

UNIT 7 NATIONAL INCOME ACCOUNT

NATURE AND MEANING OF NATIONAL INCOME ACCOUNT

NATIONAL INCOME FEATURES

- **National Income** is the aggregate monetary value of all the final goods and services produced in a country during a year.

Main features of national income

- counted for a period of one accounting year
- a flow concept
- include only final goods and services
- expressed in terms of monetary value of goods and services.

Intermediate goods are not included in the calculation of national income

Importance of National Income Accounting



- Indicator of Economic Progress
- Investment, consumption, employment
- Significance in Business Policy Making
- Significance for Trade Unions
- Measure of Economic Growth
- Comparison with other Countries
- Knowledge of Structural Changes
- Significance for Economic Analysis

GDP (GROSS DOMESTIC PRODUCT) AND GNP (GROSS NATIONAL PRODUCT) DEFINITION AND MEASUREMENT

Gross Domestic Product(GDP): is the market value of all the final goods and services produced within the domestic territory of a country during a year.

GDP:

- Gross Measure
- Market value
- New Production
- GDP includes only the value of final goods and services, i.e., finished products only

Distinction between Intermediate and Final goods

Intermediate goods

- Goods which are used for further production by passing through some production process as secondary inputs.

Final goods

- Goods which are used either for final consumption by the consumers or for investment by the producers.

Gross National Product

Gross National Product (GNP) is the money value of all final goods and services produced in the domestic territory of a country during a year plus net-factor income from abroad minus factor income of non residents in domestic territories.

$$\mathbf{GNPMP = GDPMP + NFI}$$

Where, GNPMP = Gross National Product at market prices

GDPMP = Gross Domestic Product at market prices

NFI = Net Factor Income

NFI = Factor income earned from abroad by residents – factor income of non-residents in domestic territory

Approaches to Measuring GDP



- There are three different phases in circular flow of national income: production, income and expenditure.

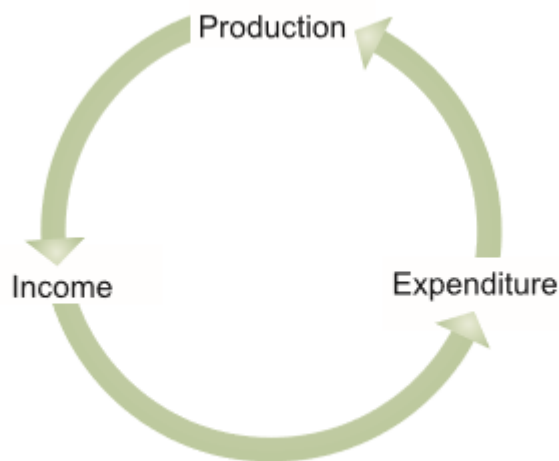
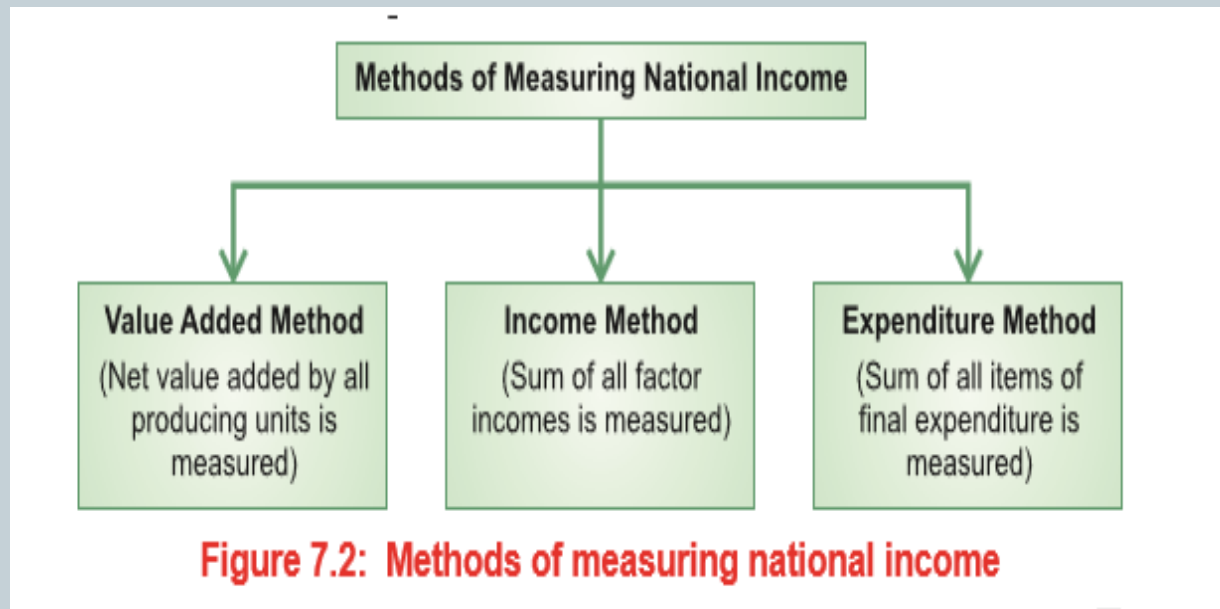


Figure 7.1: Circular Flow of Production, Income and Expenditure



I Production Method (Value Added Method)



- In this method two approaches – ‘Final Product Approach’ and ‘Value Added Approach’ – are adopted.

i Final Product Approach:

- include the market value of all final goods and services produced in a country.

For example, if we manufacture thread from cotton, cloth from thread and shirts from cloth, here shirts are the final good. Hence, we should include the value of shirts only in the calculation of national income.

PROBLEM OF DOUBLE COUNTING IN THE FINAL PRODUCT APPROACH:

- The final product approach cannot be used in actual practice because production is a continuous process and in this process it is difficult to know the final product.
- Counting the value of a commodity more than once in the measurement of national income is called double counting.

For example, for a farmer, cotton is a final product, for a spinning mill, thread is a final product, for a cloth-mill, cloth is a final product, and for a garment manufacturer, shirts are a final product.

- o To overcome the difficulty of double counting, the value added approach is used.

ii Value Added Approach

- Value added is defined as the difference between total value of the output of a firm and the value of inputs bought from other firms.



The final productions of a hypothetical nation is given by the following table. The table shows how GDP is calculated using final product and current prices.

	Product	Quantity (millions)	Price (per 1 unit)	Birr value (millions)
Goods	Shoes	1	250	250
	Cars	2	75,000	150,000
	Bed	10	900	9,000
Services	Haircuts	24	10	240
	Legal advice	2	3,000	6,000
	Medication	5	750	3,750
				GDP: 169,240

II Income Method



- The income method measures national income from the side of payments made to the primary factors of production in the form of rent, wages, interest, and profit for their productive services in an accounting year.
- If we add the value of depreciation and indirect taxes to this, we get GDPMP. Adding further net factor income from abroad gives us GNPMP.

To correctly compute national income by the income method, the following precautions need to be taken.

- Only factor incomes which are earned by rendering productive services are included. All types of transfer income are not included.
- Imputed rent of owner-occupied dwellings and the value of production for self-consumption are included, but the value of self-consumed services is not included.
- Income from illegal activities like smuggling, black marketing, etc., as well as windfall gains from lotteries, etc., are not included.



Example:

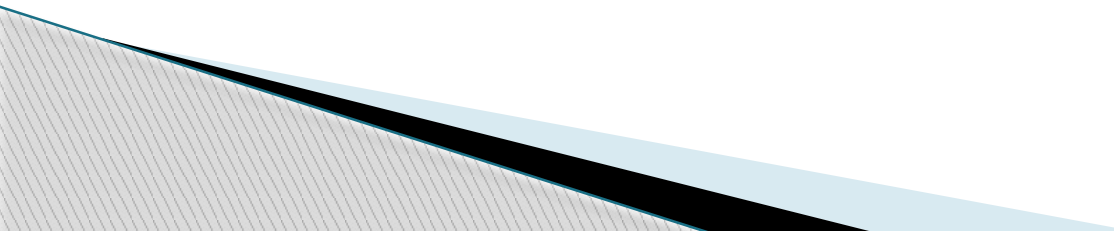
GDP at market price measured by income approach, of a hypothetical nation.

Types of Income	Amount (in millions Birrs)
Compensation of employees	84,000
Rental income	9,200
Interest income	12,100
Profits (proprietor's income)	30,000
Depreciation	10,000
Indirect business taxes	4,000
GDP: 149,300	

III Expenditure Method

GDP is gross expenditure on the final use of domestically produced goods and services during a period of account.

$GDP_{MP} = \text{Private final consumption expenditure} + \text{government final consumption expenditure} + \text{gross fixed capital formation} + \text{change in stocks} + \text{net exports}$





Example: Calculating GDP by expenditure approach

Expenditure		Amount (in millions of Birr)
1. Personal final consumption expenditure	4,500	12,000
Durable goods	1,500	
Non durable goods		
Services	6,000	
2. Government final consumption expenditure	1040	5440
Federal defence	2100	
Federal non-defence		
State and local governments	2300	
3. Gross fixed capital formation (Gross private Domestic Investment)	3,940	7410
Construction Expenditure	2,200	
Machinery equipment Expenditure (Business fixed investment)		
Changes in inventories	1,270	
4. Net Exports	94	-111
Exports		
Imports	205	
		GDP: 24,739



Private final consumption expenditure

- include consumption expenditure by consumer households on all types of consumer goods (i.e., durable, semi-durable, and nondurable goods and services).

Government final consumption expenditure

- It is incurred by general government to satisfy collective needs of the people. For example, government expenditure on health, education, general administration, law and order, etc. belongs to this category.



Gross fixed capital formation: consists of mainly two items

- o Construction, and
- o Machinery and equipment

Change in stocks

- o It is the difference between the stocks in the beginning of and at the end of the accounting year. (inventories or unsold outputs).



Note: Change in stocks is sometimes taken as a part of gross fixed capital formation.

Net exports (exports less imports)

- the difference between the value of exports and value of imports.

$$\text{GDPMP} = C + I_g + G + (X - M)$$

$$\text{GNPMP} = \text{GDPMP} + \text{NFI}$$

The following precautions need to be taken to correctly estimate national income by the expenditure method:

- To avoid double counting, expenditure on all intermediate goods and services is excluded.
- Government expenditure on all transfer payments, such as scholarships, unemployment allowances, old age pensions, etc., is excluded because non-productive services are rendered by the recipients in exchange.

- Expenditure on purchase of second-hand goods is excluded from national income because this type of expenditure is not on currently produced goods.
- Expenditure on purchase of old shares/bonds or new shares/bonds etc. is excluded because it is not payment for goods or services currently produced. It shows mere transfer of property from one person to another.

PROBLEMS IN MEASURING GDP

Conceptual Problems

- o Product, income or expenditure – Which method – should be selected and which is more appropriate – it is a constant problem for enumerators to solve.
- o Opinions differ regarding the meaning and definition of national income.

- There is no clear-cut demarcation between productive and non-productive activities.

For instance, production for self-consumption, services rendered without remuneration, services of an artist, etc

- In developed and under-developed countries, the same pattern for the computation of national income should not be adopted.

STATISTICAL (OR PRACTICAL) PROBLEMS

- Non-availability of data
- Barter system
- The problem of double counting
- Production for self-consumption
- Non-maintenance of accounts

Nominal and Real GDP

- When final goods and services included in GDP are valued at current market prices, i.e., prices prevailing in the year for which GDP is being measured then it is called GDP at current market prices or Nominal GDP.
- For example, Nominal GDP of 2009 is the value of output produced in 2009 calculated at the market prices prevailing in 2009.

- when goods and services included in GDP are valued at constant (fixed) prices i.e., prices of the base year it is called GDP at constant prices or Real GDP.
- Constant prices refer to prices prevailing in some carefully chosen year called the base year.

SIGNIFICANCE OF THE DISTINCTION

1. Real GDP (i.e., at constant prices) truly reflects the performance and level of economic growth in an economy, whereas Nominal GDP (i.e., at current prices) does not.

Nominal GDP is affected by two factors:

- o Change in physical output, and
- o Change in prices.



- Real GDP is affected by only one factor, change in physical output because prices are fixed or constant. Thus real GDP can rise only when there is a rise in physical output during a year.
- A country is interested in change in physical output (real GNP) and not in monetary or Nominal GDP because an increase in real GDP leads to a rise in the standard of living of the people.



2. Real GDP is a better tool for making a year-to-year comparison of changes in the physical output of goods and services.

- A sustained rise in real GNP reflects the economic growth of the country, whereas a continuous fall in real GDP is an indicator of recession, and depression.

3. Real GDP is often used in making international comparisons of economic performance across countries.

Conversion of Nominal GDP into Real GDP



$$\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{Price Index of Current Year}} \times 100$$

Example:

Using the following data about a hypothetical nation, calculate Real GDP for the nation in the years 2000, 2001, 2002, 2003.

No	Year	Nominal GDP (Birr)	CPI
1	2000	360 billion	100
2	2001	420 billion	140
3	2002	520 billion	200
4	2003	570 billion	300



Solution:

No	Year	Nominal GDP (Birr)	CPI	Real GDP $= \frac{\text{Nominal GDP}}{\text{Price Index of Current Year}} \times 100$
1	2000	360 billion	100	360 billion
2	2001	420 billion	140	300 billion
3	2002	520 billion	200	260 billion
4	2003	570 billion	300	190 billion

Note that real GDP is decreasing while the nominal GDP is increasing. This is happening due to higher level of consumer's price index.

OTHER NATIONAL INCOME ACCOUNT



Net Domestic Product at Market Prices (NDP_{MP})

- Net Domestic Product at market prices is the net market value of all the final goods and services produced in the domestic territory of a country during a year.

$$\text{NDPMP} = \text{GDPMP} - \text{Depreciation}$$



Net National Product at market Prices (NNP_{MP})

- o Net National Product at market prices is the net market value of all the final goods and services produced by the normal residents of a country during a year.

$$\text{NNPMP} = \text{GNPMP} - \text{Depreciation}$$

$$\text{NNPMP} = \text{NDPMP} + \text{NFI}$$



Net National Product at Factor cost (NNP_{Fc})

- Net National Product at factor cost is the sum total of net value added at factor cost by all the normal resident producer enterprises of a country during a year.

$\text{NNP}_{\text{FC}} \text{ or NI} = \text{NNP}_{\text{MP}} - \text{Indirect taxes.}$



Personal Income (Y)

- Personal income is the sum of earned income and transfer income received by persons (households) from all sources within and outside the country.
- Personal income includes not only factor incomes which are earned from productive services but also transfer incomes.
- It is a receipt concept as compared to national income, which is an earning concept.



- ❖ Note that national income is not the sum total of personal incomes, since the former includes only earned incomes, whereas the latter includes earned incomes as well as transfer incomes.
- ❖ personal income is different from national income because two components of national income, namely, corporate tax and undistributed profit of corporate enterprise are not included in personal income.



Personal Income(Y)= NI- (Corporate tax + Undistributed profit + All types of transfer incomes)

Personal Disposable Income (Yd)

- Personal disposable income is that part of personal income which is available to the households for disposal as they like.

Personal Disposable Income (Yd) = personal income (Y) - personal taxes