Economy CLASS-4

Topics → National Income Accounting
Nominal vs Real GDP, GDR vs NDP, Green GDP, SEEA, PPP, Private vs Personal Incomes.

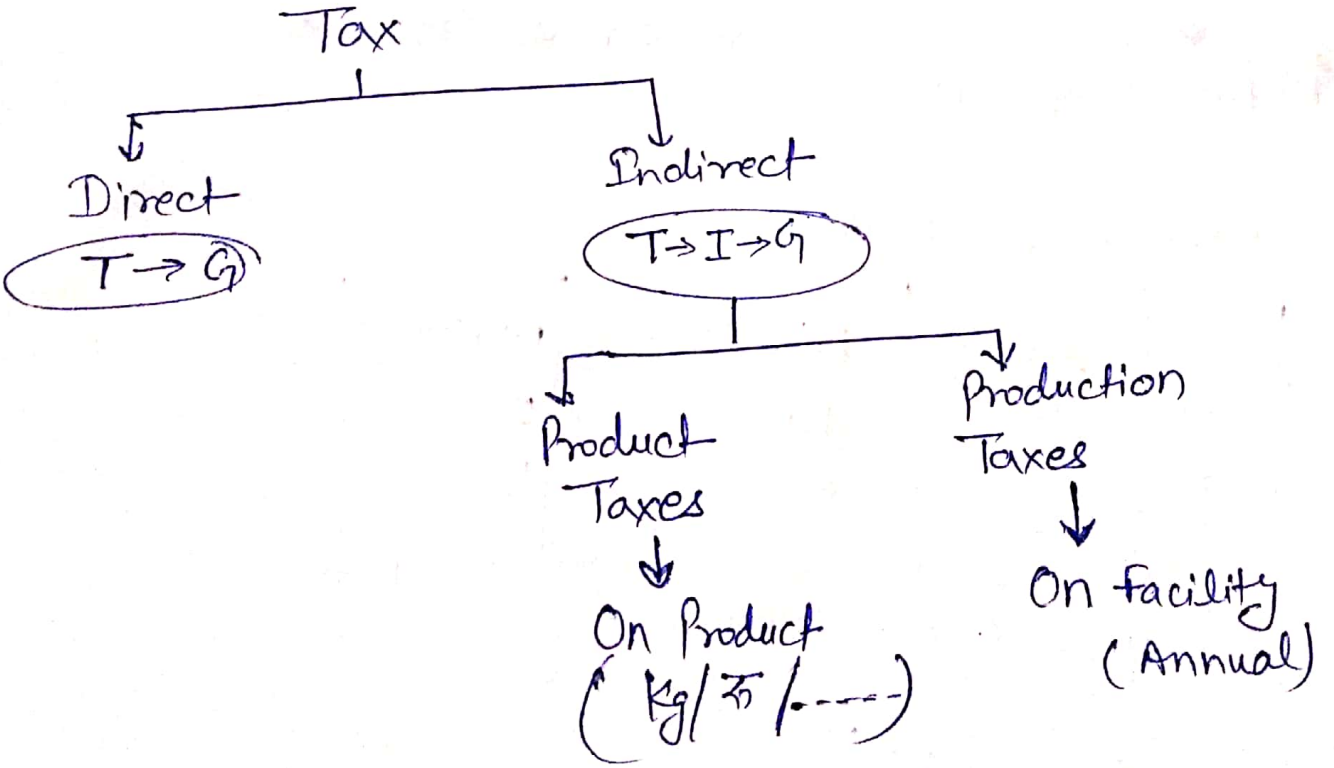
National Income Accounting

$NI = R + W + I + P$ [factor Incomes]

3 Methods

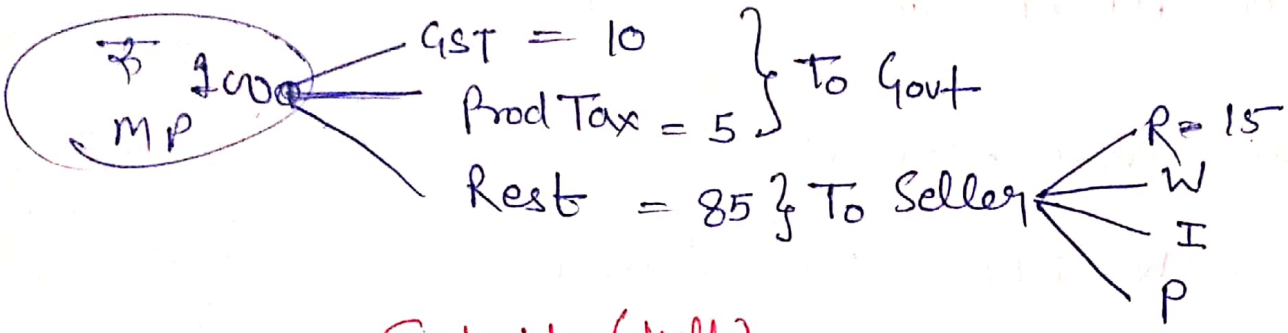
↳ Production < GDP / GVA

MP vs BP



(2)

- MP (Mkt Price) = ₹ 100
- BP (Basic Price) = MP − (Product Tax net) = 90
- (X) FC (factor Cost) = MP − (All Ind. Tax. net of subsidies)
  = 85



Subsidy (Help)

- To Consumers → eg → LPG → ↑ Purchasing Power
- To Producers → eg → Khadi → ↓ Cost of Production

Nominal vs Real

Ques

	Quantity	Price (2019-20)	Price (2011-12)
A	10	10	5
B	20	5	4

Compute NGDP & RGDP.

Soln. (EG ↑Q, Inflation ↑P)

Nominal vs Real

Nominal GDP is the value of Goods & Services computed at market price of current year. It is also called GDP at current prices. It is impacted by both quantity as well as prices. Real GDP is the value of Goods & Services computed at constant prices of some past year called base year. It is also called the GDP at constant price. Change in real GDP is caused by change in quantity only since prices remain same. Hence it is useful for computing the economic growth rate from year to year.

Soln. NGDP = $(10\times10)+(20\times5) = 200$

RGDP = $10\times5+20\times4 = 130$

NGDP is useful to know absolute size of economy, income etc.

RGDP is useful for relative comparison.

Ques

	P	Q
2019-20	15	8
2011-12	5	5
2018-19	10	10

Compare EG Rate for 2019-20.

Soln.

NGDP — P Q

2018-19 — 10×10 = 100
2019-20 — 15×8 = 120

} Unreal Increase of 20%

Real GDP

2018-19 — 10×5 = 50
2019-20 — 8×5 = 40

} Decrease (Real)

Concept of Depreciation ⇒

The reduction in the value of capital assets such as building, machinery, infrastructure due to different factors or causes like → wear & Tear,

→ Efflliction of time,

→ Obsalesence etc.

Example →

Machine (Value)

2019 — 10L
2020 — 6L — loss of 4L

Gross Income - 5L

Net income = 5L - 4L = 1L

(5)

Value of depreciation is subtracted from gross income to calculate Net Income. for eg-

GDP − Depⁿ = NDP (Net)
GNI − Depⁿ = NNI

Green GDP

Green GDP refers to the net GDP which we get after detecting the loss to environment in one year.

Green GDP = GPP − Loss to Environment

Such loss to environment can be computed by way of estimating the cost of rectification of the damage made in one year time.

SEEA

(System of environmental and economic Accounts)

In 1992 United Nations Conference on Environment and development (Earth Summit) recommanded that countries must implement environmental economic account and inresponse united Nation Statistical commission published a Handbook called Integrated environmental and economic Accounting.

It became popular as Seea and it latest version has three part.

1. Central framework
2. Experimental Ecosystems Accounts and Extension
3. Applications.

In 2011, an expert group under the chairmanship of Prof. Das Gupta was setup in India to develop a framework of Environmental accounts and prepare a road map to implement it. In year 2013 it published a report green national accounts in India a framework.

According to this report Economic growth is growth of wealth per capita. Wealth means social value of economies capital assets comprising of.

i) Reproducible Capital (building, machine, infrastructure)
ii) Human Capital (People skills, Health, productivity)
iii) Natural Capital

(7)

Domestic Vs National Income

National Income includes both factor income earned within domestic territory and from abroad.

NI = DI + Net factor Income from Abroad (NFIFA)

= DI + (FIFA − FI to Abroad)

(NFIFA = FIFA − FITA)

	US	India	
	A 100	C − 300	
	B(I) 200	D(USA) 400	
GDP	300	700	Global Income = 1000
Adjustment ± B	−100 FITA	+100 FIFA	
Adjustment ± D	+300 FIFA	−300 FITA	
NFIFA	+200	−200	
GNP	+500	+500	Global Income = 1000

NFIFA (Net factor Income from Abroad).
includes only rent, wages, interest and profit excluding the non-factor incomes like transfer income (money transfers), gifts, donation, grants, subsidies etc.. It does not mean Net exports (Exports - Imports) as it is calculated by income method.

Domestic + NFIFA = National Income

GDP + NFIFA = GNP
GDI + NFIFA = GNI
NDI + NFIFA = NNI

1. NFIFA = Net factor Income = RWIP
2. Non factor Income = G, C GT
3. Net Exports = (X - M)

Purchasing Power Parity (PPP)

Different countries published their GDP data in different currencies and hence country wise comparision of GDP is not possible. Therefore Different GDP figures of different Nations are converted on to a common currency like US dollars.

(9)

Conversion Methods

Forex Rate
₹ 70 = $1

PPP Rate (based on cost of Living)
1 : 4

$1 = 1 bottle (US)
= 4 bottle (India)

If data are converted on to US dollars based on foreign exchange rate (forex) then relative cost of living is ignored. Purchasing power of currency is different from country to country which means 1$ can buy more goods and services in India than in US. Therefore purchasing power parity ~~used~~ method is used because it is based upon relative cost of living.

If we use forex rate for the conversion than at present India's nominal GDP can be estimated at around US $ 3 trillion and India become fifth largest economy after US, China, Japan & Germany. After considering PPP India's GDP (PPP) crosses 11 trillion US dollars and India becomes third largest economy after China and US.

(Source:- ~~World~~ World Eco. Outlook (Oct 2019) published by IMF).

Nominal

NGDP (USD 't')	US	China	Japan	Germany	India
	21.44	14.14	5.15	3.86	2.94

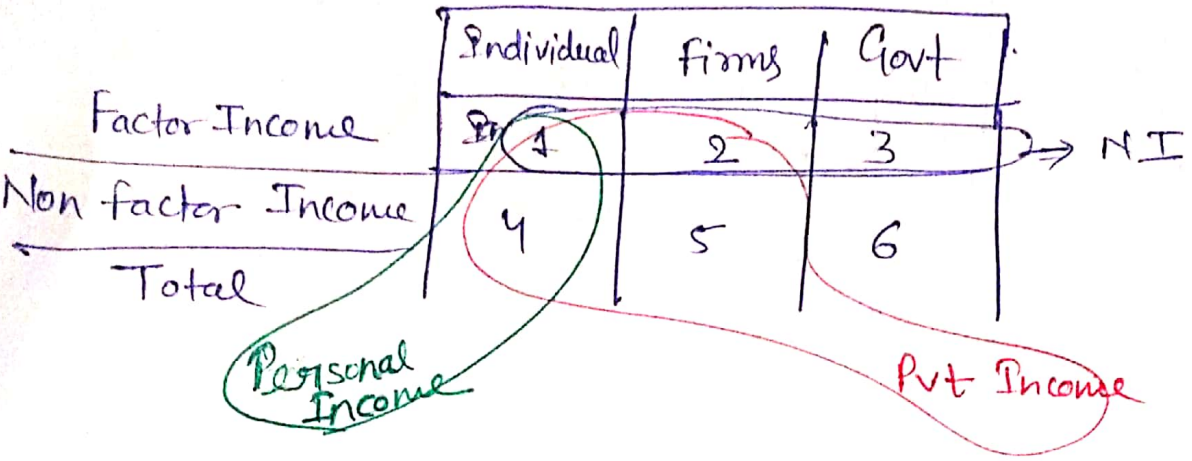
GDP (PPP)	China	US	India (IIIrd).
	27	21	11

Method-2 Income Method

National Income is computed as the sum of factor incomes of the normal residents in the form of rent, wages, interest and profits in one financial year. Alternatively we can use the terms compensation of employees (wages, operating surplus (profit & mixed income).

Non factors income are excluded from the concept of National incomes but they are including in other variable like private income or personal income. Private income is the total income of non-government sector that is individual and firms inclusive of non factor income. If firms are excluding then total income of individuals

(ii) After subtracting personal taxes from it we get disposable personal income.



$$\text{Per Capita Income (person)} = \left(\frac{\text{Total Income}}{\text{Population}}\right)$$

Method - III

Expenditure Method

Under expenditure method GDP is calculated as the sum of following

(i) Private final Consumption Expenditure (PFCE)
(Amount spent by people on Goods & Services Consumed)

(ii) Government final Consumption Expenditure
(Amount spent by govt. on Goods & Services Consumed)

(iii) Gross fixed capital formation (GFCF)
(Amount saved in the form of Investment in fixed assets like machinery, building, etc.)

(iv) Change in stock (Increase in the stocks of goods produced but not consumed)

(v) Net Exports (x-m)

$\Rightarrow$ GDP = PFCE + GFCE + GFCF + DS + (x-m)

At the end following adjustment are required to compute National Income.

* mp - market price
* BP = Basic Price

NI from GDP$_{mp}$ Adjustment

GDP$_{mp}$	✓
− Depreciation	✓
+ NFIFA	✓
− (Product Taxes net of Subsidies)	✓
NNP$_{BP}$ (NI)	✓

#

MP	Gross	Domestic
−(PT−S)	−(Dep^n)	(+NFIFA)
BP	Net	National

$$NI(NNP_{BP}) = GDP_{mp} - Dep^n - (Net\text{-}PT) + NFIFA \Rightarrow NI$$