

- It has an expansionary effect on the economy.
 - ❖ Usually gov't of developing countries plan for a deficit budget.
 - ❖ A deficit budget is financed by domestic borrowing, external borrowing and the printing of new currency.

Structure or components of budget

- ❖ Usually, budget is divided into two parts;
 - A. Revenue budget -this forecasts the total revenue collections of the gov't from tax and non-tax source.
- ❖ In Ethiopia, it is classified into three;
 - i. Ordinary revenue
 - ii. External assistance
 - iii. Capital revenue
- i. Ordinary Revenue -is made up by tax revenue and non-tax revenue.
 - Tax revenue -is further divided into three parts ;direct, indirect tax and foreign trade tax
 - a) Tax-a compulsory payment that the citizens of a country have to make to gov't without a quid pro quo.
 - ❖ Direct taxes-w/c is paid by the same persons on whom they have been levied and cannot be shifted onto anybody else. E.g. person income tax, rental income, business income tax etc.
 - ❖ Indirect taxes-are those taxes whose burden can be shifted. e.g. excise duties, and sales tax, stamps and duty and VAT etc.
 - ❖ Foreign trade tax-includes custom duty, excise tax and sale tax on imported goods.
 - b) Non-tax revenue -collected by the gov't from sources other than tax. E.g. charges, fees, fines, pension contribution and investment revenue.
- ii. External assistance-grants receive in cash, or some other form, from outside the country are known as external assistance.
 - External assistance received from friendly countries is called bilateral assistance.
 - Assistance (grants) received from multilateral or an international institution is known as multilateral assistance.
- iii. Capital revenue-it comprises the money received by the gov't from the sale of gov't assets, collection of loans and external loans.
- B. Expenditure budget-it is a forecast of the total expenditure by the gov't in a year.
 - In Ethiopia, it is classified into two parts;
- i. Recurrent expenditure -represents expense made by the gov't w/c are recurrent in nature i.e. they are repeated. E.g. salaries of civil servants, purchases of raw materials, fuels and other factors of production.

- ❖ It is classified into four in Ethiopia
- a. An administrative and general service includes such activities as performed by political organs of the state council of representatives, ministries, defense and so on.
- b. Economic services include activities as ones that come under agricultural, industrial and service sectors.
- c. Social services include such activities as health, education and culture.
- d. Other expenditures include pension payments, repayment of public debts, provision of unforeseen expenses and similar items.
- ii. Capital expenditure –expenses made by the gov't for the implementation and expansion of dev't projects.

- ❖ It is classified into three in Ethiopia;
- a. Economic development includes production activities in the agricultural and industrial sectors and economic infrastructure in mining, road, energy etc.
- b. Social dev't includes such activities as education, health, urban dev't and social welfare.
- c. General dev't includes services in statistic, cartography and administrative buildings
 - ❖ In most developing countries, recurrent expenditure is mostly financed from the domestic revenue sources i.e from tax and non-tax but capital expenditure is usually financed external borrowing grants.
 - ❖ The annual budget for the federal gov't of Ethiopia is prepared by the ministry of finance and economic development(MoFED)
 - ❖ The budget for the regional gov'ts is prepared by regional finance bureaus.

END OF UNIT SIX

UNIT SEVEN

NATIONAL INCOME ACCOUNT

- ❖ National income is defined as the aggregate monetary value of all the final goods services produced in a country during a year.
- ❖ National income (NI) is often as the most comprehensive measure of how an economy is performing.
- ❖ NI is an essential element in the study of macroeconomics.
- ❖ National income account (NIA) is an accounting record of the level of economic activities of an economy.

The following are the main features of NIA

- Only goods and services produced during the period is counted.
- National income is the flow concept i.e. NI is a measure of the flow of goods and services during a year.
- NI is a device that designed to measure the market value of production (goods and services) that flows through the economy's sectors during a year.
- Only final goods and service are counted.
- Expressed only in terms of monetary value of goods and services. Intermediate goods are not included in the calculation of NI.

Important of NIA

- ❖ NIA is important for the formulation of economic policies and also as a measure of economic growth.
 - ❖ NIA is important for the following reasons
 - ✓ It is indicator of economic progress.
 - ✓ It is helpful investment, consumption, employment etc.
 - ✓ It is significance in business policy making
 - ✓ It is significance for trade unions and labor organization.
 - ✓ It measures economic growth (output, income, capital formation, consumption, etc.)
 - ✓ It comparison with other countries e.g. to say a country developed or under developed.
 - ✓ Knowledge of structural changes e.g. it shows the distribution of income among sectors.
 - ✓ Significance for economic changes i.e. to show the inter relationship among sectors(agriculture, industry and service sector)
 - NIA are very useful for measuring economic growth and formulating economic policies.
 - In most way GDP and GNP are used in national income accounting.
 1. Gross Domestic Product (GDP)-is the market value of all final goods and services produced with in a country's territory during a year irrespective of the owner of the factor of production.

From this definition we understand that;

 - GDP measures the gross value of the products
 - GDP takes the market value of the products (goods and services)
 - GDP measures current/new production only.
 - GDP takes the value of the final goods and services i.e. finished products only. We don't take intermediate goods into GDP calculation.
 - Final products are produced with in the country's territory only.
 - GDP includes the incomes locally earned by the foreigner or non-nationals.
 - GDP excludes the income received by the residents from abroad.
 2. Gross National Product (GNP)-it is the money value of goods and services currently produced by domestically owned factors of production in a given period of time (in one year) irrespective of where these resources are used. It excludes factor income of non-residents (foreigners' income) in a domestic territory.
- Thus;-

$$\begin{array}{|c|} \hline \text{GN} \\ \hline P_{mp} = \text{GDP} \pm \text{NFI} \\ \hline \end{array}$$

Where, $\text{GNP}_{mp} = \text{GNP}$ at market price

$\text{GDP}_{mp} = \text{GDP}$ at market prices

NFI = net factor income

NB. NFI = factor income earned from abroad by residents - factor income of nonresidents in domestic territory.

NFI can be positive or negative

- If $\text{NFI} > 0$, then $\text{GNP} > \text{GDP}$
- If $\text{NFI} < 0$, then $\text{GNP} < \text{GDP}$
- If $\text{NFI} = 0$, then $\text{GNP} = \text{GDP}$

But $\text{GDP} = \text{GNP}$ If and only if the economy follows closed economy.

Approaches to measure GDP

- In circular flow of national income, income creates expenditure and expenditure in turn gives rise to further production.
- There are three ways of measuring GDP and GNP of a country.
 - i. production method (value added method)
 - ii. Income method
 - iii. Expenditure method
 1. Production method (value added method)
- ❖ The flows of goods and services
- ❖ There are two approaches in production

i. Final product approach - the market value of all final goods and services produced in country.

$\text{GDP}_{mp} = P(qf) + P(sf)$ where P = market price, qf = final quantity of goods produced by agricultural and industrial sector.

Sf = final quantity of services produced by services

- The most and main problem under this approach is double counting. i.e. counting more than once in measurement of national income.
- This over counting leads to over estimation of the GDP.
- To overcome this difficulty the value added approach is used.

ii. Value added approach - it is a value added at each stage of production to estimate

- It is the value of the output of the firm minus the value of inputs bought from other firms.

- By applying this approach we have to take either of the following during GDP calculation.
 - a. market values of final goods and services or
 - b. value added at each stage of production.

2. Income method

- ✓ The flows of income
- ✓ GDP_{mp} is measured in terms of income earned from factors of production in the form of wage, rent, profit and interest and adding the value of depreciation and indirect business taxes such as sales tax, excise duty, custom duty etc.
- ✓ Factor income and factor cost are the same.
N.B depreciation is the estimated amount of money by w/c capitals goods wear out during production.
- ✓ By applying this method GDP_{mp} is calculated as follows;

$$GDP_{mp} = \text{Wage} + \text{Interest} + \text{Profit} + \text{Depreciation} + \text{Indirect tax}$$

3. Expenditure method

- ❖ The flows of expenditure
- ❖ It uses to determine the level of current of GDP_{mp} by putting all expenses or expenditures on the final use of domestically produced goods and services during a period of accounting.
- ❖ Final use of goods and services is for two purposes;
 - i. For consumption purpose-for direct satisfaction of wants.
 - ii. For investment purpose-for expanding productive capacity.

Component of GDP_{mp} (when we use expenditure approach)

2004 E.C T-shirt

n o	Stage of production	Final value of the product(birr)	Value added (in birr)
1	Cotton sale to textile factory	3.00	3
2	Cloth sale to sale to garment factory	6.00	6-3=3
3	Garment sale to retailors	10.00	10-6=4
4	Retailer sale to final consumer	15.00	15-10=5
to l		34.00	15

- ✓ $GDP_{mp} = C + I + G + S + (X - M)$

- ❖ Expenditure classified into 5 components;
 1. Private final consumption(C)-it measures the money value of goods and services purchased by households for current use during a time period.
It includes;-durable goods and services, semi-durable goods and services, on-durable goods and services
 2. Gov't final consumption(G) includes expenditure on;-
 - ✓ Health, education, law and order
 - ✓ Federal defense
 - ✓ Federal non-defense
 - ✓ State and local gov'ts etc.
 3. Gross private domestic investment(Ig)-includes
 - ✓ Construction expenditure
 - ✓ Machinery equipment expenditure (business fixed investment)
 4. Change in stock (S)-i.e. an increase in inventories (inventories of unsold outputs)
 5. Net export(S) i.e. export-import
Then, $GDP_{mp} = C + Ig + G + S + (X - M)$
Base year
 $GNP_{mp} = GDP_{mp} \pm NFI$
N.B the followings are excluded from GDP_{mp} calculation when we use expenditure approach
 - i. Expenditure on intermediate goods and service to avoid double counting.
 - ii. Gov't on old shares/bonds or new shares/bonds b/c it is not payment for goods service currently products.

Problems in measuring GDP

- ❖ Especially for developing countries like Ethiopia two types of problems.
 1. Conceptual problems-
 - ✓ W/c method should be selected and w/c is more appropriate/ suitable.
 - ✓ Opinions differ regarding the meaning and definition of NI.
 - ✓ There is no clear cut demarcation b/n productive and nonproductive activity.
E.g. Production for self-consumption,
 - services rendered without remuneration
 - Services of artists etc.
 - ✓ In developed and under developed countries the same pattern for the computation of national income should not be adopted.

2. Statistical or practical problem

- ❖ Non-availability of data; especially in developing countries
- ❖ Barter system -it is very difficult to estimate the money value of this type of transaction in developing countries.
- ❖ The problem of double counting -difficulty to distinguish intermediate goods from final goods
- ❖ Production for self-consumption.
- ❖ Non-maintenance of accounts. E.g. the contributions of self-employed persons don't maintain their accounts properly.

Nominal GDP and versus real GDP

- ❖ Nominal GDP (NGDP)-At the current market prices.
 - It is a monetary value of final goods and services (that are currently produced) measured at current market prices.
 - It is not useful to compare a country's economic performance
 - An increase in nominal GDP does not necessarily mean increase in real output.
 - Nominal GDP is affected by two factors;
 1. Change in physical output and
 2. Change in prices.
 - If current market prices rise fast, nominal GDP will also rise fast even though physical outputs remain the same.
- ❖ Real GDP (RGDP)-at the constant/fixed price.
 - ✓ It is a measure of the real production measured by eliminating the effects of price changes or price rises on the GDP measurement.
 - ✓ It is affected by change in physical output.
 - ✓ It can use to compare the country's GDP over time.
 - ✓ It is often used in making international comparison of economic performance across countries.
 - ✓ Real GDP is better tool for making a year to year comparison
- ❖ To know the real change in output, nominal GDP should be converted

into real GDP as follows;
$$\text{RealGDP} = \frac{\text{NGDP}}{\text{PI} \vee \text{CPI}} \times 100$$

Where, PI=price index of current year

CPI=consumer price index

- ✓ Economic growth rate(EGR) can also determine as follows;

$$\text{EGR} = \frac{\text{RGDP}_t - \text{RGDP}_{t-1}}{\text{RealGDP}_{t-1}} \times 100$$

Where, t=time

Example. Assume NGDP=2000, CPI=100-----in 2003

NGDP=2100, CPI=110-----in 2004 then calculate

- a. The real GDP in 2003 and 2004
- b. Economic growth rate (EG)?

Solution

$$\begin{aligned} \text{a. } \text{RGDP03} &= \frac{\text{NGDP03}}{\text{CPI03}} \times 100 \\ &= (1+x)^n = \frac{2000}{100} \times 100 = 2000 \end{aligned}$$

$$\begin{aligned} \text{RGDP04} &= \frac{\text{NGDP04}}{\text{CPI04}} \times 100 \\ &= \frac{2100}{110} \times 100 = 1909.1 \end{aligned}$$

$$\begin{aligned} \text{b. } \text{EGR04} &= \frac{\text{RGDP04} - \text{RGDP03}}{\text{RGDP03}} \times 100 \\ &= \frac{1909.1 - 2000}{2000} \times 100 = -4.5\% \end{aligned}$$

Other National income account

- ❖ Net domestic product at market prices (NDPmp) is the net market value of all the final goods and services produced in the domestic territory of a country during a year.
NDPmp = GDPmp - depreciation
- ❖ Net national product at market prices (NNPmp) is the net market value of all the final goods and services produced by the nominal residents of a country during a year.

NNPmp = GNPmp - depreciation i.e.

NNPmp = NDPmp ± MFI

- ❖ Net national product at factor cost (NNP_{fc}) is the sumtotal of net value added at factor cost by all the normal resident producer enterprises of a country during a year.
NNP_{fc} or NI = NNPmp - indirect business tax
- ❖ PI or Y = NI - (CT + U_π + TPA)
where, PI or Y = personal income, CT = corporate tax, U_π = undistributed profit
TPA = all types of transfer incomes
- ❖ Y^d = PI or Y - T where, Y^d = disposable income i.e. income after tax,
T = personal tax and other gov'tal fees/payments
- ❖ PY^d = PE + PS where, PY^d = personal disposable income

PE=personal expenditure, PS=personal savings

GDP and income distribution

- ❖ Green GDP is defined as "GDP w/c would help to attain a sustainable use of natural environment equitable distribution of benefit of dev't .
Income inequality and distribution
 - Causes for income inequality in;
 - i. Difference in wealth
 - ii. Difference in ability
 - iii. Discrimination
 - iv. Difference in education, motivation
 - v. Difference in human capital and inv't choice

EXERCISE 5

I. MULTIPLE CHOOSE

1. The phase of business cycle during which business confidence in the economy is at its lowest is known as;
A. Peak B. depression C. recovery D. Contraction
2. Which one of the following is a recurrent expenditure of the government?
A. Payment of pension B. payment of subsidies on production C. purchase of machinery
D. Grants
3. Which of the following is a direct tax?
A. Excise tax B. income C. stamp duty D. sales tax
4. Net exports will be negative if;
A. export exceed imports B. exports and imports are equal C. imports exceed exports D. none of the above
5. Pension and unemployment allowances are;
A. transfer income B. generated income
C. mixed income D. Income earned
6. If goods and services are value at the prevailing price of the year, it will be a valuation at;
A. constant price B. current price C. cost price D. extra ordinary price
7. Indirect taxes are not included in national income because; A. they are not factor income

B. they are an income of lesser value C. they affect the price of goods
D. they are income for the gov't

8. Which of the following approach of measuring national income incorporates indirect business tax as a component of GDP? A. the value added approach B. the output approach C. the expenditure approach D. the income approach

1. GDP can be measured in two ways. These are nominal and real GDP. GDP at -----price is called -----GDP. A. current market, nominal B. constant market, nominal C. current market, real D. nominal market, constant
2. Personal income differs from disposable income by A. personal taxes B. personal saving and personal taxes D. personal saving

II. Write short answer for the following.

3. Write the relationship between NDP_{mp} and GDP_{mp} in equation.
4. How do we get personal disposable income from personal income?
5. Name the components of final consumption expenditure.
6. Why are exports included in national income and imports excluded from national income?
7. Name the alternative measure of GDP which takes into account the sustainable use of the natural environment.

III. Workout

8. Given the following information (in millions of birr)
 - a. Gov't final consumption expenditure=1400
 - b. Change in stocks =210
 - c. Private final consumption expenditure=820
 - d. Net domestic capital formation =275
 - e. Exports=175
 - f. Imports=225
 - g. Depreciation=80
 - h. Factor income to abroad=78
 - i. Factor income from abroad

Find

1. GDP_{MP} by expenditure approach
2. NFI
3. GNP
4. NDP
5. NNP

9. Use the table below to answer the question.

Year	2005	2006
Nominal GDP	10,820	11,600
Real GDP	10,220	10,400

Calculate the value of price deflator for 2005 and 2006.

10. The nominal GDP of Ethiopia in the year 1999 E.C was 458000 million birr. If the consumer price index of the year 1999 E.C was 950, what was the real GDP of Ethiopia during the same year in million birr?

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