3. Measurement of National Income

Q:1 Define National Income. Explain Importance of NI?

(A) **Introduction :-** National income means the total market value of all goods and services produced in the economy during a given year. It is expressed in terms of money without duplication. Economic growth is generally considered with increase in National Income.

(B) **Meaning :-** According to Simon Kuznets "National Income is the net out put of goods and services Flowing during a year From Productive System to in the hands of Ultimate consumers"

(C) **Importance OF National Income :-**

National Income plays an important role in the Following areas :-

1) **To measure economic Performance OF Countries :-** The estimates of National Income, National Output have become standard Indicator for all countries to measure their growth and development.
   (e.g) Countries are ranked on the basis OF growth rate.

2) **To measure economic Welfare :-** Changes in composition OF NI over a Period of time, can be helpful in measuring economic Welfare.

(e.g) When large Part of NI is Contributed by Service Sector, it show Positive growth of NI.

(3) To Compare Standard of Living :- National Income Studies help us to compare the standard of Living of People living in Same Countries or living in different Countries.

(e.g) PCI of a Country shows that how income is distributed among the People.

(4) Economic planning and Policies :- NI is an important tool of macro-economic analysis & Policy. Most of government use NI data to formulate Medium and Long term planning.

(e.g) India adopted five year planning to improve growth of NI.

(5) Sectoral Contribution :- NI is Contribution From Three Sectors of economy —

a) Primary Sector b) Secondary Sector c) Tertiary Sector

Analysis of NI Shows that which sectors Contribution is more than other Sectors.

Thus it is Used to study Occupational Structure Production, investment and Consumption Pattern.

(6) Changes in Price level :- NI data Can be Used to estimate trends in Price level and to forecast inflationary and deflationary Trends.

(e.g) GDP and GNP is measured at Current and Constant Prices.

(7) Business Forecast :- NI studies are used by businessmen to forecast future business activities. Data from different countries regarding NI, PCI, PCE, Investment Policies etc will help businessmen to predit future Trends of different markets in the world.

(8) Global Income Distribution :- NI data of different Countries are used to determine Global Distribution of Income and wealth. This data enable us to determine the subscriptions of different countries to International Organisation like - UNO IMF IBRD etc.

(9) National Expenditure :- National Expenditure is incurred on Consumption Expenditure and Investment Exp. To maintain the capital stock of a community, NI helps us to charge reasonable depreciation.

(10) Defence and Development :- NI data helps us to divide the National Product between Defence and development Purpose.

(e.g) If large Part of NI is generated due to cost of health, education, consumption, It shows the Positive growth of NI & Vice Versa.

(11) Budgetory Policies :- Modern government prepare their budgets with the help of NI data. They try to make anti-cyclical policies on the basis of NI data. Taxation and borrowing Policies are framed to avoid Fluctuations in NI.

Q:2 Explain Need of Green GNP and NNP Concepts

(A) Green GNP and Green NNP :- GNP, GDP measures the total market value of goods and services Produced in a country. It does not account for environmental degradation and resource depletion. Thus New approach was adopted Green GNP & NNP.

* "The Green Gross Domestic Product (GGDP) is an index of economic growth with environmental Consequences"

The Calculation of GGDP shows Natural Capital accounting. It is the Process of calculating the total Stock and Flow of natural resources in a given ecosystem of a region.

GGDP shows Loss of bio-diversity, the cost of climate change and Pollution in the Process of Production etc.

* "Green NNP means the Net investment in Produced means of Production like equipments, Plant and machinery, material etc. but also in human Capital, various Natural resources, environmental assets are also evaluated at their respective Prices."

In India, GGDP efforts were started in 2009. The Ministry of Statistics setupan expert group in 2011 to Provide Framework of Green National accounts in India. The Committee

Presented report in 2013.

GGDP = GDP - Cost of Net Natural Capital Consumption.

Cost of Net Natural Capital Consumption include -

i) Cost of natural resource consumption
ii) Cost of environmental depletion.

(B) Need for Green GDP : (1) GNP and GDP Calculate only gross out Produced but GGDP Cost help to evaluate actual cost of wealth and assets of country.

(2) Green GDP measures helps us to know that income generated from Production Process is Sustainable in Future or not.

(3) Natural Capital include Geology, Soil, air, water and living things are not considered in economic assets in GDP.

(e.g) Benefit of maintaing Forest land, Coastal land resources etc are not included in GDP as they cannot Provide money value. So it is necessary to Calculate Green GDP.

(4) Many Economists Says that Government do not make Provision of resources for future generations They mostly deplet the natural resources to get short term Profits

But Green GDP will help to maintain interest for Future generations.

(5) Conventional GDP has limited scope for indicating the social

Well being of the economy. But Green GDP has wider Scope as it indicate Potential development and social well-being of economy.

ⓒ Drawbacks / Limitations / Criticism :-

1) It is very difficult to calculate Monetary value of some natural components.

2) GGDP measures are not giving Clear idea about economic and social welfare of GDP. It gives more importance to environment only.

3) Some economist Says that GGDP mensures only Depletion of natural resources so it cannot indicate actual growth rate.

ⓓ Calculation of GGDP :-

① Physical accounting :- It Provide Quantitative and Qualitative information of resources of each state.
(e.g) Estimating forest cover area, water cover areas etc

② Monetary Valuation :- It means to estimate money Value of natural Capital
(e.g) money value of bio-diversity in Urban areas.

③ The Net change in Natural Capital in Monetary Term

GGDP = GDP − Cost of Net Natural Capital Consumption.

Q:3 Explain Relationship between National Income and Economic Welfare ?

(A) National Income :- " NI means the total market Value of goods and services Produced in a country during a given year "

(B) Economic Welfare :- " Economic Welfare is the level of Prosperity and standard of living of either an Individual or group of People "

Economic Welfare of People depends Upon the efforts made by government to improve Quality of life. This can be Possible with Govt. Expenditure on - health, education, allowances, subsidies, investment, infrastructural growth etc.

In 1972, William Nordhaus and James introduced their Measure of Economic Welfare (MEW) as alternative to GDP.

(C) Relationship between National Income and Welfare :-

Pigou develop a close relationship between Economic Welfare and National Income because both can be measured in terms of money. Following factors shows direct relationship between NI & Welfare :-

1) Change in Size of National Income :- When the Size of NI increases, It will result more income and more Consumption of goods and services. This has a Positive impact on welfare & Vice Versa.

2) Change in Price Level :- If the value of NI rises due to inflation, it becomes difficult to measure real changes in economic Welfare. It is only real increase in Output will increase Economic welfare.

3) Per Capita Income :- $PCI = \frac{\text{Total National Income}}{\text{Total Population.}}$

If NI and Population change at same rate, then PCI will remain same. It will not increase economic welfare. Thus increase in PCI will increase Economic Welfare.

4) Expenditure Pattern :- Expenditure Pattern of People also affect on NI and on economic Welfare. If Increase in income is spend on basic necessities, then Economic Welfare increase.
If Increase in income is spend on Luxuries, then Economic Welfare will decrease.

5) Production Pattern :- Production Pattern of country decide affect on NI and Economic Welfore.
(e.g) If NI is increased due to Production of essential goods & services, Eco. Welfare will increase.
If NI has increased due to Production of Luxury and more defence Production, then Economic Welfare will decrease.

6) Changes in Income Distribution :- Governments earn revenue from People through Taxes. Government

we inject same Taxes through Govt. Expenditure.
IF rich are taxed more to increase Welfare spending, it will have a Possitive effect on economic welfare.
IF most of NI is generated through Private Sector Profit and the rich enjoy tax benefits, then economic Welfare have negative effect.

Q:4 Define the Concepts :-

1] Gross Domestic Product :- "GDP means the money value of Final goods and services Produced within a country during a given period of time".
GDP is the output Produced within domestic territory of the country.

GDP in Closed economy :- In closed economy country has no relation with other countries.

$$GDP = C + I + G$$

GDP in open economy :- In open economy country is related with other countries in Export and Import.

$$GDP = C + I + G + (X - M)$$

2) Gross National Income (GNI / GNP) :-
"GNP means the money value of Final goods and services Produced by Country's Factors of Production during a year."

GNP / GNI = C + I + G + (X − M) + (R − P)

GNP = GDP + (R − P)

Net Factor income From Abroad (R−P) :- Some of Country's national Output is Produced by Foreign Firms or Foreigners. Similarly some of domestic factors are Producing output in Foreign Countries. The difference between above two measures is known as Net Factor Income from Abroad (R−P)

R = Income received by Domestic factors

P = Payment made to Foreigners.

(3) NNI / NNP and NDP :-

NNP - Net National Product & NDP - Net Domestic Product are calculated when Depreciation is deducted From GNP & GDP respectively.

NNP = GNP − Depreciation

NDP = GNP − Depreciation.

(4) GNP, NNP, NDP, GDP at Market Price & Factor cost

In Market Price - Indirect Tax & Subsidies are included. Indirect Taxes can increase the Prices (e.g) Sales Tax, Excise Tax, GST etc.

But Subsidies can Reduce the Price

Factor Cost :- It means amount Paid to Factors of Production For their Services in Production Process

$GNP_{mp} = GNI_{fc} + IT - Subsidies.$

$GDP_{mp} = GDP_{fc} + IT - Subsidies.$

$NNP_{mp} = NNP_{fc} + IT - Subsidies$

$NDP_{mp} = NDP_{fc} + IT - Subsidies.$

Similarly.

$GNI_{fc} = GNI_{mp} - IT + Subsidies$

$GDP_{fc} = GDP_{mp} - IT + Subsidies$

$NNP_{fc} = NNP_{mp} - IT + Subsidies$

$NDP_{fc} = NDP_{mp} - IT + Subsidies$

(5) NI at Current and Constant Price :-

"The current Prices means the prices of goods Prevailing in market during a given Period of time". The Concepts of GNI, GDP, NNI and NDP are Valued at current Prices

The estimates OF GNI and NNI at Current Price do not help to indicate real growth of economy because Price go on changing. So estimates of current Price will increase the values of National Income.

Therefore in Order to show real change in GNI or NNI, we must Use Price-deflator. It means Constant Price is Used to Calculate GNI, NNI, GDP & NDP.

To Calculate National Income, at constant Price Base Year is Selected. Base Year must be

normal year and free from natural calamities like- Flood, earthquakes, famines and war.

The base year must be revised year after year. Recently base year 2011-12 is Fixed by CSO- Central Statistical Organisation.

(6) Personal Income :-

" Personal Income means sum of all incomes received by all individuals in a country during a year "

It include all the income earned by corporates, Transfer Payments, Social security Profits.

$$PI = NI + \text{Transfer Payment} + \text{Corporate Income} + \text{Undistributed Profits of Corporates} + \text{Social Security Profits.}$$

(7) Disposable Income :-

" Disposable income means income available to People after deducting Taxes "

$$\text{Disposable Income} = \text{Personal Income} - \text{Direct Tax Paid}$$

A part of income is paid to government in the form of Direct Tax. So to calculate Disposable income, Direct tax must be deducted from PI.

(8) PPP- Purchasing Power Parity :-

" Purchasing Power Parity (PPP) Exchange Rate means the exchange rate based on PPP currency of Selected Standard (dollars of U.S.A) ".

It is useful to measure relative purchasing power of different currencies for same type of goods and services.

PPP is very helpful to make accurate comparision of standard of living of different countries.

GNI PPP → means GNI converted into international dollars by using PPP rates.

GDP PPP → means GDP converted into international dollars by using PPP rates.

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