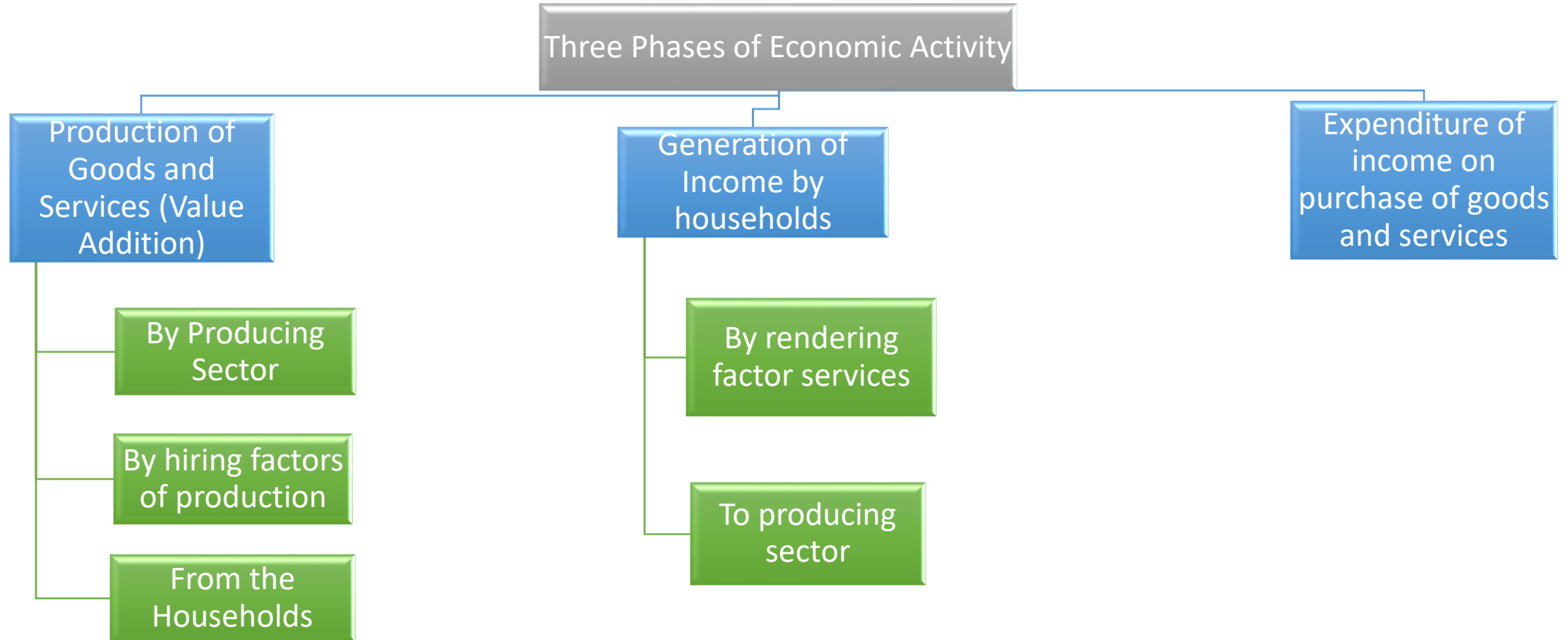
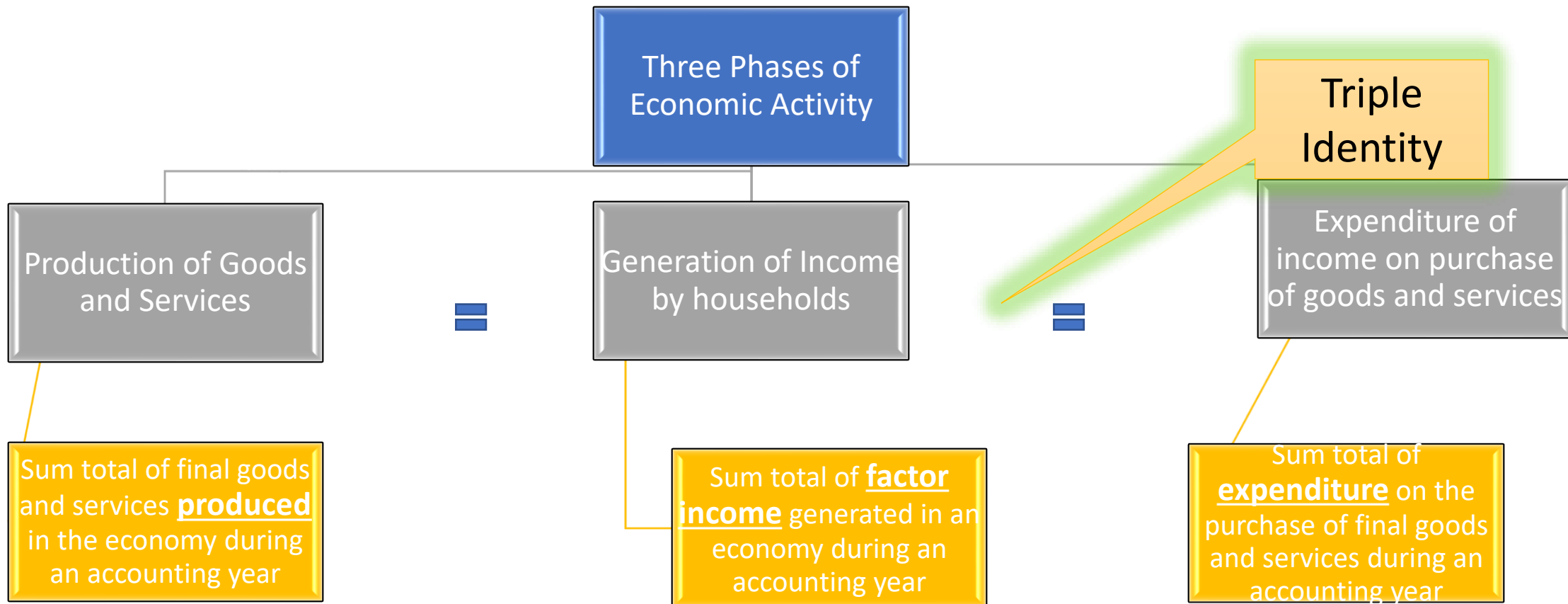


# Methods of Calculating National Income

# Circular Flow Model/3D View of National Income




# Circular Flow Model/3D View of National Income



## Assumptions :

- Two Sector Economy i.e. producing sector and household sector
- No savings. So total expenditure is equal to total income

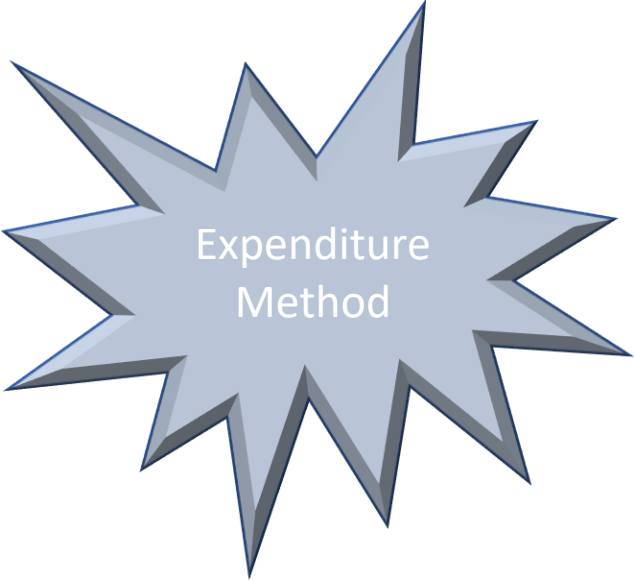
# Three methods of Calculating National Income



Product  
Method or  
Value added  
method



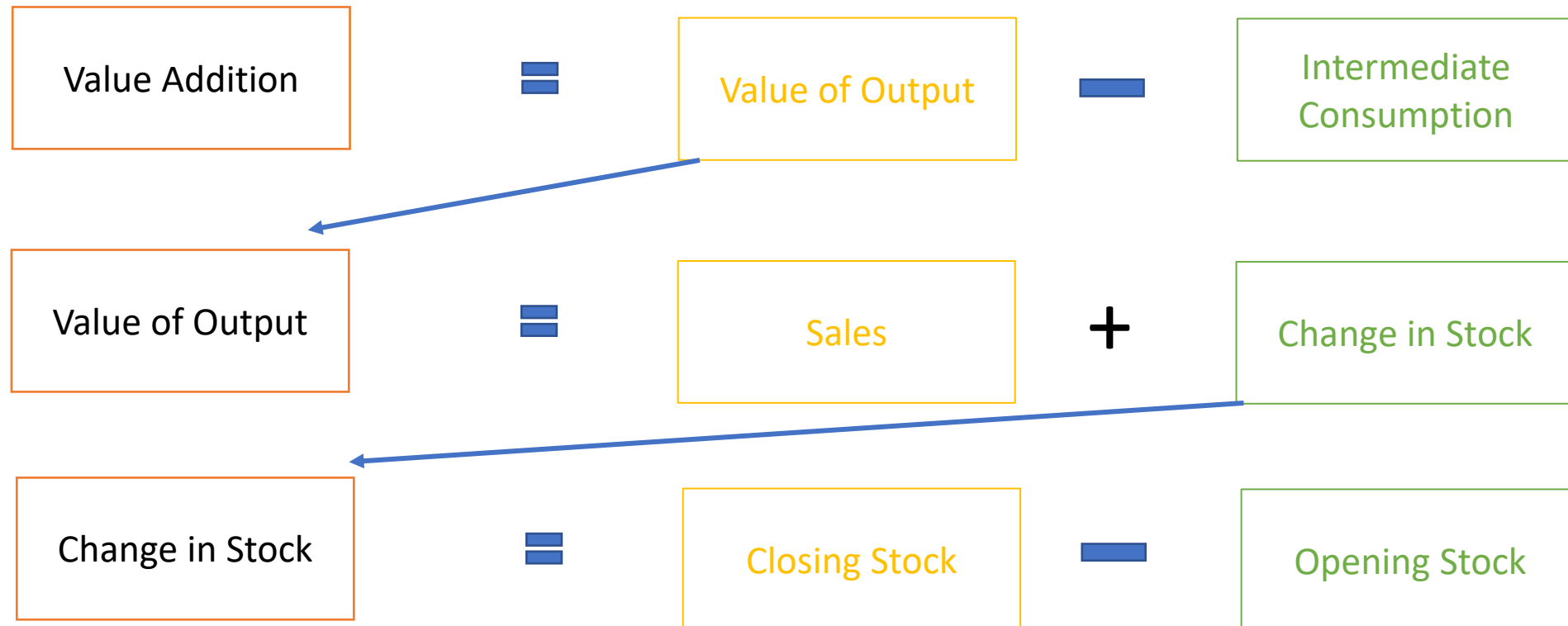
Income  
Method



Expenditure  
Method

Production method or Value  
Added method

# Production leads to Value addition



# Method 1 - Product Method or Value Added Method

## Key Points

- Value of Output
  - Market value of goods and services produced by a firm during an accounting year. Basically it is the production during the year
  - If all production is sold then Value of Output = Sales as there will be no stock
- Change in Stock
  - If Closing Stock > Opening Stock then this will be positive
  - If Closing Stock < Opening Stock then this will be negative
- Sales
  - can be domestic sales or export sales
- Closing Stock
  - Unsold output at the end of the current year
- Opening stock
  - Unsold output at the end of last year and carried forward to this year

# Method 1 - Product Method or Value Added Method

- Intermediate Consumption

- Value of non factor inputs or value of raw materials used in the process of production. It is also called single use producer goods
- It can be purchased either from domestic market or imported from abroad



# How to Calculate Sales

- No of Units Sold X Basic Price Per unit XXXX
- Add – GST/Indirect Taxes XX
- Total Sales XXXX

Or

- No of Units Sold X Price Per Unit XXXX
- Here in Price per unit indirect taxes is already included

# How Value added is Calculated

Producing Enterprise	Value of Output	Intermediate Consumption	Value Added
Farmer	600	200	400
Flour Mill	800	600	200
Baker	1000	800	200
Shopkeeper	1200	1000	200
Total	3600	2600	1000

Similarly, Gross value added by all the producing enterprises within the domestic territory of a country during an accounting year is called **GROSS Domestic Product at market Prices (GDPMP)**

# How to Calculate

## Method 1

### Final Output Method

Market Value of final goods and services produced in an economy in one year

=

Gross Domestic Product at Market Prices for one year  
Or  
 $GDP_{MP}$

=

Gross Value added by all producing enterprises within the domestic territory of a country in one year



- Sum only final goods and services of all producing enterprises in
  - primary sector
  - secondary sector
  - Tertiary sector
- Ignore intermediate consumption

## Method 2

### Value Added Method

Gross Value added by all producing enterprises within the domestic territory of a country in one year



- Sum GVA of all producing enterprises in
  - primary sector
  - secondary sector
  - Tertiary sector

# How to Calculate

Primary Sector covers  
agriculture



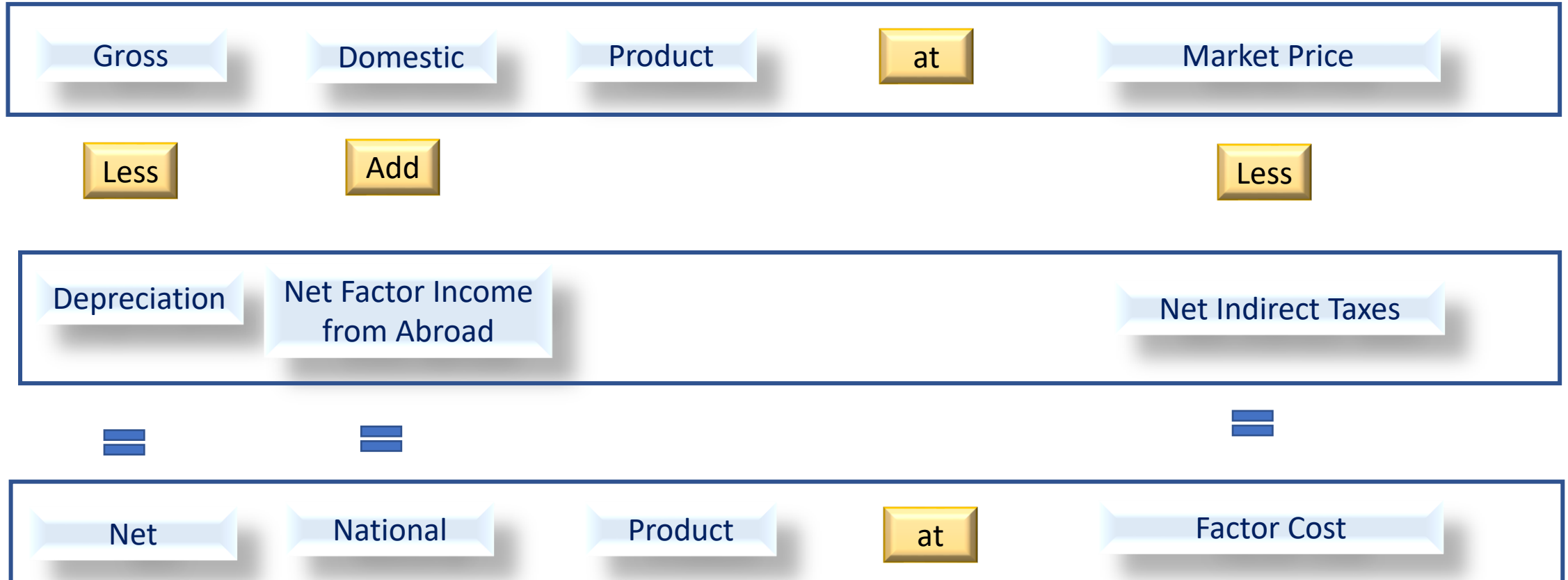
Secondary Sector covers  
industries



Tertiary Sector covers  
services like banking and  
insurance



# How to Calculate National Income from $GDP_{MP}$



Or  
**National Income**

# Precautions regarding Product Method



1

Sale and Purchase of 2<sup>nd</sup> hand goods excluded as they were already included in the year they were produced

2

Commission earned on sale and purchase of 2<sup>nd</sup> hand goods is included

# Precautions regarding Product Method



3

Own account production of goods of the producing units is included. Ex Cars used by car producer for transporting own employee



4

Imputed value of production for self consumption. Ex Wheat produced and consumed by farmers families themselves



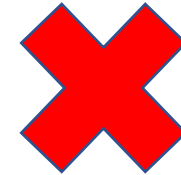


# Precautions regarding Product Method



5

Value of intermediate goods not included as already included in value of final goods. Example - Raw Materials



6

Imputed rent on owner occupied houses

Actually all houses have rental value whether rented or self occupied



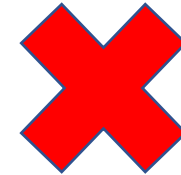


# Precautions regarding Product Method



7

Services for self consumption excluded because it is difficult to estimate its market value. Ex services of housewives



- ❖ Value added in Govt sector is equal to Compensation of Employees only.
- ❖ As data for Rent and Interest not available and
- ❖ Profit does not exist.
- ❖ Here only Govt as welfare agency is considered.
- ❖ Govt PSU's already considered in producing enterprises



# Problem of Double Counting



## How to avoid

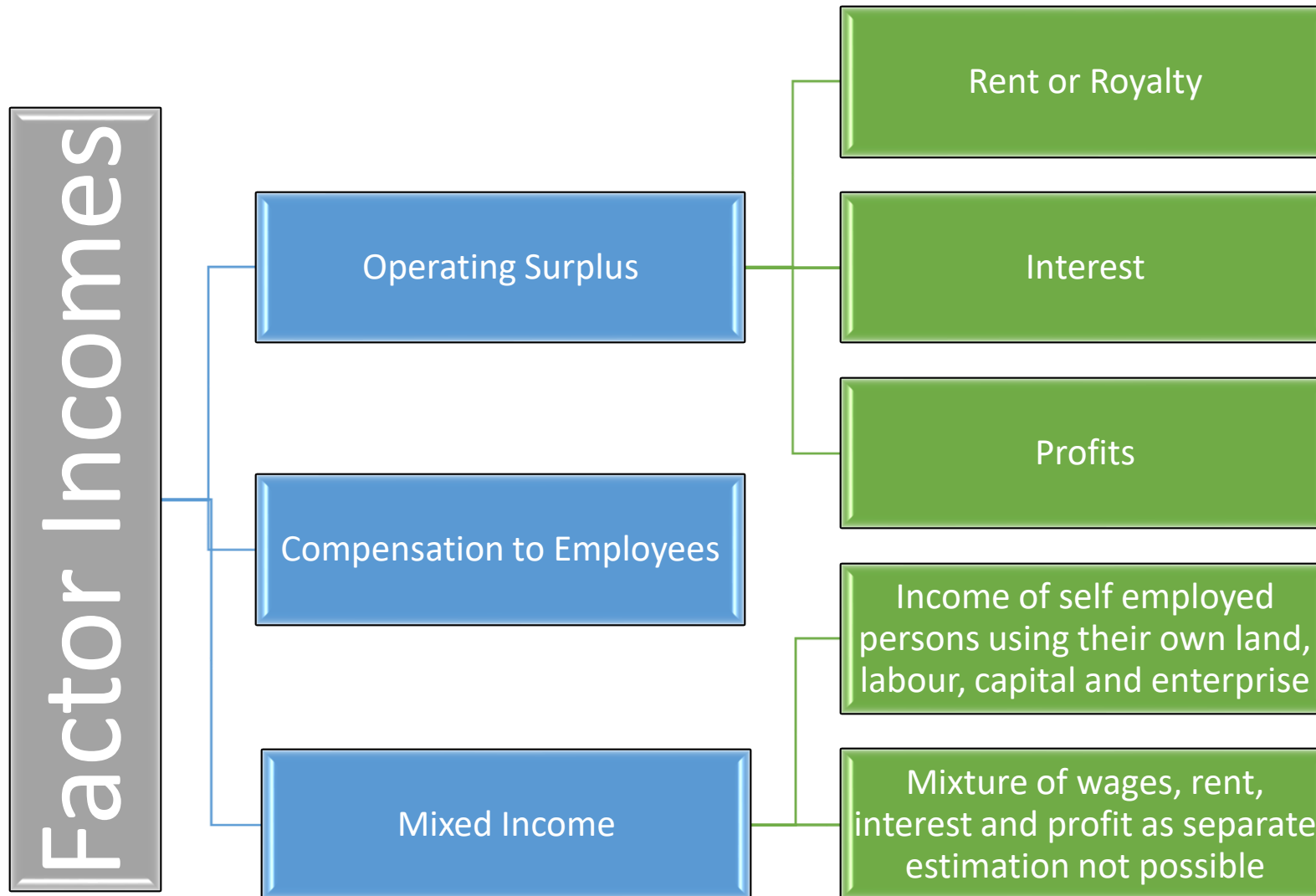
**Final Output method** – Consider only value of final goods and services and exclude intermediate consumption.

Consider only those goods which either lead to final consumption expenditure or final investment expenditure i.e by consumers or producers respectively

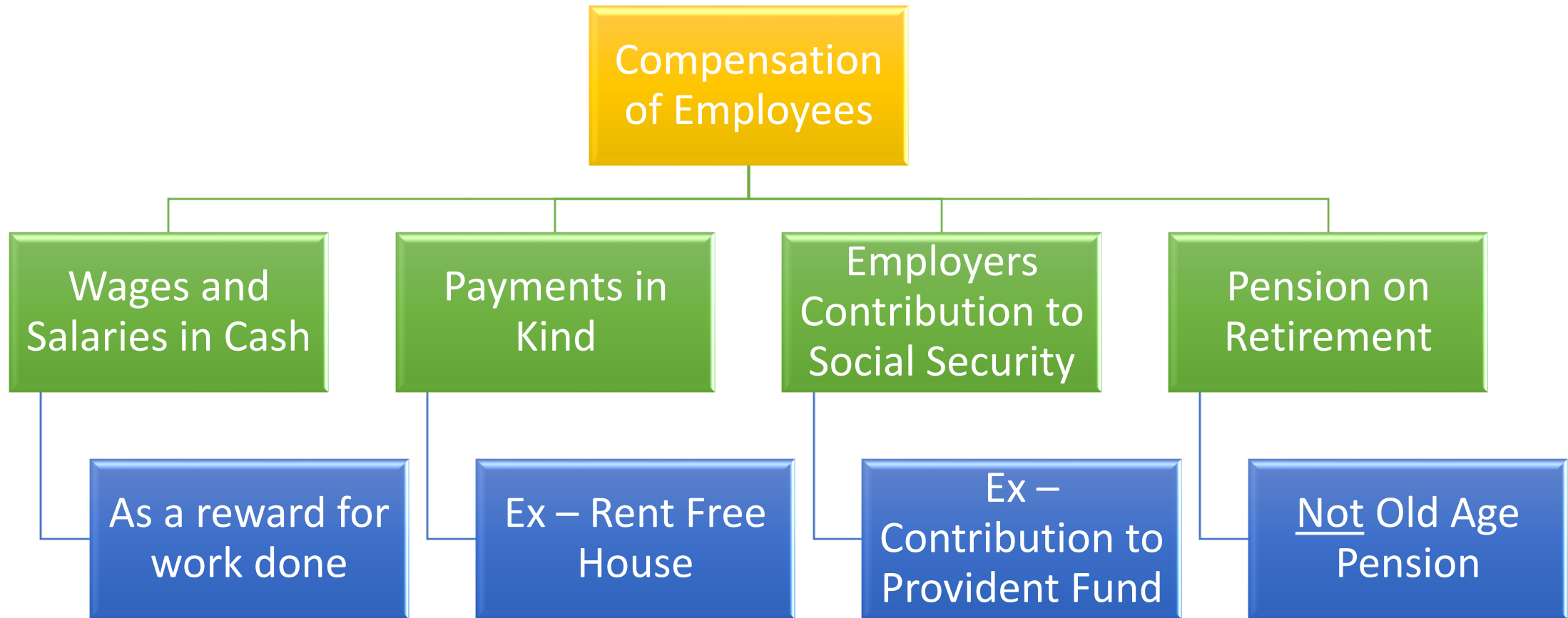
**Value added method** – Value added refers to difference between value of output and value of intermediate consumption

# Income Method

# What are Factor Incomes



# Compensation of Employees



Note : Employees contribution to social security is not considered separately as it is part of Wages and Salaries

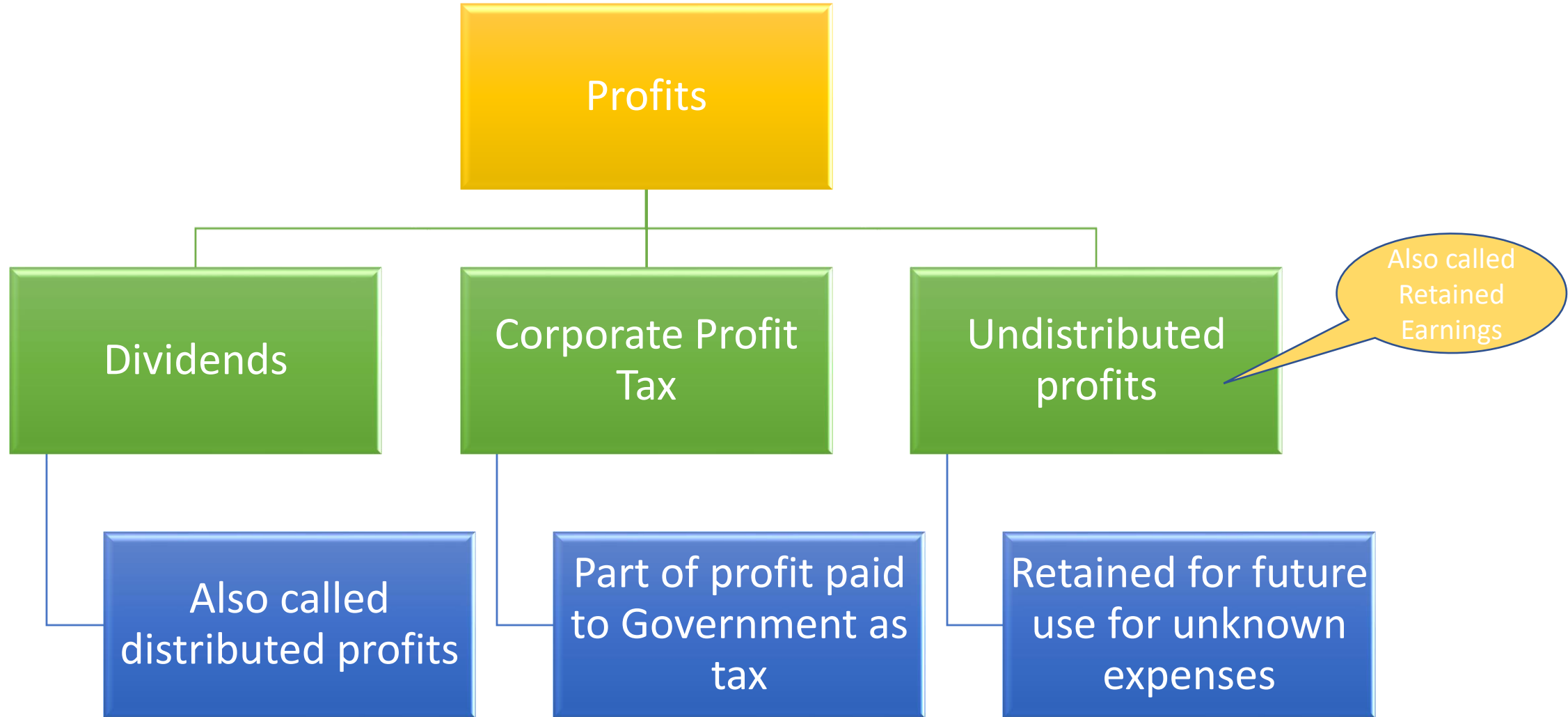
# Rent and Royalty Meaning

- Rent means income which arises from ownership of land and building.
- Rental income includes both actual rents (rent of let out land) as well as imputed rent (rent of self-occupied properties).
- Imputed rent of owner occupied houses is calculated on the basis of market rental value of the house.

Royalty refers to income received for granting leasing rights of sub-soil assets.

For example, owners of mineral deposits like coal, iron ore, natural gas, etc. can earn income by giving rights of mining to the contractors.

# Profits



# National Income by Income Method

Total factor incomes within the domestic territories of the country

Domestic Income or Net Domestic Product at Factor Cost (NDP at FC)

+

Add – Net Factor Income from Abroad

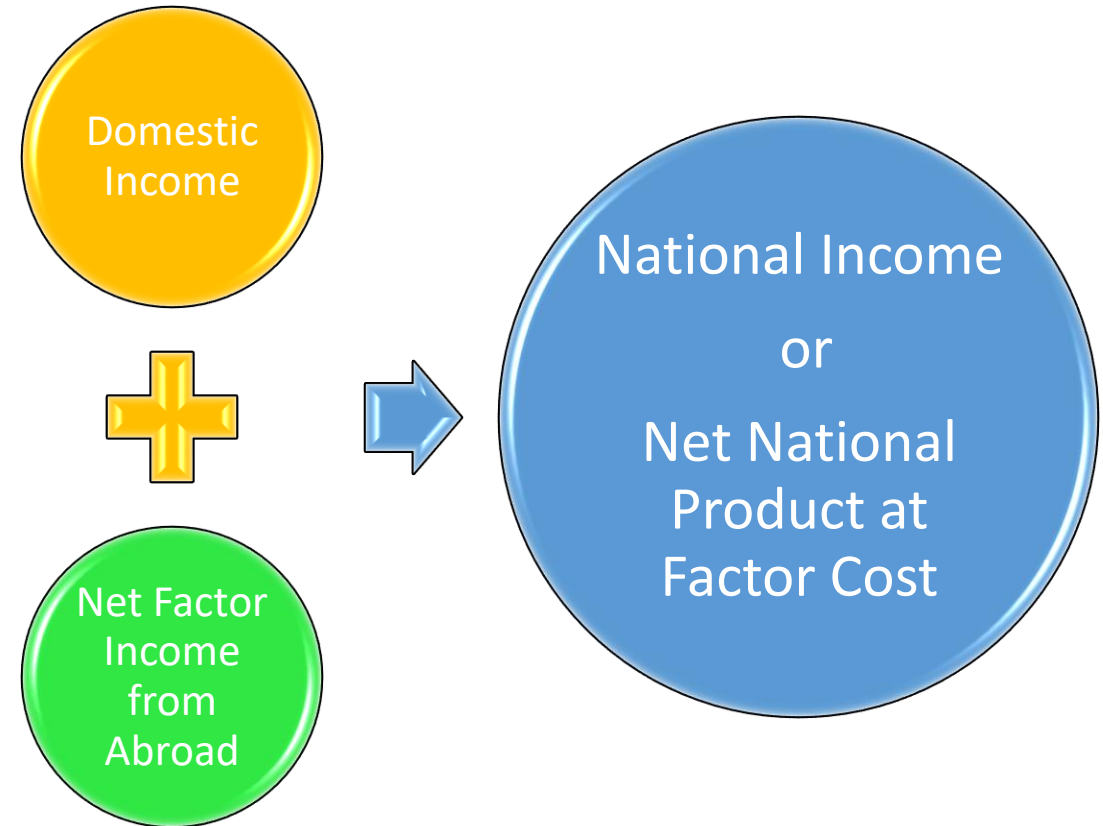
Or

Net National Product at Factor Cost or National Income (NNP at FC)



# Income Method

- National Income - Sum total of factor incomes of normal residents
- Domestic Income – Sum total of factor incomes generated within the domestic territory of the country (whether by residents or non residents)
- National Income = Domestic Income + Net Factor Income from abroad



# Related Concepts

## Mixed Income

- ❖ Incomes of the self employed persons using their own labour, land, capital and entrepreneurship in their household enterprises
- ❖ Mixture of rent, interest, wages and profit
- ❖ Separate estimation not possible



## Transfer Income

- ❖ Thus is not an earned income
- ❖ Example – Old age pension



# No Operating Surplus

## Subsistence Sector

- ❖ Production is meant for self consumption and not for sale in the market. They do not have any marketable surplus

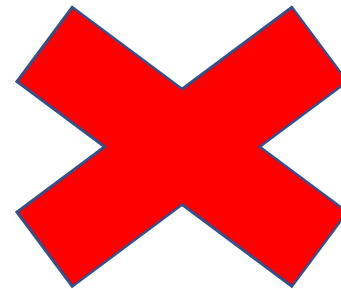
## Government Sector

- ❖ Production is meant for collective consumption of people
- ❖ Goods and services are produced for welfare of people and not for sale
- ❖ Examples – Law and Order, Defence, etc.

# Precautions regarding Income Method



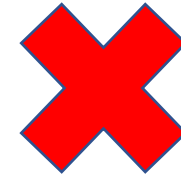
Transfer earnings like Old age pensions, unemployment allowances, scholarships, pocket expenses, etc. as there is no value additions in the economy



# Precautions regarding Income Method



Income from illegal activities like theft and gambling (black money). These cannot be estimated



Commission paid on sale and purchase of 2<sup>nd</sup> hand goods



# Precautions regarding Income Method

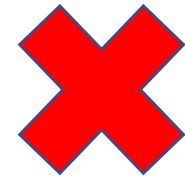


## Self Consumption

Brokerage on sale purchase of shares and bonds



Windfall Gains. There is no value addition



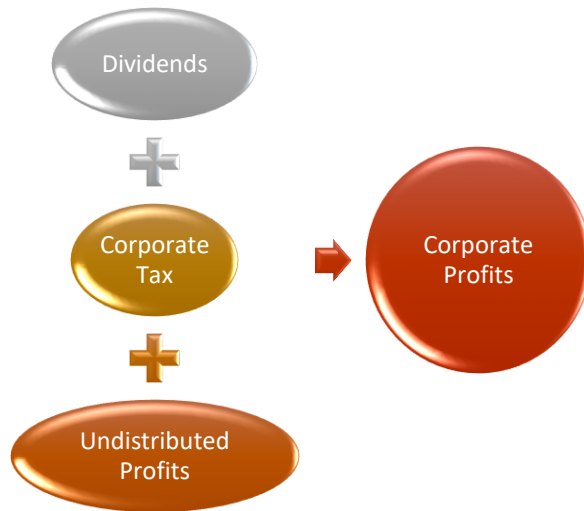
Capital Gains. There is no value addition

Income generation due to production for self consumption





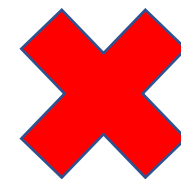
# Precautions regarding Income Method



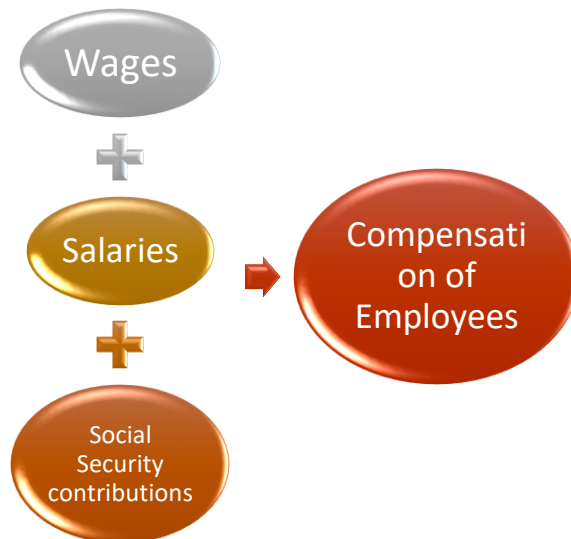
Imputed rent of owner occupied houses



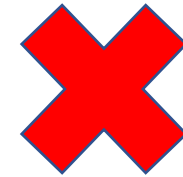
Corporate tax, dividends and undistributed profits are components of corporate profits. If corporate profits added separately then exclude its components



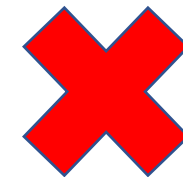
# Precautions regarding Income Method



Income Tax is part of compensation of employees so should not be added separately



If compensation of employees already added then wages, salaries, social security contributions not added separately

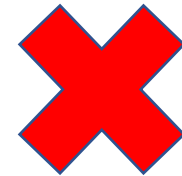




# Standard Precaution

Consider only factor incomes corresponding to which there is a flow of goods and services or there is value addition in the economy

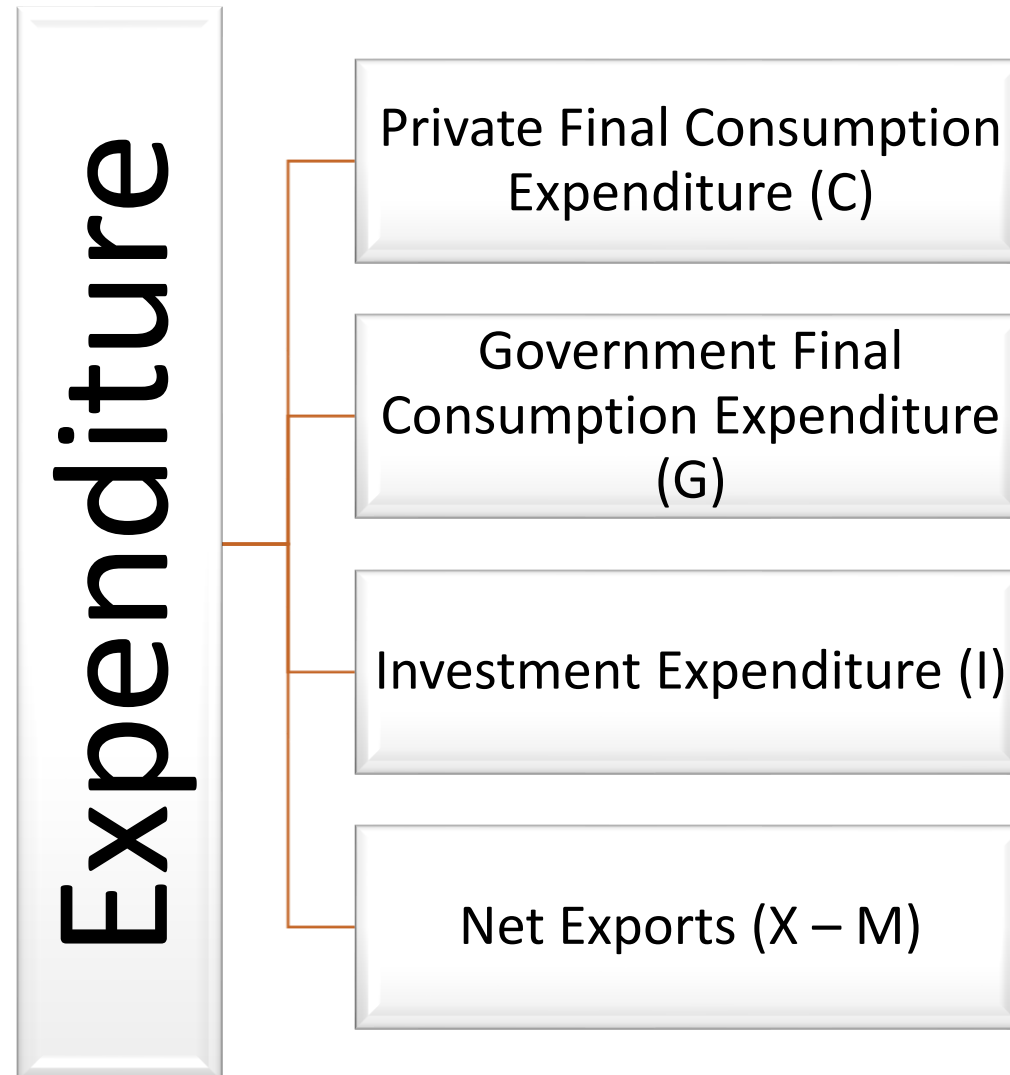
All taxes by the Government are transfer payments. These are not to be included in the estimation of national income



# Expenditure Method

Also Called Consumption and Investment method Or Income Disposal Method

# Expenditure



# Private Final Consumption Expenditure

Private Final  
Consumption  
Expenditure (C)

By Following category of  
Persons

Individuals



Households



Non Profit  
Private  
Institutions



# Private Final Consumption Expenditure

Private Final Consumption Expenditure (C)

On Following category of items

Consumer Services



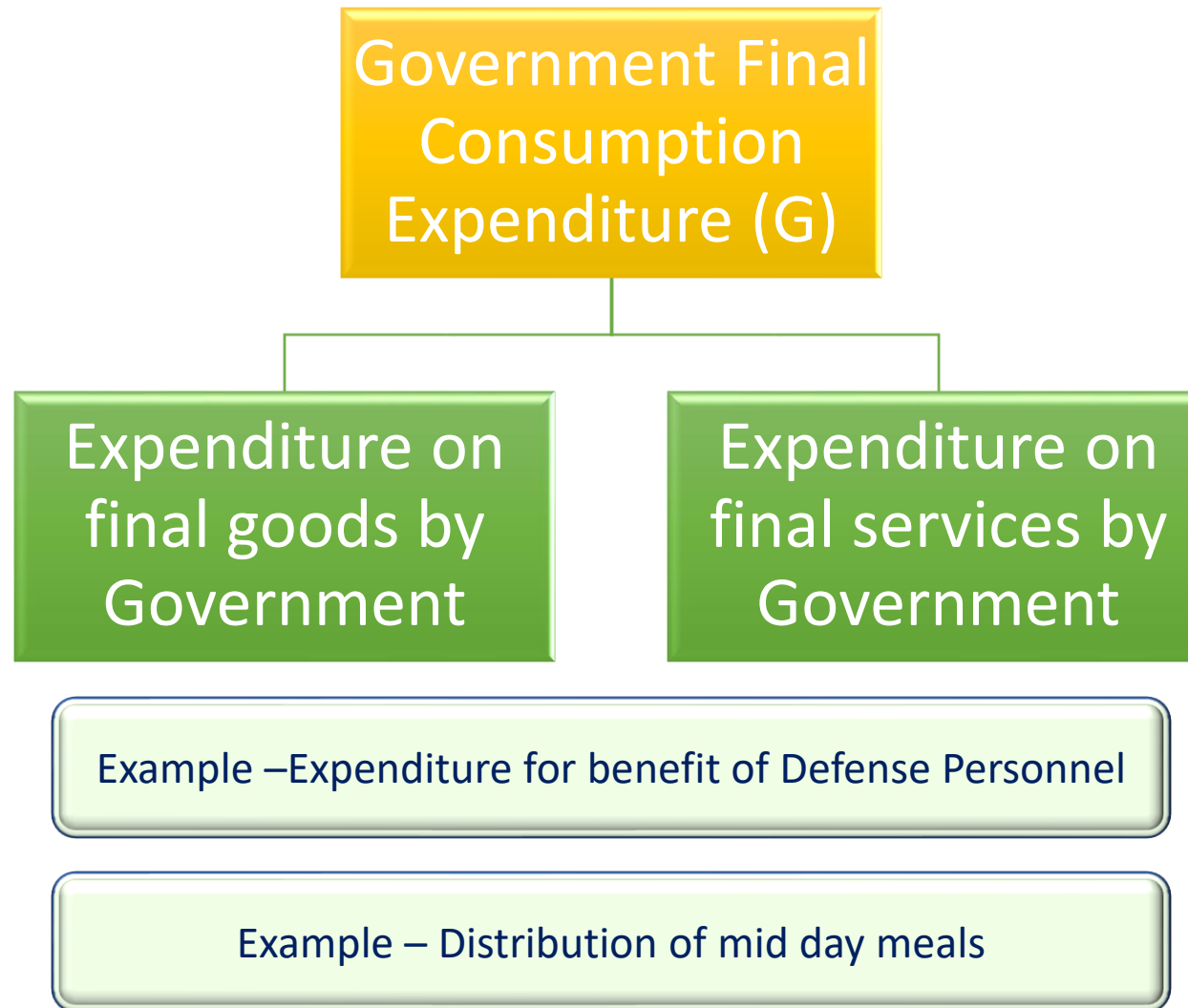
Consumer Non/semi Durable Goods



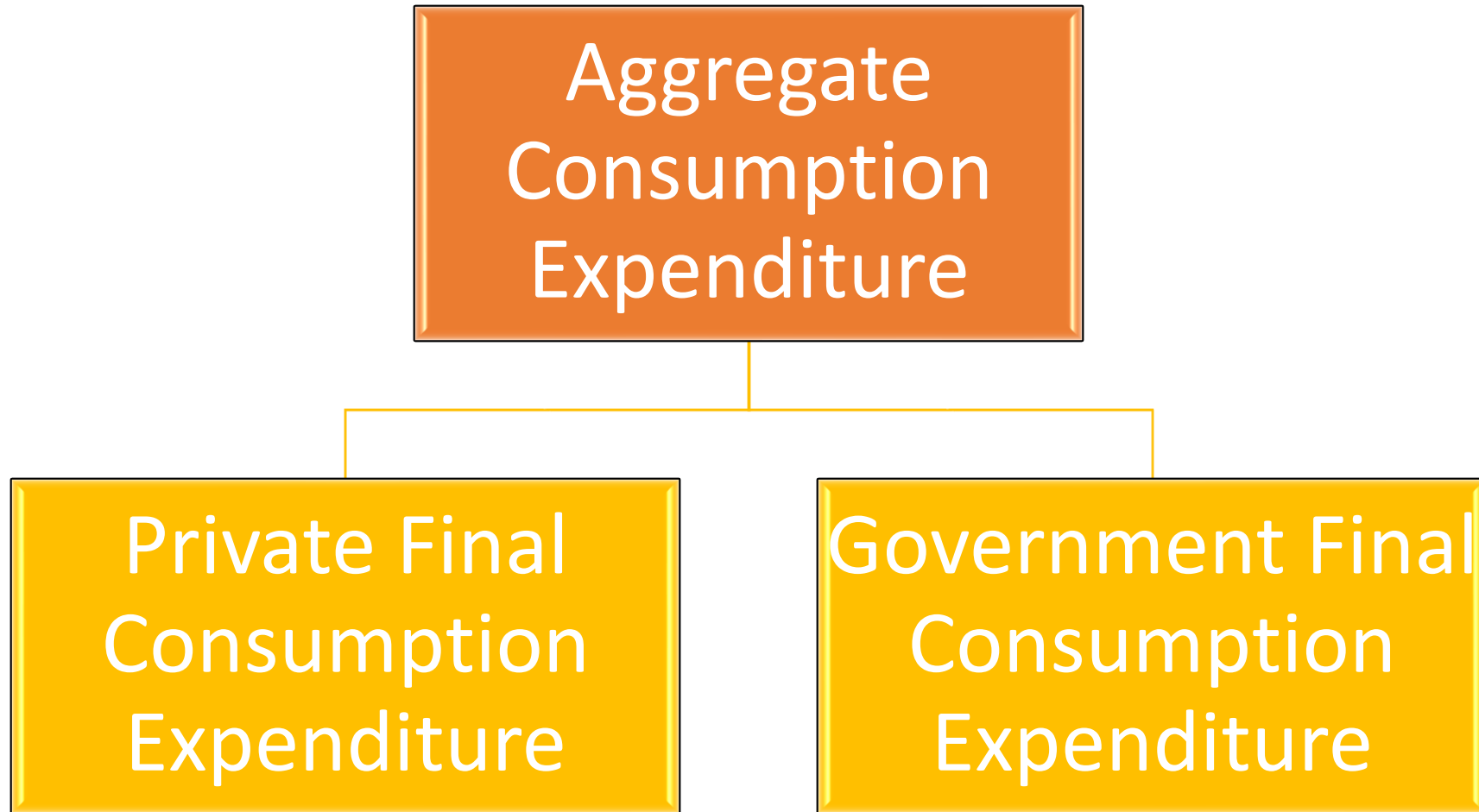
Consumer Durable Goods



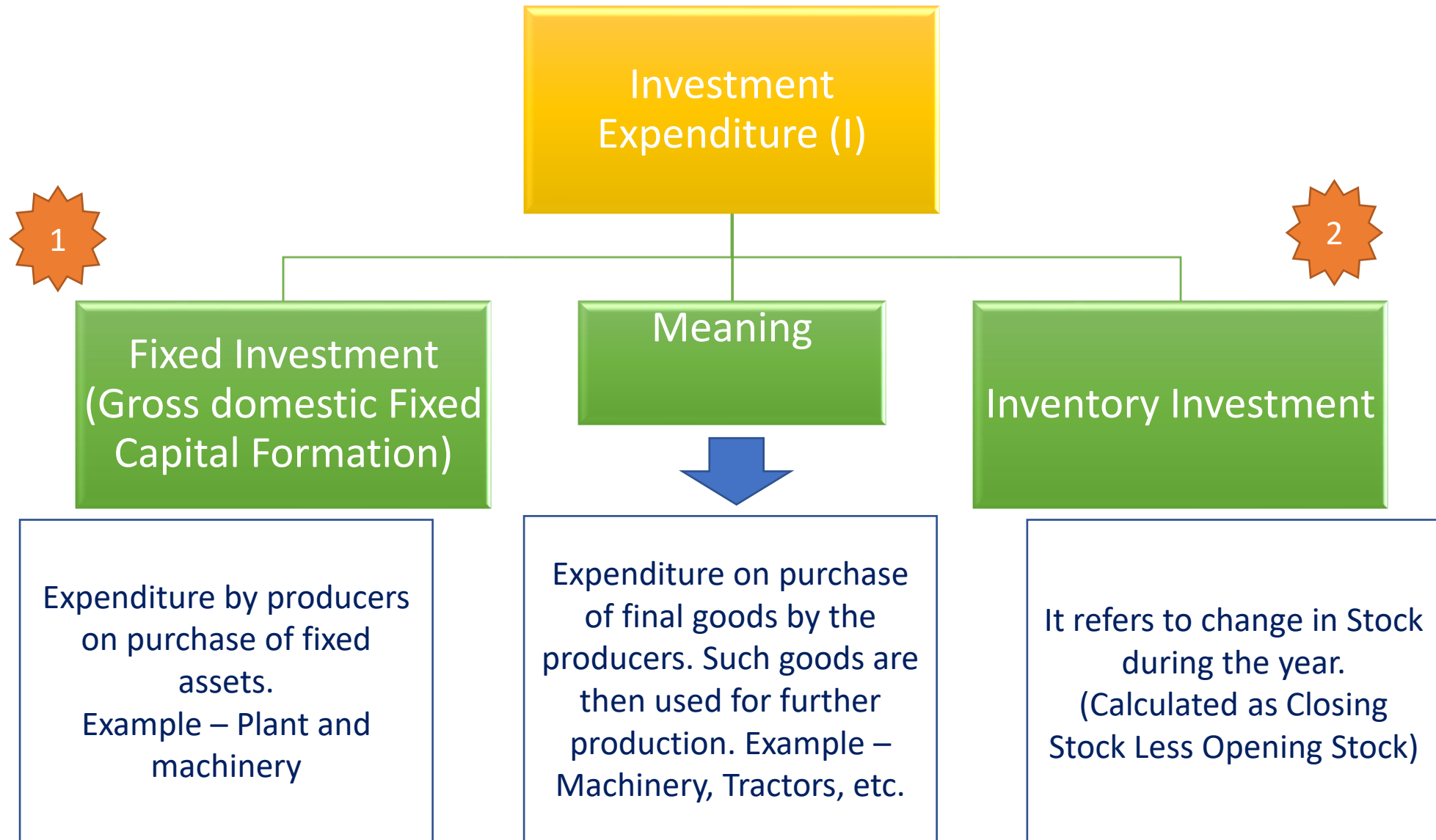
# Government Final Consumption Expenditure



# Aggregate Consumption Expenditure

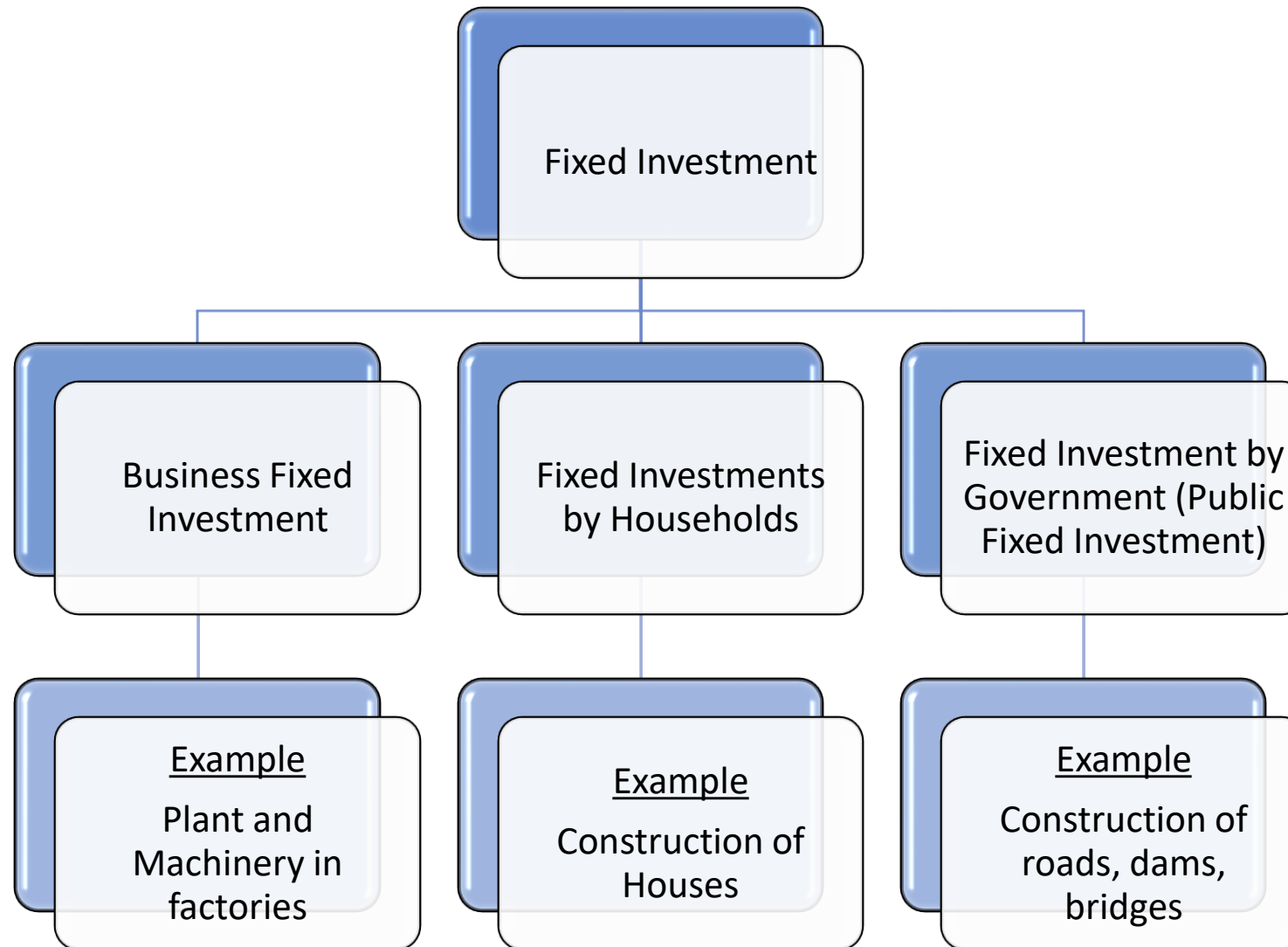


# Investment Expenditure/Gross Domestic Capital Formation

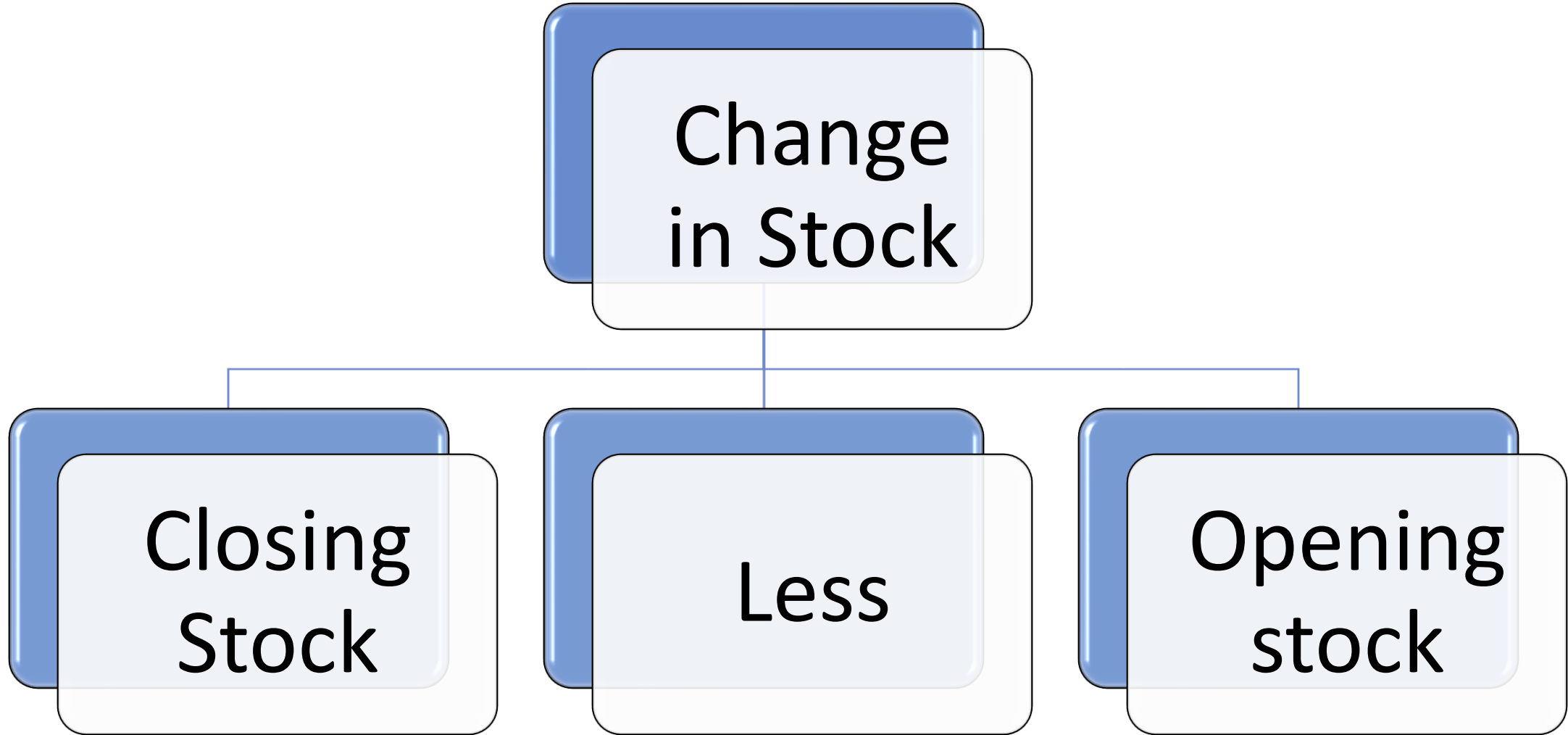




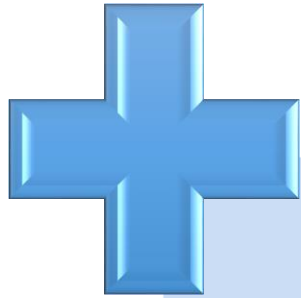
# Fixed Investment Types



# Inventory Investment



# Net Exports



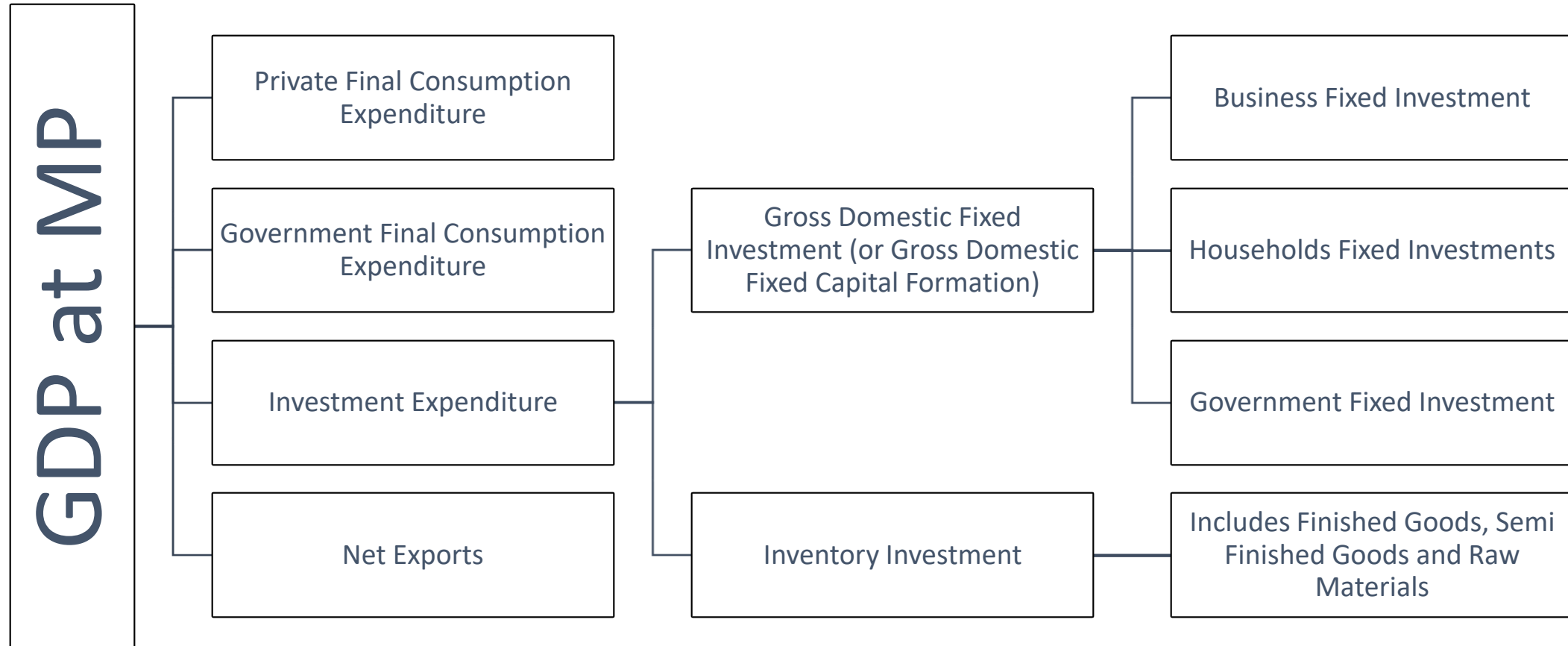
## Exports

Expenditure by  
Foreigners on the  
domestically  
produced goods  
and services

## Imports

Expenditure on  
goods and  
services produced  
abroad

# National Income by Expenditure Method



# How to Calculate (Expenditure method)

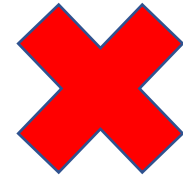


# Precautions regarding Expenditure Method

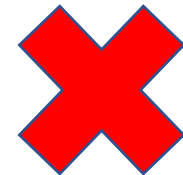
*Intermediate Consumption*



Only Final goods and services to be includes. Intermediate consumption to be excluded



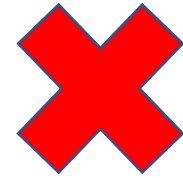
Expenditure on Second hand Goods to be excluded



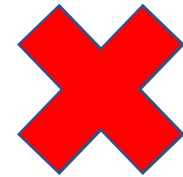
# Precautions regarding Expenditure Method



Expenditure on shares and bonds to be excluded as these are mere paper claims and does not cause any value addition



Expenditure on transfer payments to be excluded as they do not cause any value addition. Example – Old age pension, scholarship



# Precautions regarding Expenditure Method

## Production for self consumption



Imputed (Estimated) value of expenditure on goods produced for self consumption to be considered



Imputed rent of owner occupied property to be considered

