Gross National Product

Gross National Product (GNP):

GNP is the basic national income accounting measure of the total output or aggregate supply of goods and services. It has been defined as the total value of all final goods and services produced in a country during a year. GNP is a 'flow' variable, which measures the quantity of final goods and services produced during a year. For calculating GNP accurately, all goods and services produced in any given year must be counted once, but not more than once.

Approaches of Measuring GNP/GDP:

The primary purpose of national accounts is to provide a coherent and comprehensive picture of the economy. To be concise, these estimates tend to answer questions such as:

(a) What is the output of the economy, its size its composition, and its uses? And

(b) What is the economic process by which this output is produced and distributed? These questions are addressed below in relation to estimation of GDP/GNP and final uses of the GNP.

The gross national product (GNP) is the market value of all final goods and services, produced in the economy during a year. GNP is measured in Rupee terms rather than in physical units of output. Gross domestic product (GDP) is a better idea to visualize domestic production in the economy. GDP may be derived in three ways or in combination of them.

(i) Production Approach: It measures the contribution to output made by each producer. It is obtained by deducting from the total value of its output the value of goods and services it has purchased from other producers and used up in producing its own output, i.e.:

VA = value of output – value of intermediate consumption.

Total value added by all producers equals GDP.

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

(iii) Expenditure Approach: This approach looks at the final uses of the output for private consumption, government consumption, capital formation and net of imports & exports. According this approach, GDP is the sum of following four major components:

- Personal consumption expenditure on goods and services,
- Gross private domestic investment,
- Government expenditure on goods and services, and
- Net export to the rest of the world.

The concepts of expenditure approach and cost approach have been illustrated in the following diagram of circular flow of a simplified two-sector economy:

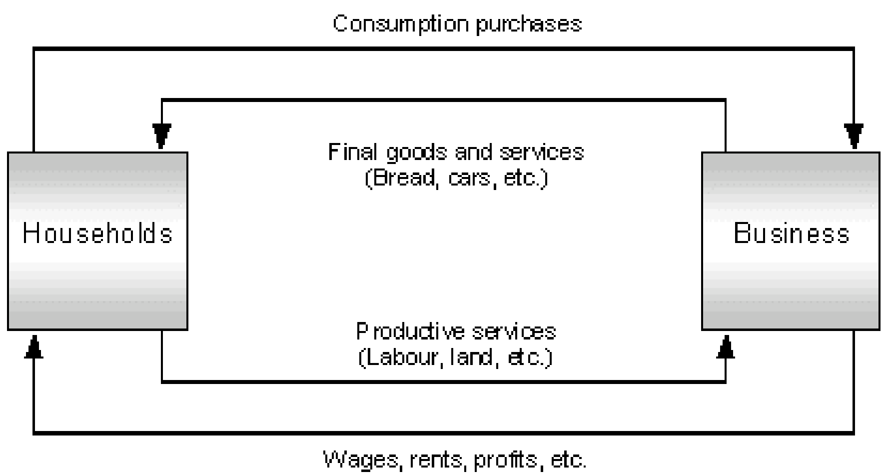

Figure 1 – Circular flow of a two-sector economy

In the above diagram, the upper loop represents the 'expenditure' side of the economy. Through this loop, all the products flow from business sector to household sector. Each year the nation consumes a wide variety of final goods and services: goods such as bread, apples, computers, automobiles, etc.; and services such as haircuts, health, taxis, airlines, etc. But we include only the value of those products that are bought and consumed by the consumers. In our 'two-sector economy' illustration, we have excluded the investment expenditure, government expenditure and taxes from GDP calculation.

The lower loop represents the 'cost or revenue' side of the economy. Through this loop, all the costs of doing business flow. These costs include wages paid to labour, rent paid to land, profits paid to capital, and so forth. But these business costs are revenues that are received by households in exchange of supplying factors of production to the business sector.

Precautions in Measuring GNP/GDP / Problems in National Income Measurement / Dangers of National Income Accounts:

The federal statisticians and economists have to be very careful in measuring GDP or preparing national income accounts. The following precautionary measures should be taken:

(a) **Reliable source of data:** All the data for national accounts are collected from different sources, including surveys, income tax returns, retail sales statistics, and employment data. Inaccurate or incomplete data can severely damage the integrity of the national accounts. The economists have to be very careful in collection and selection of national income accounting data.

(b) **Difficulties of Measuring Some Services in Money Terms:** National Income of a country is always measured in money terms, but there are some goods and services, which cannot be measured, in monetary terms. Such goods include, the services of the housewife, housemaid and the singing as a hobby by an individual. Exclusion of these services from the national income, underestimate the national income account.

(c) **Illegal Activities in the Economy/The Growth of "Black Economy":** The "Black Economy" refers to that part of economic activity, which is undeclared and therefore unrecorded for tax purposes and is therefore deemed to be 'illegal'. Many illegal activities in the economy generally escape both the law and measurement in the national income. Such illegal activities include, smuggling, drug trafficking and all parallel market transactions. Since such activities are outlawed, income earned, through them are not captured in the national income, thus, under estimating the national income account.

(d) **Danger of double counting:** While measuring GDP, we have to distinguish between the three forms of goods:

(i) **Final product:** A final product is one that is produced and sold for consumption or investment.

(ii) **Intermediate good:** Intermediate goods are semi-finished goods or goods-in-process.

(iii) **Raw material:** Raw materials are unfinished and unprocessed goods.

To avoid double or multiple counting, it is necessary to add the value of only those goods which have reached their final stage of production, i.e., final goods, and to not add the value of intermediate goods and raw materials, which are already included in the value of final goods. GDP, therefore, includes bread but not wheat, cars but not steal.

(e) **Problem of Including All Inventory Change in GNP:** Firms generally record inventories at their original cost rather than at replacement costs. When prices rise, there are gains in the book value of inventories but when prices fall, there are losses. So, the book value of inventories overstates or understates the actual inventories. Thus, for correct computation of GNP, inventory evaluation is required. This is achieved when a negative valuation of inventory is made for inventory gains and a positive valuation is made for losses.

(f) <u>Problem of Price Instability:</u> Since national income is measured in money terms, fluctuation in the general price level will render unstable the measuring rod of money for national income. When prices are rising, the national income figures are rising even though production might have gone down. On the other hand, when prices are falling, GNP is declining even though the production might have gone up. To solve this problem, economist and statisticians have introduced the concept of real income.

(g) <u>Exclusion of Capital Gain or Losses from GNP:</u> Capital gain or losses accruing to property owners by increase or decrease in the market value of their asset are not included in GNP computation because such changes do not result from current economic activities. Such exclusions underestimate or overestimate the GNP.

(h) <u>Value added:</u> 'Value added' is the difference between a firm's sales and its purchases of materials and services from other firms. In calculating GDP earnings or value added to a firm, the statistician includes all costs that go to factors other than businesses and excludes all payments made to other businesses. Hence business costs in the form of wages, salaries, interest payments, and dividends are included in value added, but purchases of wheat or steel or electricity are excluded from value added. The following table illustrates the concept of value addition in GDP:

Table 1

Bread Receipts, Costs, and Value Added

Rupees Per Loaf

Stages of Production	(1) Sales Receipts	(2) Cost of Intermediate Materials	(3) Value Added (wages, profit, etc.) (1 – 2)
Wheat	2.00	0	2.00
Flour	5.50	2.00	3.50
Baked dough	7.25	5.50	1.75

Delivered bread	10.00	7.25	2.75
Total	24.75	14.75	10.00

(i) **Non-productive transactions are excluded from GDP:** The non-productive transactions are excluded from GDP measurement. There are two types of non-productive transactions:

(i) **Purely financial transactions:** Purely financial transactions are:

- All public transfer payments, which do not add to the current flow of goods such as social security payments, relief payments, etc.
- All private financial transactions, such as receipt of money by a student from his father, etc.
- Buying and selling of marketable securities, which make no contribution to current production.

(ii) Sale proceeds of second-hand goods.

Difference between GDP and GNP:

GDP is the most widely used measure of national output in Pakistan. Another concept is widely cited, i.e., GNP. GNP is the total output produced with labour or capital owned by Pakistani residents, while GDP is the output produced with labour and capital located inside Pakistan. For example, some of Pakistani GDP is produced in Honda plants that are owned by Japanese corporations. The profits from these plants are included in Pakistani GDP but not in Pakistani GNP. Similarly, when a Pakistani university lecturer flies to Japan to give a paid lecture on ‘economies of under-developed countries’, that lecturer’s salary would be included in Japanese GDP and in Pakistani GNP.

Net National Product (NNP):

Net national product (NNP) or national income at market price can be obtained by deducting depreciation from GNP. NNP is a sounder measure of a nation’s output than GNP, but most of the economists work with GNP. This is so because depreciation is not easier to estimate. Whereas the gross investment can be estimated fairly-accurately.

NNP equals the total final output produced within a nation during a year, where output includes net investment or gross investment less depreciation. Therefore, NNP is equals to:

NNP = GNP – Depreciation

It is the net market value of all the final goods and services produced in a country during a year. It is obtained by subtracting the amount of depreciation of existing capital from the market value of all the final goods and services. For a continuous flow of money payments it is necessary that a certain amount of money should be set aside from the GNP for meeting the necessary expenditure of wear and tear, deterioration and obsolescence of the capital and 'it should remain intact'.

In the above definition, the phrase 'maintaining capital intact' is meant to make good the physical deterioration which has taken place in the capital equipment while creating income during a given period. This can only be made by setting aside a certain amount of money every year from the annual gross income so that when the income creating equipment becomes obsolete, a new capital equipment may be created out. If the depreciation allowance is not set aside every year, the flow of income would not remain intact. It will decline gradually and the whole country will become poor.

National Income or National Income at Factor Cost:

National income (NI) or national income at factor cost is the aggregate earnings of all the factors of production (i.e., land, labour, capital, & organisation), which arise from the current production of goods and services by the nation's economy. The major components of national income are:

(i) Compensation of employees (i.e., wages, salaries, commission, bonus, etc.);

(ii) Proprietors income (profits of sole proprietorship, partnership, and joint stock companies);

(iii) Net income from rentals and royalties; and

(iv) Net interest (excess of interest payments of the domestic business system over its interest receipts and net interest received from abroad).

National income can be calculated as follows:

National Income = NNP – Indirect Taxes + Subsidies

Personal Income:

Personal Income is the total income which is actually received by all individuals or households during a given year in a country. Personal income is always less than NI because NI is the sum total of all incomes earned, whereas, the personal income is the current income received by persons from all sources. It should be noted here that all the income items which are included in NI are not paid to individuals or households as income. For instance, the earnings of corporation include dividends, undistributed profits and corporate taxes. The individuals only receive dividends. Corporate taxes are paid to government, and the undistributed profits are retained by firms. There are certain income items paid to individuals, but not included in the national income, commonly known as 'transfer payments'. Transfer payments include old age benefits, pension, unemployment allowance, interest on national debt, relief payments, etc. Personal income can be measured as follows:

Personal Income = NI at Factor Cost – Contributions to Social Insurance – Corporate Income Taxes – Retained Corporate Earnings + Transfer Payments

Disposable Income:

Disposable income is that income which is left with the individuals after paying taxes to the government. The individuals can spend this amount as they please. However, they can spend in categorically two ways, i.e., either they can spend on consumption goods, or they can save. Therefore, the disposable personal income is equal to:

Disposable Income = Personal Income – Personal Taxes

or

Disposable Income = Consumption + Saving

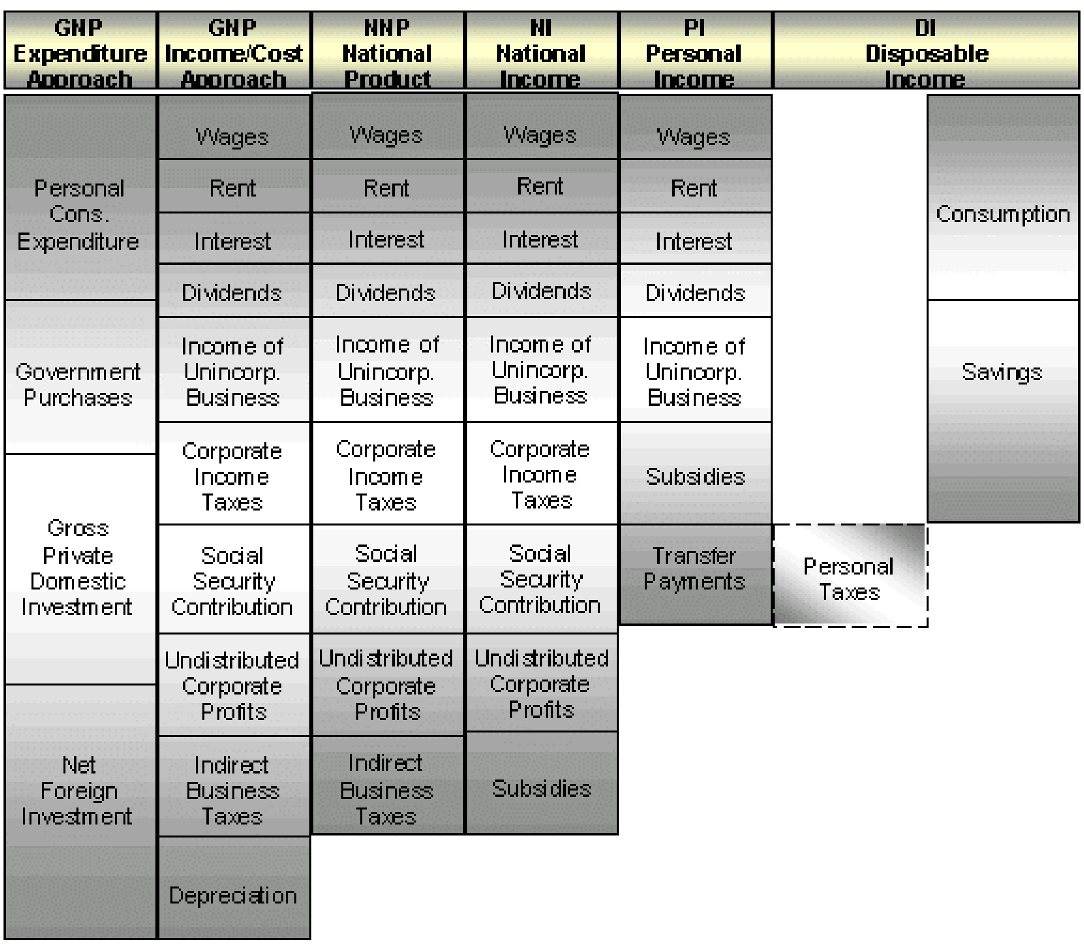

Figure 2 – From GNP to Disposable Income