.52   The estimates of GFCF for agriculture crops sub-sector are separately prepared for private and public sectors. The public sector estimates are based on data supplied by the public sector organizations.

The estimates for household and private corporate sectors have been reviewed in light of System of National Accounts (SNA 1993). Data on land improvement, farm buildings & sheds, wells & bundats, farm transport, water courses and orchards have been taken from

Agriculture Census 2000 and the investment in non-monetized is taken from Study on Agriculture 1999-2000 undertaken by National Accounts, FBS.

Livestock

15.53   In livestock, the animals not yet ready for sale or delivery, are recorded as work in progress. However, when animals intended to be used as fixed assets, they are produced on account by farmers or others, even though they are immature (not ready to be used in production) are treated as gross fixed capital formation. Gross fixed capital formation in livestock is measured by the value of acquisitions less disposals, taking account of treatment as described above. It is, therefore, equal to the total value of all mature and immature animals produced on own account acquired by users of the livestock less the value of their disposals. Disposals consist of animals sold or otherwise disposed of including those sold for slaughter, plus those animals slaughtered by their owners. The investment on cultivated assets of livestock has been estimated using data supplied by Ministry of Livestock and Dairy Development.

Fishery

15.54   Purchase of fishing crafts and construction of fishing harbor facilities are the two major components of fixed capital formation in fishing sub-sector. Investment in fishing crafts and other accessories is made by the private sector, while physical infrastructure for marine fisheries is developed and managed by the fish harbor authorities in the public sector. As regards inland fisheries, investment in hatcheries takes place in public sector, while those in fish farm, ponds and boats, it is made by individual framers and households.

15.55   For the estimates of bench mark year 1999-200 (marine and inland) the purchase of fishing crafts and other accessories and construction and major repair of fish harbours and fishing docks facilities accounted for major portion of fixed investment in fishing sub-sector. For subsequent year's estimation or extrapolation data on increase in number of fishing crafts, purchase of fishing gears and other components during the year (and prices of few items) is collected from Karachi Fisheries Harbour Authority, Marine Fishing Department, Fishing Trawlers operators Association, Ministry of Food and Agriculture

(Agriculture Statistics – Annual), and Provincial Fisheries Departments. Value of fixed assets created as allied services by Fishermen's Cooperative Society, etc. is also added.

Forestry

15.56 Gross fixed capital formation in forestry sub-sector cover construction work and expenditure on regeneration and aforestation, access roads, watershed works, national parks, games sanctuaries and conservation of wild life. The equipments includes office equipments, cutting and sawing tools, fire fighting and photographic equipments and others used for loading, unloading and transportation of logs.

15.57 Data on investment expenditure for the estimates of bench mark year 1999-2000 is based on the survey conducted for special study on 'Forestry' by Quaidian Economic

Consultants, Quaid-e-Azam University, Islamabad for PBS. For estimation of investment expenditures in subsequent years, data is being collected from the office of Inspector General of Forests, Provincial Chief Conservators of Forests (through Divisional Forests Officers) and Provincial Forests Department. Reports and research of Pakistan Institute of Forests are also consulted where desired. Data is being collected by category of forests and area under thereof.

Mining and Quarrying

15.58 Gross Fixed Capital Formation (GFCF) in the Mining and Quarrying sector has been estimated as per study on Mining and Quarrying conducted by FBS in 2001. Moreover, information on GFCF has also been used from Census of Mining Industries 1999-2000. Acquisition of capital assets less disposal of assets is recorded as Gross Fixed Capital Formation. GFCF is being calculated on the basis of information supplied by Mineral Exploration Companies, Allied Services Companies, Federal & Provisional Mineral Departments, for expenditure on land improvement, Building, construction works, transport equipment, machinery & equipment, furniture & fixture. The GFCF estimates for this sector are computed separately for public and private sectors. The component of Direct Foreign Private Investment supplied by State Bank of Pakistan (SBP) is being also added to GFCF in this sector. Investment deflator developed for this sector is used to convert the estimates from current to constant.

Manufacturing

Large Scale Manufacturing Industries

15.59 Gross fixed capital formation in Large Scale Manufacturing Industries (LSMI) is measured by the value of acquisitions less disposal of fixed assets [land improvement, building, construction, plant and machinery, transport equipment, furniture and fixture,

others (including intangible assets)] plus certain additions to the value of non-produced assets. It is, therefore, equal to the total value of all produced (tangible & intangible) assets less the value of their disposals during the accounting year. Exceptional losses of assets due to misuse, accidental losses or other natural disasters are recorded in other changes in the volume of assets account and not as disposals. The gross fixed capital formation (GFCF) of LSMI has been estimated by using a combination of expenditure & financing approaches. The gross fixed capital formation (investment) by units in production has been estimated through capital expenditure survey (LSMI Study 1999-2000).The estimates of GFCF are compiled for private and public sector separately. The estimates for private sector are compiled for in production units and under construction units separately. The estimates of in production units are compiled by survey approach. For this purpose regular survey is launched to collect data from all the listed and non listed companies. The estimates of

under construction units are compiled by applying the financing approach, for which data is collected from all the scheduled Banks, Development Financial Institutions, Leasing and Modaraba companies. The estimates of public sector are compiled by conducting a regular census of public sector enterprises. The investment deflator is applied to compile the estimates at constant prices.

Small and Household Manufacturing Industries

15.60 The estimates for the base year 1999-2000 have been derived from the study on Small scale and household Manufacturing Industries in Pakistan conducted for the change of base of National Accounts. For subsequent years the estimates are extrapolated by applying a fixed growth rate of 9.44 percent derived from the study. The investment inflator is applied to convert the constant price estimates at current prices.

Slaughtering

15.61 The estimates for the base year 1999-2000 have been derived from the Study on SlaughteringIndustry conducted for the change of base of National Accounts. For subsequent years the estimates are extrapolated by applying growth rate of meat production. Data for that is supplied by Livestock Division.

Construction

15.62 Investment in construction sector is computed separately for private and public sectors. For private sector, investment is estimated through commodity flow approach taking into account the c.i.f. value of imports of construction machinery and value of domestic production used for construction purposes namely concrete mixture, road rollers, etc. The import duty and sales tax, etc. are added to c.i.f. value of import of construction machinery and equipment while value of export/re-export is deducted. 42 percent is added

on the net available balance for domestic   use from total imports to account for trade margin and 3 percent of c.i.f. value of import is added as handling charges.

15.63 GFCF estimates of public sector construction include investment by capital assets i.e. expenditure on land improvement, machinery & transport equipment, furniture & fixture from autonomous bodies such as Development Authorities, National Construction Company, Indus Basin etc.

Electricity, Gas and Water Supply

15.64 The Gross Fixed Capital Formation (GFCF) consists of expenditure on land improvement, building, construction works, transport equipment, machinery & equipment, furniture & fixture. The GFCF estimates for this sector are computed separately for public and private sectors. GFCF is being estimated on the basis of information supplied by:

- WAPDA, KESC, IPPs, CPPs, for electricity generation & distribution
- SNGP, SSGC, OGDCL, Mari gas and PPL for gas distribution
- Water Supply

15.65 Gross Fixed Capital Formation (GFCF) for the water supply sub-sector was estimated by the expenditure incurred on fixed assets during the year on purchase of capital assets, installation and repair of utility lines & buildings. The component of Direct Foreign Private Investment supplied by State Bank of Pakistan (SBP) is being also added to GFCF of this sector. To convert the Current into constant GFCF estimates, investment deflator for the sector is being applied.

Transport, Storage and Communications

15.66 The investment in transport and communication sector is estimated for private and public sector separately through commodity flow approach and expenditures incurred on land improvement, buildings, construction works, all types of machinery, transport equipment and furniture & fixtures. Investment in private sector transport is estimated through commodity flow approach. The c.i.f. value of imports of transport machinery & equipment and value of domestic production such as trucks, Buses, LCVs are taken into account. Import duty and other indirect taxes are added to the c.i.f. value of imports machinery & equipment and value of exports & re-export is deducted to arrive at net available for domestic use. On the value of net available for domestic use 42 percent is added to account for trade mark-up and 3 percent on c.i.f. value of imports as handling charges. The summing up of the above items and adding the value of domestic production gives total value of gross fixed capital formation in private transport sector. For public sector transport, data is collected from all autonomous and semi-autonomous bodies such as Pakistan Railways, PIA, PNSC, KPT, NLC, CAA, PARKO and Port Qasim etc. In case of gross fixed capital formation in communication for public sector data is collected from

all autonomous & semi autonomous bodies   such as Post Office, PTCL and NTC etc. and from relevant companies for the private sector. Direct Foreign Investment is also included to arrive at the total GFCF of the sector. Investment deflator developed for transport sector is used to convert the estimates from current to constant.

Wholesale and Retail Trade

15.67   The GFCF in the wholesale and retail trade sector is based on the study conducted in 2001-02 for rebasing purposes. The estimates of gross fixed capital formation at current market prices for the benchmark year 1999-00 have been collected directly from the trade and hotel establishments. For compiling the data, balance sheets or accounts registers were used in respect of establishments maintaining regular accounts, whereas, for establishments having no proper accounts, the estimates are based on survey response, trend and averages. In the latter case the enumerators completely reviewed and examined the data of such establishments and adjusted the data where higher differences were

observed. The component of Direct Foreign Private Investment supplied by State Bank of Pakistan (SBP) is being also added to GFCF of this sector.

Finance and Insurance

15.68   The Financial Corporate Sector includes
  i.   **State Bank of Pakistan**
  ii.   **Other Depository Corporations**
  iii.   **Other Financial Intermediaries**
  iv.   **Insurance Corporations and pension fund Institution**

15.69 GFCF in the Financial Corporate Sector includes expenditure on land improvement, buildings, transport equipments, machinery & equipments, furniture, fixture and intangible assets, The GFCF is estimated separately for each of the above sub-sectors by deducting value of sale proceeds of disposal of fixed assets from value of addition in above assets as per following.

GFCF = Addition of assets - Sale proceeds of disposal of fixed assets

15.70   The data of Discount & Guarantee Houses, Venture Capital Companies, Investment Companies, Exchange Companies (Money Changers), Postal Life Insurance Company and Employees Old-Age Benefit Institution have been compiled and included in the estimates.

Ownership of Dwellings

15.71   GFCF of this sector is compiled through expenditure on following by type of fixed assets.

  a) **New Buildings**
  b) **Alteration & Amendments**
  c) **Major (Significant) Repair & Maintenance**

15.72 The expenditure on (b) & (c) activities have been taken from Construction Survey 1996 and for the former head of investment per house expenditure by type is applied on number of total houses newly constructed.

Public Administration & Defense

15.73 GFCF estimates derived from the budget documents (Development and Non-development) of Federal (including Defense), Provincials & Districts Governments, Tehsil Municipal Administration and Cantonment Boards. GFCF in Public Administration & Defense (General Government) includes expenditure made on purchase of physical assets i.e. transport, machinery and equipments, furniture & fixtures and construction of civil works e.g. land improvement; construction of buildings (residential & Non residential); and other constructions i.e. roads; highways; bridges; runways; tunnels; sewerage,

drainage, water supply and other utilities lines, canals and irrigation tracts. Military equipments i.e. war weapons such as missiles, bombs, rockets, air craft's, tanks and other assets whose function is to release these weapon are not treated as investment. They are part of intermediate consumption instead.

15.74 The current GFCF is deflated with investment deflator of General Government based on components of GFCF to convert in to constant factor cost.

Social Community and Personal Services

15.75 The investment in services sector includes expenditure incurred on land improvement, buildings, construction work, all types of machinery, transport equipment and furniture & fixtures. The investment estimates for this sector are computed separately for public and private sectors. The investment estimates of private sector cover all private educational services, research & scientific institutions, medical & health services, religious institutions, recreational and cultural services, personal and household services and the component of Direct Foreign Private Investment in services sector supplied by State Bank of Pakistan(SBP) is added. The investment estimates of services in public sector are based on actual data collected annually on land improvement, buildings, construction works, all types of machinery, transport equipment and furniture & fixtures from all autonomous and semi-autonomous bodies such as research, development and educational institutions, universities, Higher Education Commission and Pakistan Council of Scientific and Industrial Research etc. To convert the Current into constant GFCF estimates, investment deflator for the sector is being applied.

CHANGE IN INVENTORIES (STOCKS)

15.76 It refers to the value of physical change in the inventories of raw material, work-in-progress and finished goods held by industries and producers of government services as per details given below:

> **a) Goods producing industries**
>> **i.   Material and supplies**
>> **ii. Work-in-progress**
>> **iii. Livestock except breeding stock,**
>> **iv. Dairy cattle and the like**
>> **v.   Finished goods**
>
> **b) Wholesale & retail trade**
> **c) Other industries**
> **d) Producers of government services**

15.77 The change in inventories in current prices is deflated by the wholesale price index (WPI-General) to bring the same at constant prices.

EXPORTS AND IMPORTS OF GOODS AND NON-FACTOR SERVICES

15.78 These transactions in national accounts are recorded at the moment at which the legal ownership of the goods passes between residents and non-residents or the services are rendered by either group or by one transactor to the other. That is, these transactions are recorded on the basis of physical movement of goods and services and not on financial basis. The basic data on merchandise are taken from the trade statistics of the FBS, whereas non-factor services and other current transfers are extracted from the SBPs balance of payments statistics. Besides, it includes imports under baggage, gifts in cash or in kind but excludes military equipments transferred between governments. The imports are deflated by the imports price index and the exports by the exports price index to bring the same at constant prices.

INDIRECT TAXES AND SUBSIDIES

15.79 Indirect taxes comprise those taxes paid by enterprises which are chargeable as business expenses and taxes paid by the households on possession of use of goods and services without regard to personal circumstances. Subsidies consist of current grants made by government to producers and are in fact negative indirect taxes since they contribute to factor income but do not enter into market prices. They may take the form of direct payments to producers or of a differential between the buying and selling prices of government trading organizations. The figures of indirect taxes and subsidies are derived from the budgets documents of the federal, provincial and local governments. The

estimates in current prices are deflated by the wholesale price index (WPI-General) to bring the same at constant prices.

NET FACTOR INCOME FROM REST OF THE WORLD

15.80 **For estimation of GNP, the net inflow of income from the rest of world which consists of remittances, investment income and royalties & trademarks etc. is added to GDP figure. Data on current flows from the rest of world is compiled from the balance of payments figures of State Bank of Pakistan. To account for the non-cash remittances, an imputation based on special study conducted by FBS is added. Estimates thus obtained are at current factor cost. These are converted into constant values by using unit value index of imports as the net factor income from abroad is regarded as a means of obtaining imports.**

16. POPULATION

16.1 **Since the inception of Pakistan, five (5) Censuses have been conducted in 1951, 1961, 1972, 1981 and 1998. According to the 1998 Census results the total Population of Pakistan is 132.352 million as against 84.254 millions in 1981 showing an overall percentage increase of 57.08 or an average growth rate of 2.69 percent. Since then population is estimated by PBS and presently by NIPS under Planning & Development Division.**

17. PRICES

17.1 **Wholesale Price Index (WPI): 2007-08 Base. Wholesale Price Index (WPI) is being compiled with 2007-08 as base year. The WPI covers 112 commodities divided in five major commodity groups viz (i) Agriculture Forestry & Fishery Products-92, (ii) Food Products, Beverages & Tobacco, Textile, Apparel and Leather Products-125, (iii) Ores & Minerals, Electricity, Gas & Water-12, (iv) Other Transportable Goods except Metal Products, Machinery & equipment-143 and (v) Metal Products, Machinery & Equipment-91.**

17.2 **Consumer Price Index (CPI): 2007-2008 Base. The price of each item has been expressed in terms of a specific unit in which its retail transaction usually takes place. However, in some cases such as ready-made and second-hand garments, furniture & furnishing etc, it is difficult to express the prices in standard units in terms of quality, which can result in wide fluctuations in price quotations. Depending upon the size of each city, 1 to 13 markets have been selected. The prices of different goods & services are collected through schedules of different periodicities with in a time span of 1st to 14th of each month. Prices for mainly basic items of consumption are collected on monthly basis but prices of seasonal/perishable vegetable & fruit items are not being reported for the period of their non-availability.**

17.3   The series of Consumer Price Index   with base 2007-2008 covers 487 items of consumer goods and services. The expenditure weights for the series were derived on the basis of Family Budget Survey conducted during 2007-2008 in 52 urban cities whereas 40 urban cities are being covered as per recommendations of Group of Experts in CPI namely, Rawalpindi, Islamabad, Attock, Jhelum, Lahore, Sahiwal, Gujranwala, Wazirabad, Sialkot, Faisalabad, Jhang, Multan, Muzaffargrah, D.G.Khan, Vehari, Sargodha, Mianwali, Bahawalpur, Bahawalnagar, R.Y.Khan, Karachi, Hyderabad, Nawab Shah, Mirpur Khas, Mithi, Sukkur, Larakana, Dadu, Peshawar, Mardan, Abbottabad, Bannu, D.I.Khan, Mingora, Quetta, Turbat, Gawadar, Loralai, Khuzdar and Dera Murad Jamali. The survey covered 05 income groups i.e. upto Rs. 8000/-; Rs. 8001/- to Rs. 12000/-; Rs. 12001/- to Rs.18000/-; Rs. 18001/- to Rs.35000/- and above 35000/-. The series have twelve major commodity groups such as (1) Food & Non-Alcoholic Beverages, (2) Alcoholic Beverage, Tobacco, (3) Clothing & Footwear, (4) Housing, Water, Electricity, Gas and Other Fuels, (5) Furnishing & Household Equipment Maintenance, (6) Health, (7) Transport, (8) Communication, (9) Recreation & Culture, (10) Education, (11) Restaurants & Hotels, and (12) Miscellaneous Goods & Services.

17.4   Consumer Prices: Table 17.6 depicts average retail prices of 26 selected items in (7) seven major urban centers. The price of each item has been expressed in terms of a specific unit in which its retail transaction usually takes place.

18. PUBLIC FINANCE

18.1   The receipts and expenditure of Federal Government have been presented in tables 18.1 to 18.4. The detailed explanation is available on Finance Division's Website.

18.2   The revenue and capital budgets of the Provincial Governments have been presented in tables 18.5 to 18.8. The revenue and expenditure data of Pakistan Railways have been presented in Table 18.9.

19. SOCIAL & CULTURE

19.1   Press Statistics:(Tables 19.1 & 19.2) Data relate to newspapers and periodicals by type and language for Pakistan and provinces.

19.2   Crimes: Data relates to the number of crimes reported to the police and not the number of persons involved.

19.3   Data on road traffic accidents registered with the police authorities relates to road accidents only. Railway accidents, Air-crashes, electrocutions, etc. are not included. Fatal accidents refer to those where the death occurred on the spot or where the victim succumbed to injuries later on. Non-fatal accidents refer to those in which no person was killed but in which one or more persons were seriously or slightly injured or property damaged.

19.4   Data on Appeals and Petitions in the Supreme Court of Pakistan: Appeals include civil appeals, criminal appeals, criminal(shariat) appeals and shariat appeals in the Supreme Court of Pakistan. Petitions include Civil Petitions, Criminal Petitions Civil Review Petitions, Criminal Review Petitions, Criminal Shariat Petitions, Jail Shariat Petitions and Jail Petitions in the Supreme Court of Pakistan.

19.5   Data on appeals and Petitions in High Courts of Pakistan:- Appeals include later patent appeal, inter court appeal, regular first appeal, regular second appeal, first appeal against order, second appeal against order, settlement appeal, review appeal, executive appeal, matrimonial reference, matrimonial appeal, acquittal appeal in the High courts of Pakistan. Petitions include civil revision, writ petition, settlement revision, writ petition settlement, transfer application, civil miscellaneous, petition tax reference, tax reference, civil reference, civil original, criminal revision criminal miscellaneous, criminal quashment, criminal original banking, criminal original, contempt of court and civil original suits in the High Courts of Pakistan.

19.6   Data on Films released: It includes all films released for public exhibition through Pakistan Film Producers Association.

19.7   Data of documentary films produced/released: It includes province-wise documentary films released/produced in the country.

19.8   Number of dramas/plays produced and telecasted/Broadcasted: It includes all dramas/plays produced and telecasted by Pakistan Television Corporation and broadcasted by the Pakistan Broadcasting Corporation Limited.

19.9 & 10 (Table 19.10 & 19.11): Data shows visitors to archaeological museums and heritage sites.

19.12   Disability refers to the physical and organic handicap of a person due to natural deformity or deficient functioning of any limb resulting from accident, disease, etc. It includes blind, deaf & dumb, crippled, mentally retarded and insane.

19.13 Zoo Statistics: Data regarding number of visitors, type of attractions, total expenditure and income were obtained from Zoological Gardens Karachi, Hyderabad, Bahawalpur and Lahore.

19.14 Police Stations/Chowkies Statistics: Data relates to the number of police stations/Chowkies in provinces by Division/District. Data have been collected from the respective Inspector Generals of police.

19.15-16   Cinema Statistics: Data relates to number of cinemas and seating capacity during the year by Division/District and Provinces. Data have been collected from

Divisional Directorates of Excise and Taxation of Punjab, Sindh, Khyber Pakhtoon Khwa and Balochistan as well as the cantonment Boards of all the four provinces.

19.17 Tables 19.17 gives information about the resources of monthly household income (in percentage) by income groups upto 1998-99 and by quintiles for the year 2005-06.

19.18 Table 19.18 gives information about distribution of monthly household consumption expenditure by income groups upto 1998-99 and by quintiles for the year 2005-06

19.19 Table (19.19) shows data regarding percentage distribution of Monthly Household Income by Source and Quantities, 2005-2006.

19.20 Table (19.20) gives information regarding percentage distribution of Monthly Consumption Expenditure by Commodity Groups and Quantities, 2005-06.

20. TRANSPORT AND COMMUNICATIONS

20.1 <u>International Shipping-entered and cleared at Karachi Port and Port Qasim:-</u>
(Table 20.1 & 20.2) Statistics on International shipping entered and cleared are compiled from the monthly returns received from Karachi Port and Port Qasim authorities. The table provides information on number and tonnage of vessels entered and cleared with cargo and in ballast at the Karachi Port and Port Qasim.

20.2 <u>Cargo handled at Sea Ports (Table 20.3):</u> The annual statistics on Cargo handled at Karachi Port and Port Qasim are compiled from the returns received from Karachi Port and Port Qasim authorities on monthly basis. These show the total tonnage of foreign cargo handled at these Ports.

20.3 <u>Number and net registered tonnage of native crafts by nationalities entered/cleared in coastal shipping with cargo into/from the Port of Karachi (Table 20.4):</u> Monthly data on coastal shipping at Karachi Port are collected from Karachi Port Trust. The table provides data on net registered tonnage of native crafts by nationalities i.e. Pakistan and Arabian entered and cleared on coastal shipping with cargo into/from the Port of Karachi. The total cargo handled covers both imports and exports. The coastal shipping relates to sea-borne coastal trade between the ports of Karachi, Abudhabi, Yemen, Ajman Mascat, Bahrain, Gawadar, Pasni, Ormara, UAE, Sharjah, Iran, Bombay, etc.

20.4 <u>Cargo handled in containers at Karachi Port (Table 20.5):</u> Monthly data on cargo handled in containers at Karachi Port are collected from Karachi Port Trust. The table provides data on numbers of containers discharged, number of empty containers and weight of import cargo. It also provides data on number of containers loaded, number of empty containers and weight of export cargo. Containers are of two sizes 20' and 40'. Empty containers means container without cargo. Weight of import/export cargo means net weight of cargo only exclusive of weight of containers. The weight of empty container of 20' size is 2.5 tonnes and of 40' size is 3.5 tonnes.

20.5   Route and track kilometres of Pakistan Railways (Table 20.6): The statistics in respect of "Route and track kilometres of Pakistan Railways" are compiled from the annual returns received from Pakistan Railways, Lahore. These statistics are classified under three types of route and track kilometres as broad guage = 1.676 metres, metre guage = 1.000 metre and narrow guage = 0.762 metre.

20.6   Locomotives owned: (Table 20.7) On 30th June, 2013 the Pakistan Railways steam locomotives totalled 5, diesel locomotives 465 and electric locomotives 16. The diesel and electric locomotives, which are steadily replacing the steam locomotives are used exclusively on broad-guage.

20.7   Coaching vehicles owned: (Table 20.8) The total number of Pakistan Railways coaching vehicles at the end of the year 2012-2013 was 1783. This number includes 1540 vehicles meant for the conveyance of passengers and 245 vehicles for carrying luggage, parcels, mails auto-mobiles, horses, etc. as well as departmental vehicles. The air-conditioned passenger coaches operating between important towns are also included in it.

20.8   Freight wagons owned: (Table 20.9) The number of freight wagons owned by the Pakistan Railways at the end of the year 2012-2013 was 16635 comprising of broad guage vehicles.

20.9   Passenger kilometres by class carried by Pakistan Railways: (Table 20.10) During the year 2012-2013 the Pakistan Railways carried 41957 in thousand passengers.

20.10   Freight wagons loaded: (Table 20.11) During 2012-2013 a total No. of 46640 wagons were loaded on the entire system. These figures do not include wagons received from foreign railways.

20.11   Freight carried by Pakistan Railways: (Table 20.12) The total freight carried by the Pakistan Railways during 2012-2013 was 1016 carried thousand tonnes and 419,241 thousand tonne kilometres, averaging 412.7 kilometres travelled by a tonne. Traffic carried free of charge is not included in these figures.

20.12   Commodities carried by Pakistan Railways : (Table 20.13) The commodity-wise break-down of the tonnes carried by the Pakistan Railways for the years 2000-01 to 2012-2013 is given in the table.

20.13   Fuel consumed: (Table 20.14) Quantities of fuel for the various years are given in the table. During the year 2012-2013 the Pakistan Railways consumed 80758 tonnes of H.S.D. oil. These quantities comprise the entire fuel consumed by the Railways, i.e. on locomotives, power houses, water pumps and workshops, etc.

20.14 <u>Operating Revenue:</u> (Table 20.15) During the year 2012-2013 the total earnings of the Pakistan Railways amounted to Rs.18.07 billion rupees consisting of Rs.13.54 billion (75%) from passengers. Rs.0.984 billion (5.4%) from luggage, parcels, mails etc. Rs.1.98 billion (10.9%) from freight and Rs. 1.56 billion (8.6%) from telegraphs and other miscellaneous sources.

20.15 <u>Operating expenses of Pakistan Railways:</u> (Table 20.16) During the year 2012-2013 the total ordinary working expenses of the Pakistan Railways amounted to Rs. 35.1 billion consisting of Rs.12.66 billion (36.1%) on repairs and maintenance of track, building, rolling stock, etc. Rs.8.71 billion (24.8%) on operation fuel; Rs. 5.14 billion 14.6% on operation staff; Rs. 2.05 billion (5.8%) on operation other than staff and fuel; Rs. 5.41 billion (15.41%) on administration and Rs.0.195 billion (0.05%) on miscellaneous expenses.

20.16 <u>Persons employed by Pakistan Railways:</u> (Table 20.17) On 30th June, 2013 the Pakistan Railways had 81880 persons on its pay rolls, chargeable to revenue account. Out of this number 23109 (28.22%) were employed in the Civil Engineering Department which maintains tracks and buildings; 23129 (28.24%) in Mechanical Engineering Department which repairs and maintains the rolling stock and operates the locomotives, 10594 (12.93%) in the Transportation Department; etc. The total cost of all these employees during 2012-2013 was Rs. 20.56 billion including appropriation to depreciation reserve fund but excluding interest on assets.

20.17 <u>Road kilometres in Pakistan;</u> (Table 20.18) Statistics in respect of "road kilometres" in Pakistan is received from National Transport Research Centre, Ministry of Communication, Islamabad showing figures in respect of high and low type roads in the provinces. These terms are defined as under:-

High type road 182900   the road having cement concrete or bituminous concrete surface.

Low type road 80515   the road generally made of stone, bricks, gravel or ordinary earth properly aligned and with drainage structures provided.

20.18 <u>Air traffic of passengers, freight and mail of Pakistan International Airlines:</u>
(Table 20.19) Statistics on air traffic of passengers, freight and mail are received from the Civil Aviation Authority, Karachi. The table provides information of kilometres flown, passenger kilometres performed, tonne kilometres performed in respect of passengers, freight and mail.

20.19 <u>Aircraft movements at civil airports: (Table 20.20)</u>

i) **Aircraft movements :** An aircraft take off or land at an airport is called aircraft movement. One arrival and one departure are counted as two movements.

i) **Domestic Flight:** A flight which originates from an airport in Pakistan and terminates within Pakistan.

iii) **International Flight:** A flight which originates from any airport in Pakistan and terminates abroad or vice versa.

iv) **Scheduled movements:** Aircraft movements of international/domestic flights scheduled and performed for remuneration according to a published time-table, or so regular or frequent and to constitute a recognizable systematic series, which are open to used by member of the public; extra revenue flights occasioned by overflow traffic from scheduled flights.

v) **Non-scheduled movements:** Aircraft movements of international/domestic Charter and special flights other than those reported under scheduled flights, performed for remuneration on an irregular basis including empty flights related thereto, inclusive tours other than those reported under scheduled services.

vi) **General aviation:** Any movement involving an aircraft operated by a private individual for personal or recreational purpose, flying club, or organizations performing aerial work such as; crop dusting, chemical or fertilizer spraying, aerial photography, advertising & government department.

vii) **Local:** Movement of the aircraft which takes off and lands at the same airport within a short period of time. Under this category comes positioning, tests and training flights.

20.20 Passengers handled at civil airports: (Table 20.21)

i) **Embarked passengers:** The revenue and non-revenue passengers whose air journey begins at the reporting airport or to disembarked passengers who continue their air journey in different aircrafts.

ii) **Disembarked passengers:** The revenue and non-revenue passengers whose air journey terminates at the reporting airport or passengers who will continue their air journey in different aircrafts.

iii)   <u>Transit passengers:</u> **The passengers who continue their journey in the same aircraft in which they arrived. Passengers in direct transit are thus counted once only.**

20.21   <u>Cargo handled at civil airports:(Table 20.22)</u>

i)   <u>Loaded:</u> **The term loaded will have meaning similar embarked.**
ii)   <u>Unloaded:</u> **The term unloaded will have meaning similar disembarked.**

20.22   <u>Mail handled at civil airports: (Table 20.23)</u> Loaded and unloaded terms as applied to mail will have meaning similar to cargo loaded and unloaded.

20.23   <u>Motor vehicles registered: (Table 20.24)</u> Data on number of motor vehicles registered in Pakistan are compiled on annual basis from the returns received from the A.D.G. Excise & Taxation Punjab, Director Excise & Taxation Khyber Pakhtoon Khwa and Excise and Taxation Departments of Sindh and Balochistan. These statistics of public and private motor vehicles give information on number of vehicles registered by seven different types in the four Provinces and as well as on Pakistan basis.

20.24   <u>Telecommunication Statistics:</u>   (Table 20.25) Telecommunication Statistics are collected from the Pakistan Telecommunication Authority.

20.25   <u>Transmission hours of Radio Pakistan by Station: (:Table 20.27)</u> Annual figures in respect of "Total transmission hours of Radio Pakistan by station" are compiled from the returns received from Pakistan Broadcasting Corporation on yearly basis and represent actual hours spent by Radio Pakistan in radio transmission for all its stations and for external services in all languages.

20.26   <u>Estimated T.V. sets as on 30th June: (table 20.28)</u> The data are collected from Pakistan Television Corporation, Islamabad. The table provides province and district-wise information from 2005 to 2014 in respect of estimated T.V. sets.

20.27   <u>Telecasting hours by language: (Table 20.29)</u> The data are collected from Pakistan Television Corporation, Islamabad. The table provides information in respect of telecasting hours by languages. There are only two languages i.e. English and Urdu in which major programmes are telecasted. Each station also telecasted programmes in their local languages.

20.28   <u>Tourist arrivals by mode of transport and receipt of foreign exchange: (Table 20.30)</u> The term "tourist" is in principle, interpreted to mean any person travelling for a period of twenty four hours or more, but not exceeding 6 months, in a country other than that in which he usually resides. The following are to be regarded as tourist:-

i)   **Persons travelling for pleasure, for domestic reasons and for health.**

    ii)   **Persons travelling for meetings or in are presentative capacity of any kind (Scientific, administrative, diplomatic, religious, etc.)**

    iii)   **Persons travelling for business purposes.**

Tourist arrivals by mode of transport shows data on number of tourist arrivals by air, sea and land. There are following points of entry:-

        by air   - Karachi, Islamabad, Lahore, Quetta, Peshawar.
        by sea   - Karachi, Gwadur.
        by land - Chaman-Nokundi, Torkham, Wagha, Lahore.

20.30 <u>Tourist arrivals by nationality (Table 20.31):</u> The data in respect of tourist arrivals by nationality have been collected from Tourism Division. The table provides data in respect of tourist arrivals from different countries of Europe, America, South Asia, Pacific and East Asia, Middle East, Africa and others.

20.31 <u>Tourist arrivals by sex: (Table 20.32)</u> The data on tourist arrivals by sex have been collected from Tourism Division. This table provides information on tourist arrivals by sex (male and female).