CHAPTER 5 : Introduction to Macroeconomics

THE ABOUT

CHAPTER ANALYSIS

MASTERY

- Understand Factors affecting AD & AS
- Understand the conflicting goals
- Various macroeconomic indicators
- Know how Circular Flow of Income works
- Understand the multiplier effect

EXAM

- Important to get your fundamentals right
- Concept is tested in CSQ and essays

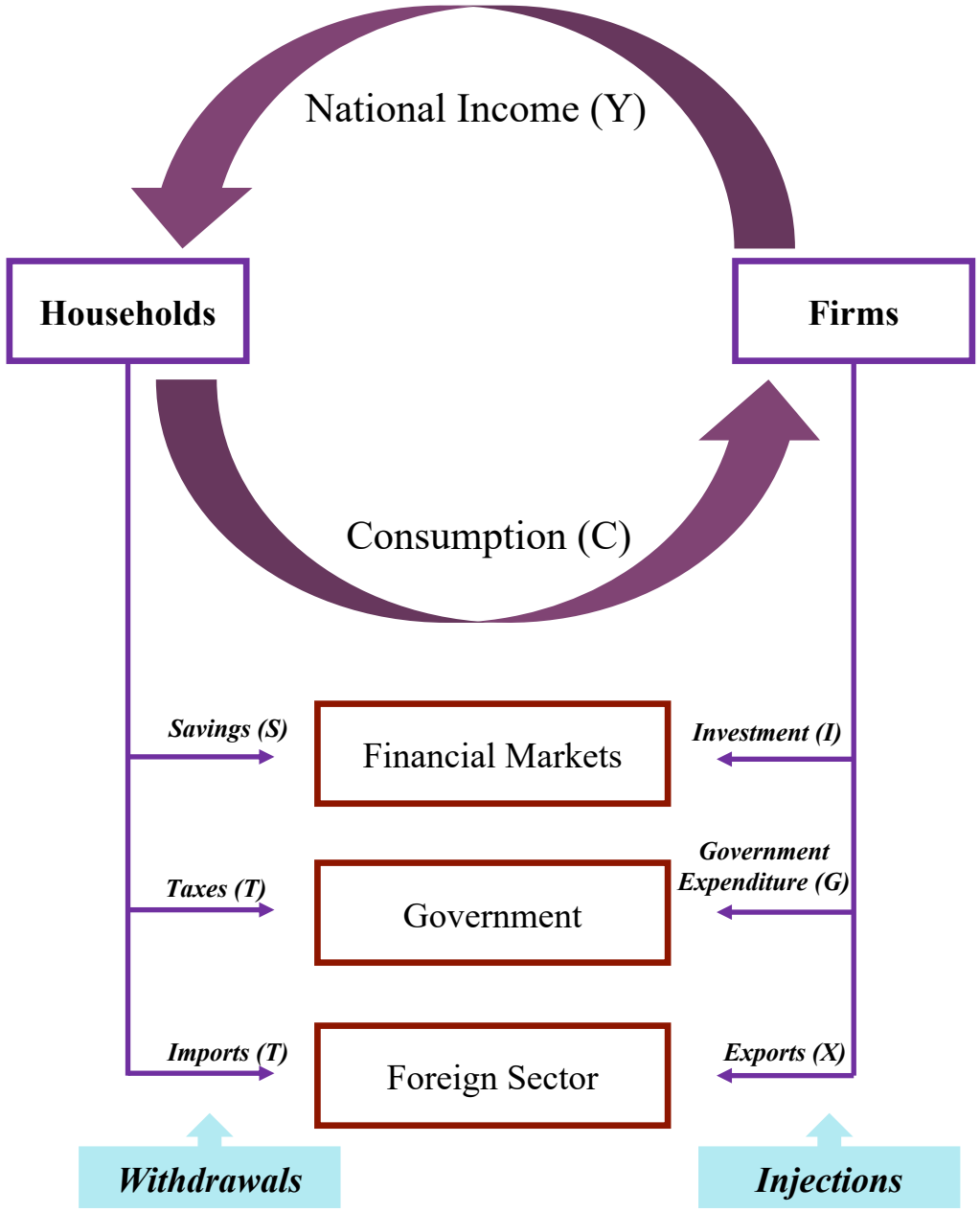
WEIGHTAGE

- Heavy overall weightage as it is a foundation to your macroeconomic concepts

KEY CONCEPT

The Circular Flow of Income
Aggregate Demand & Aggregate Supply
Multiplier K
Standard of Living
Macroeconomic Goals

The Circular Flow of Income



What is the circular flow of income?

What is the circular flow of income?	Circular flow of income shows the economic relationships between various sectors of an economy.	
What are the four sectors in an open economy?	Households, Firms, Government, Foreign Sector	
What are withdrawals?	A portion of household income is used to purchase consumer goods from domestic producers. However, there are three types of withdrawals that can occur: Some of the income will be 1. Purchased on by households (M) 2. Taxed away by the government (T) 3. Saved (S) These are known as withdrawals that are many part of incomes of households that are not passed on within the circular flow of income. ***Withdrawals (W) = Savings (S) + Taxation (T) + Spending by domestic residents on Imports (M)***	
What are injections?	Injections occurs when: 1. Government and foreigners also purchase goods produced by the domestic firms. 2. Domestic firms purchase capital goods produced by other firms These are expenditure that do not come from domestic households. ***Injections (J) = Investment (I) + Government Spending (G) + Spending on country's Exports (X)***	
How is the level of national income determined?	Level of national income in an economy is known as GDP. Can be measured by adding up the spending of Consumers, Firms, Government and Foreigners (Net Exports) on goods produced during a year. ***Expenditure = Total value of output =National Income =GDP***	
How is equilibrium achieved?	Equilibrium occurs when there is no tendency for the level of income (Y), Expenditure (E) and output to change. The condition for equilibrium in the macroeconomy is when Injections (J) equals to Withdrawals (W)	
	When J>W ▪ Means that I + G + X > S + T + M ▪ This causes the circular flow of income to increase ▪ As households receive more income (Y), some goes to C, S, T, M and they each increase. ▪ As C increases, firms enjoy a higher Y, and pay resource owners for factor inputs again. ▪ This process continues through multiple rounds, increasing C, S, T & M ▪ Since W = S, + T + M, W increases until W = J	When J < W ▪ There is a larger withdrawal from the circular flow of income than the addition through I, G & X ▪ Thus equilibrium Y falls ▪ ↓ Y → households to have less to spend on C, S, T & M ▪ Since W = S, + T + M, ▪ W will keep falling through multiple rounds until W = K when equilibrium Y is reached.

Equilibrium Level of output & price level in an economy

Aggregate Demand

Total value of goods & services demanded in an economy at various general price level, it. Shows the amount of domestically produced G&S which households, firm, governments and foreigners are willing to buy at each general price level.

Factors affecting AD:

1. Consumption (C)
2. Investment (I)
3. Government Spending (G)
4. Net Exports (X-M)

Aggregate Supply

Total domestic output of G&S that firms collectively are willing to produce at each general price level.

Factors affecting Short run AS:

1. Input prices (Wages, oil prices)

Factors affecting Long run AS:

1. Quantity of resources
2. Quality of resources
3. Technology

Factors affecting C, I, G, (X-M)

Consumption = Autonomous Consumption + Induced Consumption

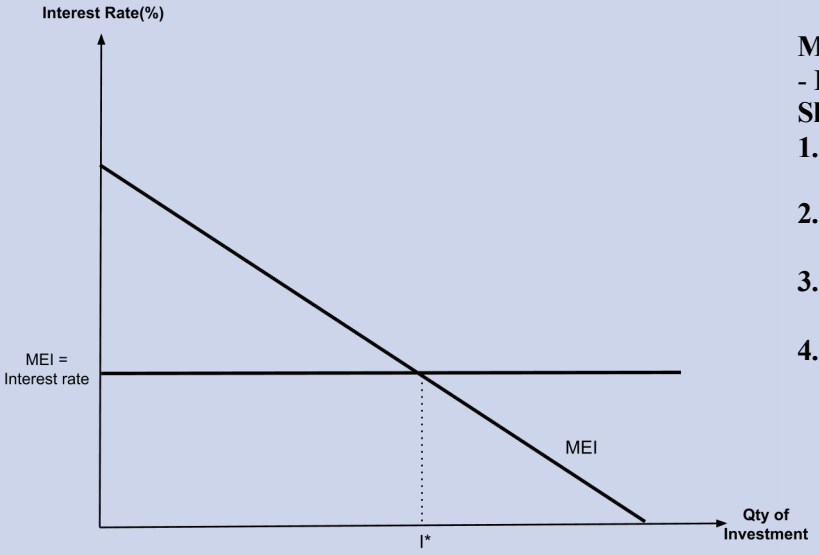
Autonomous consumption: Consumption independent of income level

- **Expectations of future income**
  Optimism/pessimism with regards to the expectations of future economic outlook will affect their willingness to spend → 'feel' richer due to anticipated ↑ income after an economic growth.
  - ➢ Paradox of Thrift: ↓Growth → ↓C → ↓AD → ↓Real NI → ↓↓↓Growth
- **Wealth**
  If the value of real assets (houses, cars, stocks) appreciate → 'feel' wealthier → ↑C
- **Consumer Credit and Interest Rates :** Credit represents borrowed funds used to finance consumption
  ↓ i/r → ↓ the cost of borrowing → ↑ C

Autonomous consumption: Changes when income changes

- **Marginal Propensity to Consume (MPC)**
  Measures the proportion of additional income that is spent on consumption
  - ➢ MPC ↓ when income ↑: Basic Necessities to sustain quality of life is met and thus it is easier to save the additional income

Investment



Marginal Efficiency of Investment: Expected profitability from investment
- Investments require borrowing from banks : ↓ in i/r → ↓ cost of borrowing → ↑ Expected rate of return

Shift of MEI curve :

1. **Business Expectations**
   - If businesses more optimistic of the future → ↑ Expectations of future profits → MEI curve shifts rightwards → ↑ I
2. **Corporate Tax**
   - Corporate tax rate ↓ → expectations of after- tax profits ↑ → MEI curve shifts rightwards → ↑ I
3. **Innovation and Technology**
   - New technology helps to reduce cost and improve quality → ↑ Expectations of profits → MEI curve shifts rightwards → ↑ I
4. **Cost of new capital**
   - ***Absolute cost:*** If the price of new plants/equipments ↑→ ↑ cost of production → firms revise downwards their expected rate of return → MEI curve shifts leftwards → ↓ I
   - ***Relative cost:*** If labour costs ↑ and investment goods (machines) become relatively cheaper → firms will switch to using machines, which are considered labour saving investments → ↑ investment to cut costs and ↑ profits

Government Expenditure

- Recurrent expenditure: education, civil servants salary, operating costs, etc.
- Social capital: building new road, infrastructure.
- Used in expansionary fiscal policy and supply side policies.

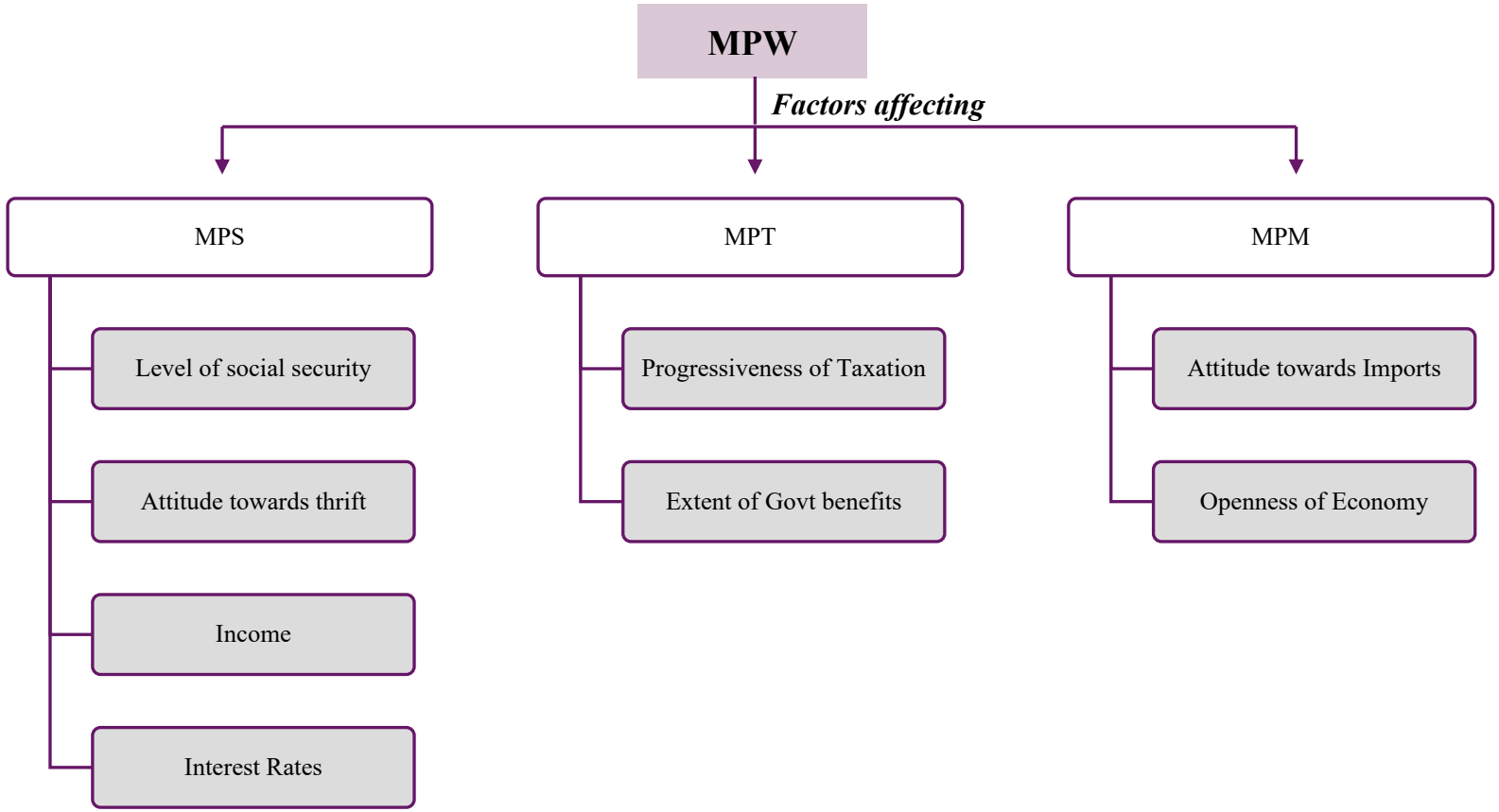
Net Exports

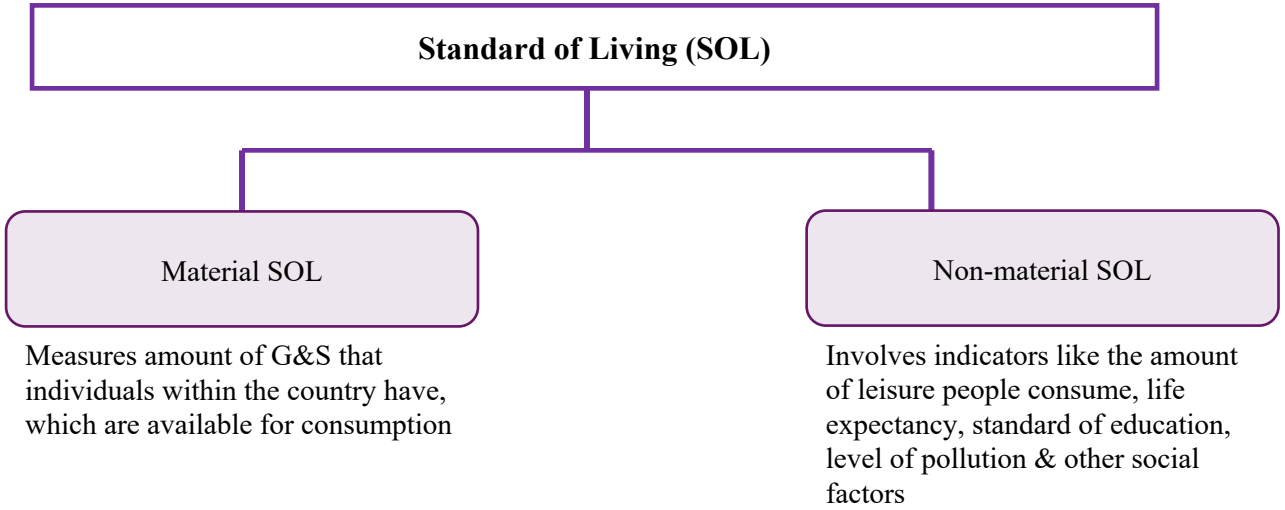
- **Import expenditure**
  Induced – depends on income level of domestic consumers
- **Export revenue**
  Price competitiveness depends on relative price levels and exchange rate
  Non-price competitiveness involves quality and branding

Multiplier K Effect

$$K = \frac{1}{MPW} = \frac{1}{1-MPC}$$

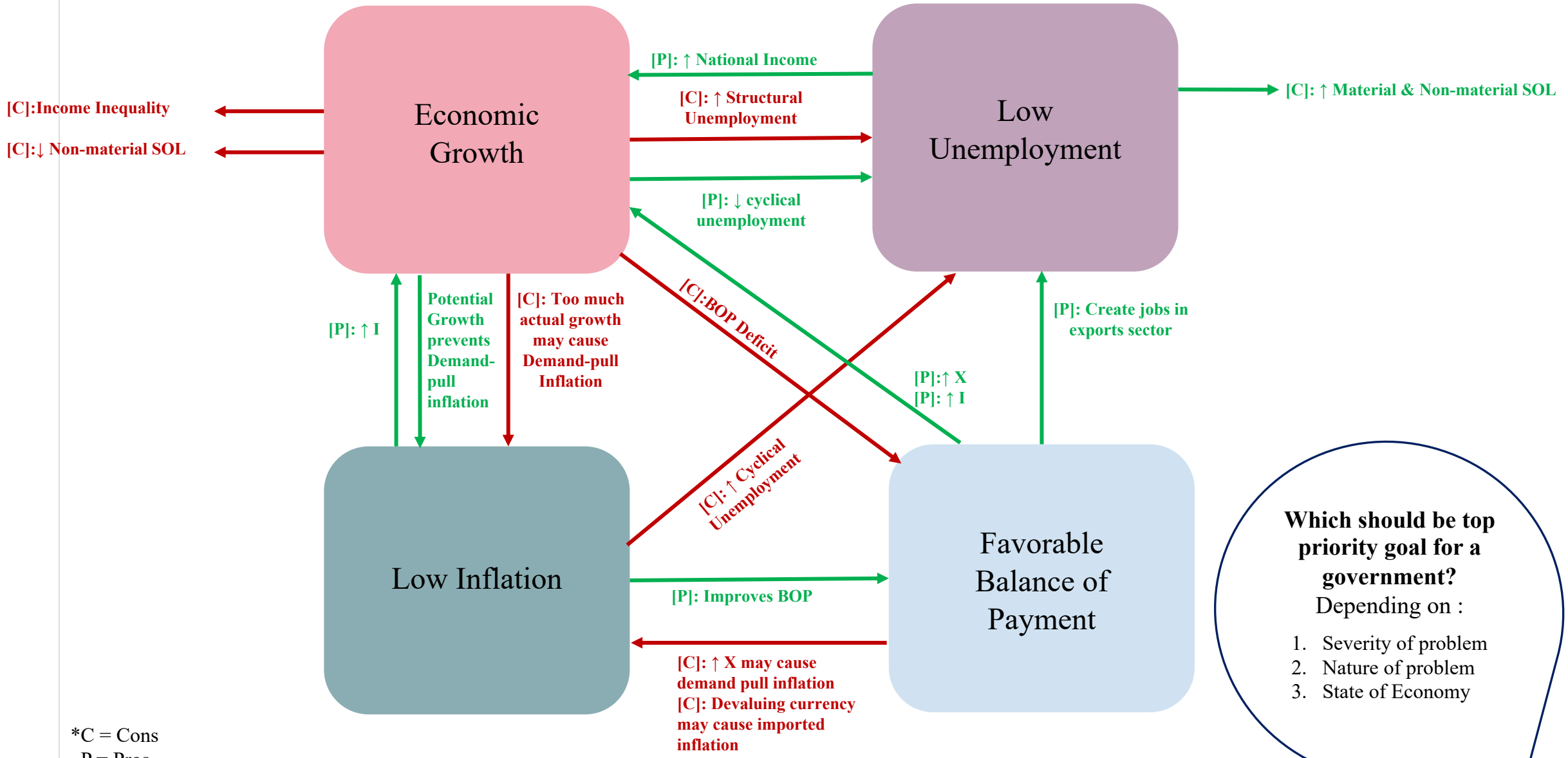
- An injection in expenditure will generate income for individuals employed by firms in the capital goods industry.
- These individuals will spend a proportion of their additional income on consumption, depending on their MPC.
- This further creates income for individuals employed in the consumer goods industry, who will further spend their additional income on consumption.
- This cycle of spending and re-spending on consumption will continue until increase in income becomes negligible.
- Eventual increase in national income is several times the initial increase in expenditure.
- The multiplier, k, represents the number of times the national income increases with respect to the initial injection.





Comparison of SOL across time (% change in GDP)	Comparison of SOL across countries (Absolute level of real GDP)
Real GDP Growth → Measure the change in purchasing power	
Real GDP Growth/Capita → Measure the change in purchasing power per citizen	Real GDP/Capita in Purchasing Power Parity (PPP) → Compare the absolute level of purchasing power ***PPP: used to adjust for the differences in cost of living to provide a better indicator of purchasing power***
Gini Coefficient → Indicates whether the poor also experienced a rise in purchasing power	Gini Coefficient to complement GDP data. Eg: High GDP/Capita (PPP) & High Gini Coefficient **VS** Slightly lower GDP/Capita(PPP) & lower Gini Coefficient → Able to better compare SOL across countries for different groups of citizens
Changes in Non-material SOL → Education, Healthcare, Leisure Hours etc.	Non-material SOL comparison → Education, Healthcare, Leisure Hours etc.
Human Development Index (HDI) → Used to complement data	Human Development Index (HDI) → Used to complement data

Brief Overview of the 4 Macroeconomic Goals



Which should be top priority goal for a government?

Depending on :

1. Severity of problem
2. Nature of problem
3. State of Economy

*C = Cons
P = Pros
Red arrow refers to conflicting macroeconomic goals
Green arrow refers to pros of achieving the macroeconomic goal

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