# National Income Accounting

By: Bharat Raj Adhikari
Asst. Professor
Gandaki University,
Pokhara

# National Income Accounting

In simple word, National Income is the total or aggregate income of the nation in a particular period of time i.e, a year. The total income is calculated by summing up the income earned by all the individuals and all the institutions within the country in a given time period.

Symbolically,

$NI = Y1 + Y2 + Y3 + \dots\dots\dots\dots + Yn$

where Y1, Y2....Yn are the income of individuals from 1st to nth unit.

National income is measured in terms of money value. So, it is the market value of all the final goods produced in an economy. It means, there shouldn't be repetition of value of any goods and services while calculating the national income. National income reflects the actual performance and size of the national economy.

# Various Concepts of National Income

- *Gross Domestic Product (GDP).*

GDP can be defined, as the sum of market value of all final goods and services produced within territory of a country during a specific period of time, generally one year.

Symbolically,

$$GDP = P_1Q_1 + P_2Q_2 + P_3Q_3 + \ldots\ldots\ldots\ldots + P_nQ_n$$

While calculating GDP, the income earned by foreigners within the country are included and the income earned by national residents abroad and remitted to the home country are excluded. Th market value of domestic product is obtained at both constant (base year) and current year. If GDP is calculated in terms of base year, this is called real GDP and if it is calculated in terms of current year price, th it is known as nominal GDP.

Simply, GDP calculation by expenditure method is $GDP = C+I+G+(X-M)$

Where, C= consumer expenditure on goods and services to satisfy their immediate wants

I= Gross private domestic investment

G= Gross government expenditure

X= Export

M = Import

# Features of GDP

- GDP includes the market value of only final goods and services and excludes the market of intermediate goods.
- If the value of final goods and services is calculated at the current market price, such GDP is known as GDP at market price (GDP ) or Nominal GDP.
- The value of second hand goods and intermediate goods are not included in GDP.
- If the value of final goods and services is calculated at the any previous year's market price, such GDP is known as GDP at base price (Real GDP).
- GDP includes only those goods and services which have market value and which are brought in the market for sales.
- GDP doesn't include transfer payment like pensions, allowances etc. because they don't have any contribution in production process.
- GDP doesn't include capital gains. (but commission received by brokers is included in GDP)
- Income earned from sales of second hand goods are not included in GDP.

# Gross National Product (GNP)

GNP is the market value of all goods and services which are produced during a year by domestically owned resources or factors of production. GNP is a national concept that includes the income of the resident only either they earned within the economy or received from abroad and excludes the income generated locally and taken by the foreigners.

- Symbolically, GNP = GDP +NFIA

Where,

NFIA= Net factor income from abroad i.e. NFIA= R-P

R= Receipt or earning of resident people from foreign country

P= Payment the earning of foreign people in domestic country.

# Difference between GDP and GNP

**GDP**

- It is territorial concept.
- It counts the production within the domestic territory. (No matters who produces either by national resident or by foreigner)
- It is narrow concept.
- It doesn't include NFIA.
- It is traditional concept.

**GNP**

- It is national concept.
- It counts the production which are produced by the nationals within or outside the country.
- It is broader concept.
- It includes NFIA.
- It is modern Concept.

# Net National Product (NNP)

NNP is the market value of all goods and services after deducting the charges for depreciation from the gross national product in a specific period of time generally one year. Depreciation is the wear and tear and ware out cost of capital goods. In other words, Depreciation is the part of capital goods which is used up or consumed.

So, NNP= GNP-Depreciation

NNP is the measure of National Income which is available for consumption and net investment to the society. The NNP is in fact, the actual measure of national income. If NNP is divided by the numbers of the population of a country, it gives per capita income (PCI)

**NI, (Net National Product @ factor cost NNP fc);** When net national income is calculated in terms of factor cost then, it is known as NI.

Mathematically, NNP fc (NI)= NNPmp-NIT

Where, NIT = net indirect taxes or difference between indirect taxes & subsidies

# Personal Income(PI)

Personal Income (PI) can be defined as the sum of all kinds of income received by the individuals from all sources of income. It is all possible income before direct taxes. Personal income includes wages and salaries, fees and commission, bonus, fringe benefits, dividend, interest earning, earning from self employment. It also includes transfer income like pensions, family allowances, old age benefits and social security benefits. Personal income also includes the income earned from illegal incomes eg. Bribe, smuggling, theft, robbery etc.

***PI = NI - undistributed corporate profit – corporate income tax – social security contribution of employees + transfer payment***

# Disposable Income (DI)

Disposable Income is the difference between earned by all individuals and households of a country from all possible source and direct tax to the government. i.e.
DI = Personal Income – Direct taxes

Yd = PI – T    Where, PI = personal income   T= personal taxes/direct taxes

In other words, DI is that part of personal income after paying taxes that the households can spend. It also refers to the purchasing power of the households. However, all disposable income is not spent because a part of income is saved for various purpose. i.e.

Yd = C+S    Where, C = Consumption expenditure,  S = Saving

## Per Capita Income (PCI)

PCI is the average income of the people of a country in a particular year. It is expressed at the current price. It is derived by dividing National Income by the total population.

$$\text{Per Capita Income} = \frac{National\ Income}{Total\ Population}$$

# Nominal GDP

It is calculated or evaluated at the current market prices. Nominal GDP includes all the changes in market prices that have occurred during the current year due to inflation and deflation.

$$GDP = \sum_{p1q1}^{n}$$

# Real GDP

Real GDP is estimated at the market price of any base year, any year before the current year. For example, if the GDP of 2024 is to be calculated and 2010 is chosen as a base year, then the GDP of 2024 is calculated by multiplying the total output of 2024 by respective price of 2010.

- $GDP = \sum_{p0q1}^{n}$ Real GDP= $\frac{Nominal\ GDP}{GDP\ Deflator} X100$

# GDP Deflator

The GDP deflator is an adjustment factor which is used to convert nominal GDP into real GDP. In other words, it is the ratio of nominal GDP to real GDP. By the uses of GDP deflator, we can obtain real GDP from the nominal GDP. Real GDP shows the actual picture of the economy. GDP deflator also helps to calculate rate of inflation.

$$\text{GDP Deflator} = \frac{Nominal\ GDP}{Real\ GDP} X\ 100$$

$$\text{Inflation rate} = \frac{Change\ is\ GDP\ Deflator}{GDP\ Deflator\ of\ previous\ year} X\ 100$$

Or $$\text{Inflation rate} = \frac{GDP\ Def\ of\ current\ year - GDP\ def\ of\ previous\ year}{GDP\ Def\ of\ previous\ year} X\ 100$$

$$GDP\ deflator = \frac{Nominal\ GDP}{\text{Real GDP}} X100$$

$$Rate\ of\ inflation = \frac{current\ GDP\ deflator - previous\ GDP\ deflator}{previous\ GDP\ deflator} X100$$

# Determinants of National Income

Various factors determine national income. Some major determinants of national income are listed as below.

- Quantity and quality of factors of production
- Technological advancement
- Political stability of the nation
- Availability of natural and human resources
- Terms of trade (X-M)

# Introduction to Nepalese Economy, its characteristics and present scenario

**Characteristics**

- Least Developed country in the world
- Low per capita income
- Fragile (weak) economy
- Unfavorable business (economic) environment.
- Political transition and uncertain economic environment
- High rate of unemployment, mass poverty, inequality
- Excessive dependency on agriculture
- Remittance based economy
- Brain drain
- Low level of capital formation
- High Trade deficit

| Economic Indicators | Value |
|---|---|
| GDP at base price (Rs in billion) | NRs. 48.51 Kharba |
| GNI Per capita income ($) | $ 1381 |
| GDP growth rate (at base price) | 5.49% |
| Remittance income (Rs in billion) | NRs. 986.2 Arba |
| Remittance income as percent of GDP | 20.3 % |
| Contribution of agriculture to GDP | 23.69 % |
| Contribution of industrial sector to GDP | 14.13% |
| Rate of inflation | 6.3% |
| Hydroelectricity generation | 1547 MW |
| Poverty level | 16.67% |
| Population growth rate | 0.92% |
| HDI value | 0.610 |
| Area covered by forest | 40.4% |
| Dependence on agriculture | 60.4 % |

# Contemporary features of Nepalese Economy

1. Low per capita income
2. Mass poverty
3. Excessive dependence on agriculture sector (27.5% of GDP)
4. Under utilization of natural resources (water, hydropower, forest, mines and minerals, medicinal herbs, natural beauty, historical places etc.)
5. High trade deficit (import payment is more than the export income)
6. Dualistic and mixed economic system (traditional and modern) (public sector and private sectors)
7. High population growth
8. Remittance based economy (879 billion which is 25.4% of GDP)

f9
(
9
)
0
_
-
+
=
T
H
A
N
K
Y
O
U
return
?
/
>