- Primary data are original and secondary data are already in existence and therefore, are not original.
- Primary data do not need any adjustment, secondary data need to be adjustment to suit the objective of study in hand.
- Primary data are expensive and secondary data are less expensive.

Statistical Methods of Data Collection

(i) Direct Personal Investigation

It is the method by which data are personally collected by the investigator from the information. Merits and demerits of this method are follows.

(a) Merits

- Originality
- Reliability
- Uniformity
- Accuracy
- Related information
- Elastic

UNIT V

NATIONAL INCOME AND RELATED AGGREGATES

Points to Remember

- **Consumption Goods :** Those final goods which are used by the consumers to satisfy human wants directly. All goods and services purchased by consumers are consumer goods.
- **Capital Goods :** Those final goods which are used for investment by the producers in production of goods and services. These goods are of durable nature.
- **Final Goods :** Those goods which are purchased either for final consumption by consumers (consumers goods) or for investment by producers (capital goods). These are not for resale or for further processing.
- **Intermediate Goods :** Those goods and services which are purchased for as a raw material for further production or for resale in the same year. These goods do not fulfill needs of mankind directly. Services used by the producers are intermediate goods. e.g. Service of Lawyers, Mechanics, Charted Accountants, Raw Material etc.
- **Investment :** Value of addition made to the physical stock of capital during a period of time (financial year) is called investment. It is also called capital formation.
- **Depreciation :** means fall in value of fixed capital goods due to normal wear and tear, expected obsolescence and efflux of time. It is also known as consumption of fixed capital. Depreciation

can be calculated by dividing the value of fixed capital by its expected life in years.

- **Gross Investment :** Total addition made to physical stock of capital during a period of time. It includes depreciation. It is also known as Gross Capital formation.
- **Net Investment :** Net addition made to the real stock of capital during a period of time. It excludes depreciation. Net Investment = Gross investment – Depreciation.
- **Stock :** Variables whose magnitude is measured at a particular point of time are called stock variables. e.g., Wealth, assets, money, Inventory etc. A stock variable is nothing but an accumulated sum of flows.
- **Flow :** Variables whose magnitude is measured over a period of time are called flow variable. Eg. National income, change in stock etc.
- **Circular flow of income :** It refers to continuous flow of goods and services and money income between firms and households in two sector economy. It is circular in nature. It has neither any end nor any beginning point. Real flow shows the flow of produced goods and services and factor services between firms and households. Money flow shows the flow of consumption/ investment expenditure and factor payments between firms and households.
- **Leakage :** It is the amount of money which is withdrawn from circular flow of income. For e.g. Taxes, Savings and Imports.
- **Injection :** It is the amount of money which is added to the circular flow of income. For e.g., Govt. Exp., Investment and Exports.
- **Economic Territory :** Economic (or domestic) Territory is the geographical territory administrated by a Government within which persons, goods and capital circulate freely.

- **Value of Output :** Market value of all goods and services produced by an enterprise during an accounting year. Value of Output = Sales + Change in Stock.
- **Value added :** It is the difference between value of output of a firm and value of intermediate goods bought from the other firms during a particular period of time. Value added=value of output-Intermediate consumption.
- **Domestic Income (NDP_{FC}) :** It is the factor income accuring to owners of factors of production for suppling factor services with in domestic territory during an accounting year.

  $NDP_{FC} = GDP_{MP}$ – Depreciation – NIT.
- **Gross Domestic Product at Market Price (GDP_{MP}):** is the market value of all the final goods and services produced by all producing units located in the domestic territory of a Country during an Accounting year.
- **Net Domestic Product at Market Price (NDP_{MP}) :** $NDP_{MP} = GDP_{MP}$ – Depreciation (Consumption of fixed capital)

NATIONAL AGGREGATES

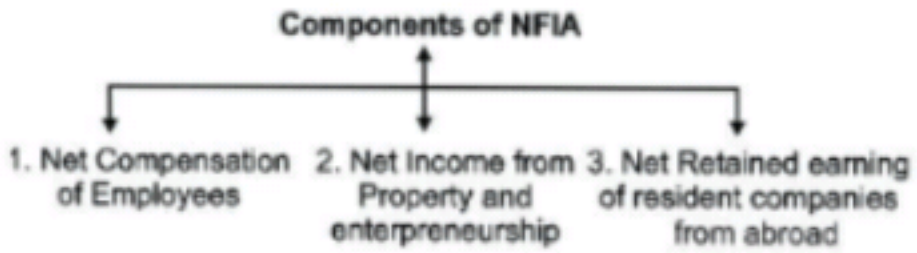
- **Gross National Product at Market Price (GNP_{MP})** is the market value of all the final goods and services produced by normal residents (in the domestic territory and abroad) of a country during an accounting year. $GDP_{MP} + NFIA = GNP_{MP}$
- **National Income (NNP_{FC}) :** It is the sum total of all factors incomes earned by normal residents of a country in the form of wages. Rent, Interest and profit during an accounting year in domestic economic territory as well as abroad.

  $NNP_{FC} = NDP_{FC} + NFIA$ = National Income.

Some Important Relations

- Gross = Net + Depreciation (consumption of fixed capital)
- National = Domestic + NFIFA (Net factor income from abroad)
- Market Price = Factor Cost + NIT (Net Indirect Tax)

- Net Indirect Tax (NIT) = Indirect Tax – Subsidies
- Net Factor Income from Abroad (NFIFA) = It is diffrerence between factor income received/earned by normal residents of a country and factor income paid to nonresidents of the country.



Methods of estimation of National Income

Value Added Method (Product Method) :

Gross Value Added at Market Price (GVA_{MP})

= Sales + change in stock – Intermediate Consumption.

= GDP_{MP} = ΣGVA_{MP} of all sectors

OR

= Value of output – Intermediate consumption

NVA_{FC} = GVA_{MP} – Depriciation – NIT

- National Income = NNP_{FC} = GDP_{MP} – Depreciation + NFIFA – NIT

Steps to be followed :

1. Write Sales value (Add sales of all sectors if given sector wise)
2. Add : Change in stock (Closing stock – opening stock if given separately).
3. Subtract : Intermediate consumption

   Capital goods are not intermediate good.

   You have reached GDP_{MP}

   National Income (NNP_{FC}) = GDP_{MP} – Depreciation + NFIA – NIT

- **Income Method (Factor Income distribution method):** Domestic Income (NDP_{FC}) = Compensation of Employees + Operating Surplus + Mixed Income

  National Income (NNP_{FC}) = NDP_{FC} + NFIFA

  Steps to be followed :

  1. Write compensation of Employees (if not given add salary, wages, bonus, contribution by employer in social security schemes).
  2. Add : Operating Surplus (If not Given add interest, Rent & Royalty and Profit).
  3. Add : Mixed Income of self employed. You have reached NDP_{FC}

     National Income (NNP_{FC}) = NDP_{FC} + NFIA

- **Expenditure Method :**

  $GDP_{MP} = C + G + I + (X - M)$

  Steps to be followed :

  1. Write Private Final Consumption Expenditure
  2. Add : Government Final Consumption Expenditure
  3. Add : Gross Domestic Capital Formation
  4. Add : Net Exports (Export – Imports)

     You have reached at GDP_{MP}

     National Income (NNP_{FC}) = GDP_{MP} – Depreciation + NFIA – NIT

- **Problem of Double Counting :** Counting the value of a commodity more than once while estimating national income is called double counting. It leads to overestimation of national income. So, it is called problem of double counting.

- **GDP and Welfare :** In general Real GDP and Welfare are directly related with each other. A higher GDP implies that more production of goods and services. It means more availability of goods and services. But more goods and services may not necessarily indicate that the people were better off during the year. In other words, a higher GDP may not necessarily mean higher welfare of the people.
- **Real GDP :** When the goods and services are produced by all producing units in the domestic territory of a country during an accounting year and valued at base year's prices or constant price, is called real GDP or GDP at constant prices. It changes only by change in physical output not by change in price level. It is called a true indicator of economic devleopment.
- **Nominal GDP :** When the goods and services are produced by all producing units in the domestic territory of a country during an accounting year and valued at current year's prices or current prices, is called Nominal GDP or GDP at current prices. It is influenced by change in both physical output and price level. It is not considered a true indicator of economic development.
- **Conversion of Nominal GDP into Real GDP**

$$\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{Price index}} \times 100$$

Price index plays the role of deflator deflating current price estimates into constant price estimates. In this way it may be called GDP deflator.

- **Welfare** mean material well being of the people. It depends on many economic factors like national income, consumption level quantity of goods etc and non-economic factor like environmental pollution, law and order etc. the welfare which depends on economic factors is called economic welfare and the welfare which depends on non-economic factor is called non-economic welfare. The sum total of economic and non-economic welfare is called social welfare. The limitations in taking GDP as welfare measure are as follows :

1. **Externalities :** Externalities refer to benefits or harms of an

activity caused by a firm or an individual, for which they are not

1. **Externalities :** Externalities refer to benefits or harms of an

activity caused by a firm or an individual, for which they are not paid or penalized. For example, environmental pollution caused by industrial plants is a negative externality and building a flyover is a positive externality.

2. **Composition of GDP :** GDP does not exhibit the structure of the product. If the increase in GDP is mainly due to increased production of war equipment's and ammunitions, then such an increase cannot improve welfare in economy.
3. **Distribution of GDP :** When GDP is unevenly distrubuted, increase in GDP does not increase welfare.
4. **Non-monetary exchanges :** Many activities in an economy are not evaluated in monetary terms, they are not included in GDP, due to non availability of data. However, such activities influence the economic welfare of people of the economy.

Finally, it can be concluded that GDP may not be taken as a satisfactory measure of economic welfare due to above mentioned limitations, yet it does reflect some index of economic welfare.

PRECAUTIONS IN MAKING ESTIMATES OF NATIONAL INCOME

1. **Value added (Production) method :**
   (a) Avoid double counting
   (b) Do not include sale of second hand goods.
   (c) Self-consumed output must be included.
2. **Income Method**
   (a) Avoid transfer income
   (b) Avoid capital gain
   (c) Include income from self-consumed output
   (d) Include free services provided by the owners of the production units.
3. **Final expenditure Method**
   (a) Avoid intermediate expenditure