# CA Foundation – Business Economics

# Economics Chp 6
## Last Minute Notes
### (Only Important Points)

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## CHAPTER 6 – NATIONAL INCOME | UNIT 1

**1**

**Gross domestic product (GDP) is-**
- **monetary value** of
- all **final**
- **economic** G/S,
- **gross of depreciation**,
- **produced**
- **within domestic territory**
- during a given **time period**.

**2**

**Final Goods**

Goods **used either** for **consumption** or **investment**.
Neither **resold** nor undergo **further transformation**.
Only final goods is considered in GDP, to **avoid double counting.**

**3**

**Intermediate goods**
- Used either for-
  - **resale** or
  - for **further production in same year**.

They **do not end up in final consumption**, and are **not capital goods** either.

- They have **derived demand**.
- If they remain for more than one year→ treated as **final goods**.

**4**

NI & GDP is a **'flow' measure of output per time period** & **includes only those G/S produced in current period**

**5**

**Exclusions from GDP**
- **Transfer Payments - Making a payment**, **without G/S** being **received in return.**
- **Financial transactions -Stocks & bonds exchanged during the period** are **not included**.

**However, value of services that accompany sale & purchase (e.g. brokerage) is included.**
- **Sale of 2nd Hand goods**
- **Non-reported output - illegal transactions.** Eg - narcotics & gambling

**6**

**Nominal GDP (aka. GDP at current year price)**
- CY output (x) CY Prices
- **Nominal GDP changes** for **two reasons.**
  1) **Qty of G/S** produced changes, &
  2) When **market prices change**.

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**Real GDP (aka. GDP at constant price)**
- CY Output (x) BY Price
- It is **inflation adjusted** GDP
- It **changes only when** there is **change in Qty prod.**
- **Not affected by changes in prices**
- Real GDP- **better measure** of **economic well being**

## CHAPTER 6 – NATIONAL INCOME | UNIT 1

| | |
|---|---|
| 8 | GDP Deflator = $\frac{\text{Nominal GDP}}{\text{Real GDP}} \times 100$ |
| 8.1 | Inflation rate in Yr 2 = $\frac{\text{GDP deflator in Yr 2 - GDP deflator in Yr 1}}{\text{GDP Deflator in Yr 1}} \times 100$ |
| 9 | **Domestic Vs National**<br>'**National**' → **normal residents** within or outside domestic territory → **broader concept** compared to '**domestic**'.<br><br>'**Domestic**' → production done **WITHIN domestic territory** |
| 10 | **Resident Unit**- Unit having **predominant (major) economic interest** in economic territory of country for **1 year or more irrespective of nationality** or legal status |
| 11 | **Net Factor Income From Abroad**=<br>**Factor Income from abroad (-) Factor Income to Abroad** |
| 12 | **Operating Surplus** = **Rent + Interest + Profit → (R,I,P)** |
| 13 | **Mixed Income of Self Employed**<br>Difficult to separate **labour income from capital income** when **people provide both labour and capital services**. |
| 14 | **Net Domestic Product at Factor Cost (NDP FC)**<br>**(AKA - Domestic Income or Factor Income earned in Domestic Territory) =**<br>Compensation of employees<br>(+) Operating Surplus (R,I,P)<br>(+) Mixed Income of Self- employed |
| 15 | **National Income (NNPFC) = NDPFC + NFIA** |
| 16 | As per CSO → '**National income** is **sum total of factor incomes** generated by **normal residents** of a country like **wages, rent, interest & profit** in an **accounting year**'. |
| 17 | **3 Golden Rules of NI**<br><br>**1) Gross – Depreciation = Net**<br>**2) MP = FC + IDT - Subsidy**<br>**or**<br>**MP = FC + NIT**<br>**3) Domestic + NFIA = National** |

## CHAPTER 6 – NATIONAL INCOME | UNIT 1

| | |
|---|---|
| 18 | **GDP Per Capita**<br>➢ Measure of country's **economic output per person**.<br>➢ **Indicator** of the **standard of living** of a country.<br>➢ **GDP Per Capita = Real GDP / Total Population** |
| 19 | **Indirect Taxes and Subsidies**<br>**1) Production Taxes & Production Subsidies**<br>**Independent** of volume (qty) of actual production<br>**2) Product Taxes & Product Subsidies**<br>Paid or received **on per unit of product** |
| 20 | **Basic Price= FC + Production Tax – Production Subsidy**<br>**Market Price= BP + Product Tax – Product Subsidy** |
| 21 | **Personal Income**<br>**Income received** by **household sector** including **Non-Profit Institutions Serving Households** from all sources<br>PI (Basic Formula) = National Income + **income recd but not earned - income earned but not recd** |
| 22 | **Disposable Personal Income (DI)**<br>It is a measure of **amount of money in hands of individuals → available for consumption or savings**.<br>**DI = Personal Inc – Personal Inc Tax – Non Tax Pay.** |
| 23 | ➢ **Income from domestic product (NDPfc) accruing to public sector (Govt Income)**<br>**= Income from P/E accruing to govt admin dep + Savings of Non dep enterprises**<br>➢ **Income from domestic product (NDPfc) accruing to private sector**<br>**= NDPfc (-) Govt Income** |
| 24 | **Private Income**<br>A measure of income (**both factor & transfer income**) which **accrues to private sector** from **all sources within & outside** the country.<br>**Private Income** = Income from domestic product accruing to private sector + Net factor income from abroad + National debt interest + Current transfers from government & rest of world |
| 25 | **Net National Disposable Income (NNDI)**- The amount of G/S domestic **economy** has at its disposal.<br>➢ **NNDI** = NNPfc + Net IDT + Net Current Trf. from ROW<br>➢ **GNDI** = NNDI + Depreciation<br>**( Ignore "Govt transfer pay" in GNDI/NNDI )** |

## CHAPTER 6 – NATIONAL INCOME | UNIT 1

| Particulars | Includes | Remarks |
|---|---|---|
| **National Income** | Earned Income recd. or not recd. | All sectors |
| **Personal Income** | Earned Income recd. & Transfer Income recd. | Household sector including NPISH |
| **Private Income** | Earned Income recd. or not recd. & Transfer Income recd. or not recd. | Private Sector |

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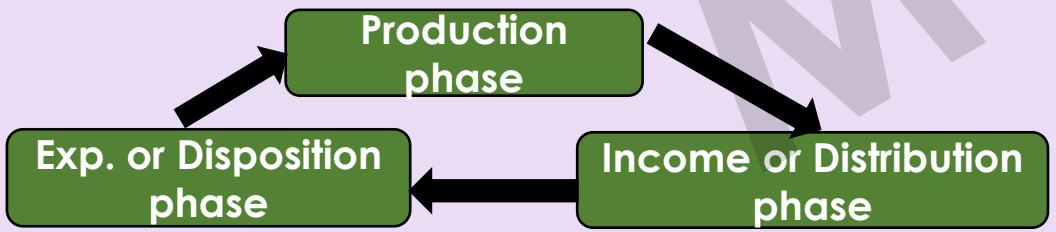
**Circular flow of income**

**Circular flow of income** refers to the **continuous circulation** of- **production, income generation & expenditure** involving **different sectors** of the economy. There are 3 phases-






| Method | Data Required | What is measured? |
|---|---|---|
| **Value Added** or Product or Industrial Origin or Net Output Method | The sum of net values added by all the producing enterprises of the country | Contribution of production units |
| **Factor Income** or Factor Payment or Distributed Share | Total factor incomes generated in the production of goods and services | Relative contribution of factor owners |
| **Expenditure method** or Income Disposal | Sum of exp. of 3 spending units-<br>1. government,<br>2. consumer households, and<br>3. producing enterprises (firms) | Flow of consumption and investment expenditures |

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**Value Added Method**

Value of Output - Intermediate Cons. (of all sectors: PS, SS, TS)

= **GVA mp** or **GDP mp**

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|---|---|
| 28 | ➢ **GVAmp (-) Dep (+) NFIA (-) NIT = NNPfc (NI)**<br><br>➢ If Value of Output is **not given, then**<br>**Value of Output =** Sales + Change in Stock<br>Where, Change in Stock= Cl Stock (-) Op Stock |
| 29 | **<u>If Value of Output is not given separately</u>**<br>**Value of Output =** Sales + Change in Stock<br>Where,<br>**Change in Stock = Cl. Stock – Op. Stock** |
| 30 | **<u>Income Method</u>**<br>Compensation of Employees + Operating Surplus (R, I, P) + Mixed Income of Self-Emp = **NDP fc +** NFIA = **NNP fc (National Income)**<br><br>O.E. **includes** - wages and sal., bonus, D.A., commission, **employers' contri.** to PF and imputed value of pay in kind.<br><br>**Profit** = Corp. taxes + Dividend + Undistributed Profits |

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|---|---|
| 31 | **<u>Expenditure Method</u>**<br>**GDP mp = PFCE + GDCF + GFCE + (X-M)**<br>❑ GDCF includes-<br><br>➢ Gross Domestic Fixed Capital Formation, i.e Invt in Fixed Assets by household, Pvt Business, Govt<br><br>➢ Changes in Inventory OR Inventory Investment<br>➢ Net Acquisition of Valuables<br>❑ GDCF – Dep = NDCF |
| 32 | **<u>Who is responsible for calculating National Income in India ?</u>**<br>MoSP&I → CSO → National Accounts Division which compiles **National Accounts Statistics (NAS)** |
| 33 | **Combination of methods** used in **India** to measure NI-<br>➢ **Value-added method** → commodity producing sectors like agri & mfg.<br>➢ **income method** → small scale sector<br>➢ **expenditure method** → construction sector |
| 34 | **Method for measurement of NI in developed economies:**<br>Mostly **Income method**→ sometimes expenditure method also used. |

## CHAPTER 6 – NATIONAL INCOME | UNIT 1

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**System Of Regional Accounts In India**

**State Income or Net State Domestic Product (NSDP)** → value in **monetary terms** of qty of **all G/S produced** in **state** within a given **period of time** accounted **without duplication**.

**Per Capita State Income → NSDP (State Income)** divided by **mid-year projected population** of the state.

**Prepared by State Income Units** of respective State Directorates of Economics and Statistics (DESs). **CSO assists** them.

Certain activities like **railways, communications, banking** etc→ **cut across state boundaries**, & their **contribution cannot be assigned to any one state** → known as the '**Supra-regional sectors**'

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**Can GDP a country be taken as an index of welfare?**

**No**, since GDP measures **exclude** the following-

a) **Income distributions**
b) Quality improvements due to **tech** & **managerial innovations.**
c) **Productions hidden from govt.** (**drugs, gambling etc**.).
d) **Non-market production & Non-economic contributors → health, education levels etc.**
e) **Disutility of loss of leisure time**
f) **Economic 'bads': crime, pollution, traffic congestion etc which make us worse off.**
g) **Volunteer work rendered without remuneration**
h) **Things that contribute to economic welfare- leisure time, fairness, gender equality etc.**
i) **Distinction between production that makes us better off & which prevents us from becoming worse off, for e.g. defence exp → Increased exp on police due to increase in crimes may incr. GDP but these exp only prevent us from becoming worse off.**

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**Limitations And Challenges of NI**

**Conceptual difficulties**

1) **lack** of an **agreed definition** of NI
2) **accurate distinction** between **final** & **intermediate** goods,
3) issue of **transfer payments**,
4) **difficulty** of **incorporating distribution of income**,
5) valuation of a **new good** at **constant prices**,
6) services of **durable goods**,
7) **valuation** of **govt. services**

## CHAPTER 6 – NATIONAL INCOME

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|---|---|
| | **Challenges**<br>1) **Inadequacy of data** and **lack of reliability** of available data,<br>2) **absence** of **recording of incomes** due to **illiteracy and ignorance**,<br>3) **lack** of **proper occupational classification**, and<br>4) accurate **estimation** of **consumption of fixed capital**<br>5) production for **self-consumption**<br>6) presence of **non-monetised sector**, |
| **32** | **Usefulness And Significance Of National Income Estimates**<br>1) **Framework** for analyzing **short-run performance**.<br>2) Helps **businesses to forecast future demand**.<br>3) **Economic welfare** depends on **value of national income**<br>4) **Composition of NI** of **different sectors** & **variations** in them.<br>5) Provides **quantitative basis** for **assessing & evaluating economic policies**<br>6) Shows **income distribution** & **inequality in its distribution**. Make **comparisons** using **ratios** of **investment, taxes, to GDP**.<br>7) Guide to make **policies for growth & inflation**. |

## CHAPTER 6 | UNIT 2 - Keynesian Theory of National Income

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|---|---|
| **33** | ➢ In **previous unit**, '**ex post**' (**realized**) values were used<br>Eg- **aggregate consumption (C)** denotes what **people have actually consumed**<br>➢ In this unit variables are defined in '**ex-ante**' (**anticipated**) terms or in terms of **what is intended or planned**.<br>➢ Ex-ante values are used to **predict** what **equilibrium value of output or GDP** is. |
| **34** | ➢ **Natural level of real GDP→** Level of GDP where **resources are fully employed.**<br>➢ Before Keynes, **classical economists** said that **economy is self-regulating** & **capable of automatically achieving equilibrium** at '**natural level**' of **real GDP**<br>➢ But, Keynes said that **markets** do **not automatically** lead to **full-employment equilibrium.**<br>➢ So, **output will remain at less than full employment level unless** there is **insufficient spending**. |

## CHAPTER 6 – NATIONAL INCOME | UNIT 2

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**3 models of economy as per Keynes**

1) **Two-sector** = household + business,
2) **Three-sector** = household + business + government,
3) **Four-sector** = household + business + govt. + foreign

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**Circular Flow in a Simple Two-sector Model**

- The **circular flow of income** is a process where the **national income** and **expenditure** of an economy **flow in a circular manner continuously** through time.
- In the figure-

❑Circular **broken lines** - factor and product flows- '**real flows**'

❑**Continuous line** with arrows show **money flows**

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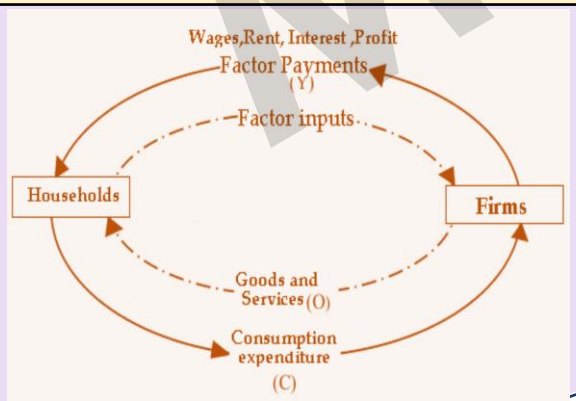
**Factor Payments**

**= Household Income**

**= Household Expenditure**

**= Value of Output**

**= Total Receipts of Firms**




**38**

**Consumption function → C = a + b.Yd**

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**Average Propensity to Consume**

**APC = C / Y**

Consumption is **decreasing function of level of income.** (As income increases, APC decreases)

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**Marginal Propensity to Consume (MPC = "b")**

**MPC = ΔC / ΔY = b**

Keynes **assumes→**

increase in cons. **<** increase in Yd

(b <1). i.e. **0 < b < 1**

**MPC is slope of consumption line**

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**Saving function → S = -a + (1-b).Yd**

**42**

**Marginal Propensity to Save**

**MPS = ΔS / ΔY = 1- b**

**MPC + MPS = 1 ; MPS 0 < b < 1**

Also, **MPS is slope of savings line**

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**Average Propensity to Save**

**APS = S / Y**

Saving is **increasing function of level of income.** (As income increases, APC decreases)

## CHAPTER 6 – NATIONAL INCOME | UNIT 2

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| Y | C | S | MPC | MPS | APC | APS |
|---|---|---|---|---|---|---|
| 0 | 50 | -50 | - | - | ∞ | -∞ |
| 100 | 125 | -25 | 0.75 | 0.25 | 1.25 | -0.25 |
| 200 | 200 | 0 | 0.75 | 0.25 | 1.00 | 0 |
| 300 | 275 | 25 | 0.75 | 0.25 | 0.92 | 0.08 |
| 400 | 350 | 50 | 0.75 | 0.25 | 0.88 | 0.12 |

**45**

**Aggregate Supply (AS)**

Ex ante AS→ **total supply of G/S** which firms **plan on selling** during a specific time period.

AS = Agg. Production = Factor Payments = Factor Incomes [National Income→ Y]

**46**

**Aggregate Demand (AD)**

Ex-Ante AD is total **planned expenditure** in the economy.

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**Equilibrium output**

When **desired amount of output demanded equals amount produced**. (AS = AD)

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**Two Sector Model**

- Household Sector & Business Sector only
- AD = C + I (I is assumed to be constant)
- AS = C + S
- Equilibrium is achieved when -

AD = AS or C + I = C + S or I = S

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**Three Sector Model**

- Household + Business + Government Sector
- AD = C + I + G

(I & G are constant)

- AS = C + S + T
- Equilibrium is achieved when -

AD = AS or C + I + G = C + S + T or **I + G = S + T**

Govt adds following flows to circular flow :

1) **Taxes**
2) **Transfer payments** & **subsidy payments**
3) **Govt purchases**
   - G/S from business
   - factors of prod from household, and
4) **Govt borrowing in financial markets** to **finance deficits** (if any, when G > T)

## CHAPTER 6 – NATIONAL INCOME | UNIT 2

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**Four Sector Model**

- Household + Business + Govt. + Foreign Sector
- AD = C + I + G + (X - M)

(I, G & X constant)

- AS = C + S + T
- Equilibrium is achieved when -

AD = AS or C + I + G + (X – M) = C + S + T or

**I + G + X = S + T + M**

Foreign sector adds following flows to circular flow :

1) **exports**,
2) **imports and**
3) **net capital inflow (capital inflow - capital outflow)**

**If (X > M), then NX is +ve**
**→ then NI incr.**
**If (X < M), then NX is -ve**
**→ then NI decr.**

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**Leakage & Injection**

- **Leakage-** **Outflow of income** from circular flow model. Leakages are that part of income which is **not used to purchase goods of current year** or what households **withdraws**.
- **Injection-** **Inflow of income to circular flow** → leads to **increase** in volume of income.

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- **When AS = AD → Leakages = Injections**
  **Then national income will be in equilibrium.**
- **When AS > AD → Leakages > Injections**
  **Stock Surplus or Deficient Demand → inventories will pile up → firms decrease production in future → lead to fall in output & income in future. (NI will fall)**
- **When AS < AD → Leakages < Injections**
  **Stock Shortage or Excess Demand → unexpected sales would draw down inventories (stock-out) → thus, hiring more workers & expanding production (NI will rise)**

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**Deflationary Gap**

**Deficient Demand** means,
Actual AD < Potential AD

Deficient demand → leads to '**deflationary gap**'
Occurs during **contraction**.

Leads to **unplanned inventories pile up** & thus **decrease** production & employment until **under-employment equilibrium** is reached.

## CHAPTER 6 – NATIONAL INCOME | UNIT 2

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**Inflationary Gap**

- **Excess Demand means,**
  **Actual AD > Potential AD**
- **Excess demand→ leads to 'inflationary gap'.**
  **Occurs during expansion → leads to demand pull inflation.**

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**Investment Multiplier**

**Investment Multiplier (k) explains how many times equilibrium NI increases** as result of **increase in autonomous investment**.

$$K = \frac{\Delta Y}{\Delta I} \text{ or } \frac{1}{1 - MPC} \text{ or } \frac{1}{MPS}$$

**56**

**Import → M= M + mY**

**Marginal propensity to import→ m = Δ M / Δ Y**

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**The more powerful leakages are - the smaller will be multiplier.**

**The leakages are caused due to:**

1. **progressive rates of taxation**
2. **high liquidity preference**
3. **demand** met out of **existing stocks** or **imports**
4. **additional income spent on purchasing existing wealth**
5. **undistributed profits** of companies
6. part of income used for **payment of debts**
7. **scarcity of G/S** despite having high MPC

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**How to solve numericals of equilibrium NI (Y) & multiplier ?**

**Step 1 :** Find Disposable Income (Yd) in terms of Y = Y – T – t.Y + TR

**Step 2 :** Input the above value of Yd in consumption function -> C = a + b.Yd

**Step 3 :** At equilibrium -> AS = AD -> Thus, Y = C + I + G + (X-M)

**Step 4 :** Input value of "C" in above equation & **find Y** (equilibrium NI).

**Step 5 :** Find value of **multiplier** as per data given in question & below summary-

- **2 Sector -> K = 1 / (1- b)**
- **3 Sector**
  - **If prop. tax (t) is not given -> K = 1 / (1- b)**
  - **If prop. tax (t) is given -> K = 1 / 1- [b(1-t)]**
- **4 Sector**
  - **If prop. tax (t) is not given -> K = 1 / (1- b + m)**
  - **If prop. tax (t) is given -> K = 1 / 1- [b(1-t)] + m**