

SECTION B

CHAPTER 5

EXPENDITURE ON GROSS NATIONAL PRODUCT

The estimates of expenditure on gross national product (GNP) is the sum total of the value of final uses of goods and non-factor services measured in purchasers value less the CIF value of imports of goods & services. $GNP (exp) = C + G + K + S + X - M + R$ where C is private consumption expenditure, G is government final consumption expenditure, K is gross fixed capital formation, S is change in stocks, X is exports of goods and services, M is imports of goods and services and R is net factor income from rest of the world.

The estimates of the above flows are based on the concepts and classifications prescribed in the United Nations System of National Accounts, 1993. Methodological issues and data resources are explained in the subsequent paragraphs. The estimates of the expenditure on national product for the base year are given in the annexure 38.

Private Final Consumption Expenditure

The flow 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 and is estimated at purchasers' value. The flow is measured either through commodity flow approach or on

the basis of data of Household Integrated Economic Survey (HIES). An alternative is to take the residual of the product account. Owing to insufficient data needed for commodity flow approach and time lag in the availability of the HIES results, it is derived as the residual of the GNP.

General Government Final Consumption Expenditure

The activities of the government are classified into two distinct categories, first as administrative and second as enterprise. The activities of the government, which are purely of administrative nature, are termed as general government. It measures the current expenditure on goods and services incurred by the federal, provincial and local governments. It comprises compensation of employees including pensions and purchases 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 accounts. To bring the estimates at constant prices the component of compensation of employees is deflated by the wage index whereas wholesale price index (WPI) is used to deflate the purchases.

GROSS FIXED CAPITAL FORMATION

A: Agricultural Sector

Main components of private investment in agriculture sector are i) imports and domestic production of agriculture machinery ii) tube wells installed iii) cultivated assets iv) land improvement v) farms and buildings vi) wells and bundats vii) farm transport viii) water courses ix) orchards and x) non-monetized investment. 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. For the change of base, Trade Margins on imported machinery & equipment and domestic production are taken from study of Wholesale & Retail Trade 1999-2000.

In the revised base estimates, the handling charges have been applied @ 3% (instead of 2% used for 1980-81 Base) on total value of imports, inclusive of all taxes.

Wholesale & retail trade margins are used from Study of Wholesale and Retail Trade 1999-2000. A flat rate of 43.7 % (instead of 30% used earlier) of total (other) monetized investment has been taken for non-monetized investment.

The GFCF of agriculture sector for 1999-2000 has thus been estimated at Rs 75434 million as compared to Rs. 33806 million for 1980-81 base methodology. Detail of investment by sector and by assets is given below:

GFCF (By Sector) in Agriculture, 1999-00(Rs. Million)

	1999-2000 Base	1980-81 Base
Private sector	72513	30885
Crops	53345	-
Livestock	17782	-
Forestry	187	-
Fishing	1199	-
Public sector	2921	2921
Total	75434	33806

GFCF (By Assets) in Agriculture, 1999-00 (Rs. Million)

	Private	Public
Agriculture	72513	2921
Fixed Assets	54731	2921
Cultivated Assets	17782	

This increase is attributed to following factors

- i. 100 % increase in trade margins in LSM 1999-2000 over 1980-81 methodology.
- ii. Almost 220% increase in trade margins in small scale manufacturing.
- iii. Inclusion of cultivated assets of Rs. 17.8 billion.
- iv. 163% increase in non-monetized investment.
- v. Inclusion of investment on orchards and water courses of Rs.1083 million which was not undertaken in 1980-81 base methodology.

Sub-sector wise detail is given below.

Crops: 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 benchmark 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. Detail is given in annexure 39.

Livestock: Gross fixed capital formation in livestock is measured by the value of acquisitions less disposals. It is, therefore, equal to the total value of all mature animals 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 Livestock Division. GFCF estimates for the sub-sector amounts to Rs 17782 million, and have been included in the total cultivated assets. Detail is given below.

GFCF in Livestock, 1999-2000 (Rs. Million)

Cultivated Assets	1999-2000
Dairy cattle	8840
Breeding Stock	283
Draught Animals	6930
Goats & Sheep above 1 year	1729
Sub total	75434
Change	17782

Fishing: At present, no GFCF is accounted for in the estimates of Fishing sector. Only a tiny investment combined with poultry, livestock etc is adjusted with the loan funding of agricultural activities. Fishing crafts, gears and equipment added annually are the major part of investment in fishing sub-sector. Value of fixed assets created as allied services by Fishermen's Cooperative Society, etc. is also added. GFCF amounts to Rs 1199 million as detailed below.

GFCF in Fishing Sector, 1999-2000 (Million Rs)

Heads	1999-2000 Base
A. Marine Fishing	1092
B. Inland Fishing	107
Total Fishing (A+B)	1199

Forestry: In the 1980-81 based estimates of GFCF, forestry sub-sector, covering timber, firewood and some of the minor forest products is included in the Agriculture sector. Investment in forestry is taken either in the form of increase in stock or fixed capital formation. Investment in land improvement and horticulture is, however, not accounted for. In the existing series for current year estimates, the benchmark estimates of 1980-81 are adjusted with the weighted growth of current year's output of timber and firewood.

GFCF in Forestry Sector, 1999-2000 (Rs Million)

Fixed Assets	GFCF
1. Land (Improvement + Cost of Transfer)	28.70
2. Buildings (Residential/Non-Residential)	16.68
3. Other Construction (Utility Lines)	8.25
4. Other Improvements (Water Tracks)	18.59
5. Transport Equipments	32.50
6. Electrical Machinery & Appliances	17.38
7. Non-Electrical Machinery – Agriculture	21.50
8. Furniture and Fixture	6.75
9. Own Account Capital Formation	36.55
Total	186.90

The new estimates of gross fixed capital formation in forestry sector are based on results of Study on Forestry conducted for rebasing purposes in 2001. Data was collected by category of forests and area under thereof. GFCF for the year 1999-2000 turned out Rs. 186.90 million as detailed in the table above.

B: Industrial Sector

Mining And Quarrying: GFCF in the mining and quarrying sector has been estimated as per survey/study conducted by FBS in 2001. Moreover, supplementary information on GFCF was also used from Census of Mining Industries 1997-98 and 1999-2000. GFCF have been estimated separately for coal, gas, oil and other minerals by capital assets (tangible & intangible) in line with SNA-93.

Acquisition of capital assets netting out their disposal at book value has been recorded as changes in fixed assets. The addition of depreciation for the year and on the assets disposed off has converted the net fixed assets accumulation to gross fixed capital formation. The GFCF in mining and quarrying sector has been estimated at Rs. 18221 million as per following.

	(Million Rs)
▪ Public Sector	5113
▪ Private Sector	8982
▪ Foreign Direct investment / Loan	4126
Total	18221

The bifurcation of these estimates by type of assets is given below.

**GFCF in Mining and Quarrying Sector
, 1999-2000 (Rs. Million)**

S.No	Fixed Assets	GFCF
1	Land Improvement	21.6
2	Buildings	251.6
3	Other Constructions	7.3
4	Transport Equipments	1750.5
5	Machinery and Equipments	8538.8
6	Furniture & Fixture	71.3
8	Intangible Assets	3453.6
9	Direct Foreign Investments	4126.0
Total		18221

Manufacturing

The total fixed investment in the manufacturing sector has been estimated at 1999-2000 base as Rs. 140345 million as compared to 1980-81 base estimate of Rs. 102727 million, showing an increase of about 36.6%. These estimates consist of Rs. 120532 million in large scale manufacturing (compared to 1980-81 based estimates at Rs. 84688), and Rs. 19732 million in small scale manufacturing (compared to Rs. 18039 million at 1980-81 base). An amount of Rs. 81 million has been added first time as investment in slaughtering sub-sector.

Large Scale Manufacturing Industries: Gross fixed capital formation in LSMI is measured by the value of acquisitions less disposal of fixed assets [land improvement, building and 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 & financial approaches. The investment by units in production has been estimated through capital expenditure survey (LSMI Study 1999-2000). The total investment by units in production has been computed at around Rs75494 million whereas the largest share comes from plant and machinery followed by building and transport. GFCF by under construction units is estimated through financing approach i.e. loans disbursed by Development Finance Institutions (DFI's) / Scheduled Banks, Leasing & Modarabas (Rs 7825 million) & Direct Foreign Private Investment (Rs 16026 million). Details are given in the following table:-

**GFCF in Large Scale Manufacturing Sector, 1999-00
(Rs. Million)**

Sectors	GFCF
Private Sector	99345
a) Units in Production (BMR)	75494
b) Units under Construction	23851
i) Loans disbursed by DFI's / Scheduled Banks, Leasing & Modarabas	7825
ii) Direct Foreign Private Investment	16026
Public Sector	21188
Total Investment	120533

Source: i. LSMI Study 1999-2000 ii. FBS iii. SBP

Small and Household Manufacturing Industries: The bench mark estimates of 1980-81 for Small & Household Manufacturing Industries were primarily based on SHMI rural / urban estimates of investment in small & cottage industry calculated by multiplying the number of workers in small industry by the investment per worker. As no comprehensive source was available to provide data on annual basis on fixed capital formation in small-scale industries, the estimates of this sub-sector were computed on the basis of geometric growth rate of 8.4% based on SHMI surveys of 1976-77 and 1983-84 conducted by FBS in rural and urban areas. This growth rate continued to be applied upto 1995-96. The FBS conducted SHMI survey 1996-97 in rural / urban areas of Pakistan. On the basis of survey results FBS started applying a growth of 7.4% to project the year-to-year investment. The estimates at constant prices are converted into current prices by a deflator developed by National Account. The rebased estimates have now been derived on the basis of survey conducted in rural/urban areas of Pakistan during July-December 2001 for the year 1998-99 and 1999-00. The benchmark estimates of gross fixed capital formation in small and household manufacturing sector stood at Rs. 19732 million (compared to 1980-81 based estimates at Rs. 18039 million) for the year 1999-2000. The GFCF estimates of the small scale-manufacturing sector may be seen at annexure 40.

Slaughtering: In order to improve the quality from the standpoint of better sanitation and hygienic handling and

quantity of slaughtering products and by-products, the investment is made in the construction of buildings, machinery and equipment. For this purpose, investment to the tune of Rs 80.2 million was made during 1999-2000 to erect two model slaughterhouses; one in Hyderabad, Sindh and the other in Baluchistan. Similar expenditure in Punjab and NWFP was estimated at Rs. 1.2 million during this period. Thus, total GFCF in slaughtering sector during 1999-2000 amounted to Rs. 81.4 million.

GFCF In Slaughtering Sector, 1999-2000 (Rs. Million)

Fixed Assets	1999-2000
Buildings	19.089
Other Construction	25.468
Transport Equipment	6.709
Machinery & Equipment	30.126
Furniture & Fixtures	0.006
Total	81.398

Construction: 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 CIF 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 CIF value of import of construction machinery and equipment while value of export/re-export is deducted. 42% is added on the net available balance for domestic use from total imports to account for Trade Margin and 3% of CIF value of import is added as handling charges. The private sector estimates of GFCF in the construction sector have thus been worked out at Rs 12373 million.

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. The Public Sector estimates of GFCF in the construction sector amounts to Rs 2743 million. Total GFCF in the construction sector has been estimated at Rs. 15116 million against 1980-81 based estimates of Rs 14629 million as shown at annexure 41.

Electricity, Gas and Water Supply: The sector covers expenditure on fixed assets by

- i. WAPDA, KESE, IPPs, CPPs, small hydle power plants, for electricity generation & distribution
- ii. SNGC, SSGC & Marigas for gas distribution including for CNG.
- iii. Water works & supply

Compared to 1980-81 based GFCF estimates at Rs.50315 for 1999-2000, the rebased GFCF estimates in the sector amount to Rs. 67354 million. LPG is covered in large scale manufacturing sector. The detailed GFCF estimates for 1999-2000 are given below.

GFCF in Electricity, Gas and WWS, 1999-00 (Rs. Mil.)

Sector	Electricity distribution	Gas distribution	Water supply & sanitation	Total
Public	31648	8638	11899	52185
Private	10477	111	-	10588
FDI	4581	-	-	4581
Total	46706	8749	11899	67354

Water supply and Sanitation: Gross fixed capital formation for the water supply sub-sector is estimated on the basis of expenditure made on fixed assets during the year on purchase of capital assets installations and repair of utility lines and buildings. The GFCF in the sub-sector has thus been estimated at Rs. 11899 million. Detail is as follows:-

GFCF in Water Supply Sub-sector, 1999-2000 (Rs. Million)

Purchase of Durable Goods			Buildings Construction		Other Constructions					T O T A L
Transport	Machinery	Furn. & Fixture	Residential	Non-Residential	Sewerages	Canals & Tubewells	Dams, Reservoir & Tanks	Electric Machinery	Others	
5	171	29	60	13	443	6620	4332	1	225	
205			73		11621					11899

The gross fixed estimates in the electricity, gas and water supply & sanitation by type of fixed assets is as under.

GFCF in Electricity, Gas & Water Supply Sector, 1999-2000 (Rs. Million)

S. No.	Fixed Assets	Electricity Distribution	Gas Distribution	Water supply	Total
1.	Land improvement	660	64	2324	3048
2.	Buildings	2435	584	-	3019
3.	Other construction	509	1156	3812	5477
4.	Transport equipment	403	4739	1635	6777
5.	Machinery & equipment	37752	2099	2888	42739
6.	Furniture, Fixtures and office equip.	246	107	-	353
7.	Intangible assets	120	0	1240	1360
8.	Direct foreign investment/loan	4581	-	-	4581
	Total	46706	8749	11899	67354

C: Services Sector

Transport, Storage and Communications: Gross fixed capital formation of the sector has been estimated at Rs 80080 million including public sector investment of Rs. 56213 million and private sector investment of Rs. 23867 million constituting mainly in the acquisition of plant and machinery, and transport equipments as shown at annexure 42.

Wholesale, Retail Trade and Hotels & Restaurants:

The GFCF in the wholesale and retail trade sector is based on the study conducted in 2001-02 for rebasing purposes. The estimates of GFCF at current market prices for the benchmark year 1999-2000 are actual and 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 respondents memory, trend and averages. In the later case the enumerators completely reviewed and examined the data of such establishments and adjusted the data where higher differences were observed.

The estimates are developed on book values and on the basis of record of opening and closing balance of fixed assets. The net addition of fixed assets is compounded with addition of depreciation for the year and accumulated depreciation on the assets disposed off. The wholesale and retail trade has been worked out at Rs. 5821 million and hotels & restaurants at Rs. 1289 million. Thus GFCF for the whole sector for 1999-2000 amounts to Rs. 7110 million as shown in the table below.

GFCF of Wholesale, Retail Trade and Hotels & Restaurants, 1999-2000 (Rs. Million)

Description	Annual
Wholesale & Retail Trade	5821
Sale, Repair and Maintenance of Motor Vehicles	767
Wholesale Trade	1505
Retail Trade	3549
Hotels and Restaurants	1289
Hotels, Motels, Inns, Hostels, etc.	1108
Restaurants, Cafes, Canteens and Other Eating & Drinking Places	181
Total	7110

The estimates for the wholesale and retail trade sub-sector being used at 1980-81 based were 9 % lower than the results of survey conducted for the new benchmark.

Financial Corporate Sector: The Financial Corporate Sector includes

- a) State Bank of Pakistan
- b) Other Depository Corporations
 - i. Nationalised Banks
 - ii. Private Commercial Banks
 - iii. Specialised Banks
 - iv. Foreign Commercial Banks
 - v. Cooperative Banks
 - vi. Development Financial Institutions
 - vii. Investment Banks
 - viii. Leasing Companies
- c) Other Financial Intermediaries
 - i. Discount and Guarantee Houses
 - ii. Housing Finance Companies
 - iii. Venture Capital Companies
 - iv. Investment Companies
 - v. Modarba Companies
 - vi. Exchange Companies
 - vii. Mutual Fund Companies
- d) Insurance Corporations and pension fund Institution

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 disposed fixed assets from value of addition in above assets and then adding therein accumulated depreciation of disposed off assets, as per following:

$$\text{GFCF} = \text{Addition of assets} - \text{Disposal of assets} + \text{Accumulated depreciation on disposed off assets}$$

The data of Discount & Guarantee Houses, Venture Capital Companies, Investment Companies, Exchange Companies (Money Changers), Postal Life Insurance Company and Employees Old-Age Benefit Institutions have been compiled and included in the estimates first time. GFCF of Financial corporate sector has been estimated at Rs. 9992 million which are higher by 15.0% compared to 1980-81 based estimates at Rs. 8685 million. Improved methodology and exhaustive coverage hold explanation for the higher GFCF estimates. The comparative GFCF estimates of Financial Corporate sector with reference to existing and incipient bases are given at annexure 42.

Ownership of Dwellings: GFCF of this sector is compiled through expenditure on following by type of fixed assets.

- i. New Buildings
- ii. Alteration & Amendments
- iii. Major (Significant) Repair & Maintenance

The expenditure on these two activities are 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. The total investment of the sector has been estimated at Rs. 77973 millions (compared to Rs 56309 million at 1980-81 base), given in the table below.

GFCF in Ownership of Dwellings, 1999-00 (Rs. Million)

Activity	Urban	Rural	Total
New Construction	20323	13747	34070
Alteration	3825	7052	10877
Repairs	14985	18041	33026
Total	39133	38840	77973

Social, Community and Private Services: Investment in this sector includes expenditure incurred on land improvement, buildings, construction works, all types of machinery, transport equipment, and furniture and fixtures, etc. in computer related activities; business activities; education; health & social work; community, social & personal services; recreation, culture & sports, shipping, forwarding and clearing agents; non-profit institutions and real estate. Besides direct foreign investment/loans are added up to complete the GFCF estimate of this sector. Accordingly, GFCF for each type of services were estimated separately as per survey/study done by FBS in 2001. The GFCF in the Social, Community and Private Services sub-sector during 1999-2000 has been estimated at Rs 47164 million which are higher by 71% than the 1980-81 based estimates of Rs 27560 million. A comparative table of GFCF of two benchmarks is placed below.

GFCF in Social, Community and Private Services Sector, 1999-2000 (Rs . Million)

Activities	1999-2000 base	1980-81 base	Change%
Computer and Related	2416	-	100
Business	16028	3022	430
Education	2482	1308	90
Health, Social Work	3291	2237	47
Community, Social & Personal	1610	-	100
Recreational, Culture, Sports	1032	601	72
Other Services	1480	1697	-13
Private Household's Employees	-	387	0
Hotels & Restaurants	-	887	0
Others (Not classified)	-	13825	0
Non-Reporting	-	3596	0
NPISHs	14937	-	100
Real Estate	956	-	100
Direct Foreign private investment/Loans	2932	-	100
Social, community & Private Services	47164	27560	71

GFCF of public services is based on the expenditure on fixed assets made by the public sector institutions/units for providing health & educational services. GFCF of public services for 1999-2000 amounts to Rs. 2869 million.

General Government: GFCF by general government represents the gross value of the assets, which are added to the domestic capital stock of the nation. It consists of the

acquisitions less disposal of fixed assets during an accounting period. The expenditure made by Federal, Provincial, local governments and defence services on fixed assets during the year are accounted as gross fixed capital formation by General Government. Such expenditure includes expenditure on purchases of fixed assets, construction and repair of building, other construction etc. Capital repairs have been included and the sale of fixed assets deducted. The expenditure made on residential construction for military personnel are included as part of fixed capital formation. War weapons such as missiles, bombs, rockets, aircrafts, tanks and other assets whose function is to release these weapons are not treated as economic assets.

Data on GFCF has been taken from published budget documents. GFCF has been worked out on the basis of these budgets at Rs. 65749 million for the year 1999-2000 as against 1980-81 based estimates at Rs. 64680 million as presented in table given below.

GFCF Of General Government, 1999-2000 (Million Rs)

Description	1999-2000 Base	1980-81 Base
Transport	2367	2367
Machinery	8659	8659
Furniture and Fixture	1159	1159
Land Improvement	30	90
Buildings	19101	25743
Other Construction	33399	26662
Others	1034	
Total	65749	64680

An increase of 1.65 % has been observed in the new estimates over the 1980-81 based estimates due mainly to the treatment of exploratory operation on repair and maintenance (major) as accretion to GFCF in accordance with the new methodology.

Change In Stocks

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

- Goods producing industries
 - Material and supplies
 - Work-in-progress
 - Livestock except breeding stock, dairy cattle and the like
 - Finished goods
- Wholesale & retail trade
- Other industries
- Producers of government services

Exports And Imports Of Goods And Non-Factor Services

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 SBP's balance of payments statistics. Besides, it includes imports under baggage, gifts in cash or in kind but excludes military equipments transferred between government. 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

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 circumstance. 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.