ECC1100 Principles of Macroeconomics

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W1 – Measuring Macroeconomic Performance: Output & Prices

- **Macroeconomics** deals with the economy as a whole, or with the basic subdivisions or aggregates that make up the economy.
  - An *aggregate* is a collection of specific economic units that are treated as if they were one unit
- **Gross domestic product (GDP)**: The market value of the final goods and services produced in a country during a given period
  - The *final goods or services* are the end products of a process; the products/services that consumers actually use (ie. bread)
  - The *intermediate goods or services* are the items produced on the way towards making the final product (ie. grain and flour)

Three approaches of measuring GDP:

1. **The Production Approach (Y)**
   - Market value: Goods and services are counted at their market prices *times* quantity
   - Measures the production of final goods and services only – avoids double counting
   - The market value of final goods embodies the cost of intermediate products
   - *Value-added method* for GDP: Summing up the value added by each firm in the production process
     i. The market value minus the cost of inputs purchased from other firms
2. **The Expenditure Approach (AE)**
   - GDP = Y = C + I + G + NX
     i. Consumption (C) – spending by households
     ii. Investment (I) – spending by firms, residential spending, and inventories
     iii. Government expenditure (G) – excluding transfer payments & interest paid
     iv. Net exports (NX) – exports less imports (X – M)
   - As such, GDP can also be measured as the sum of 'expenditure' on domestic production by households, all firms, government, and foreigners
3. **The Income Approach (Y)**
   - When a good or service is sold, the revenues from the sale are distributed to the workers and the owners of the capital involved in the production
   - GDP = labour income + capital income from production
     i. Labour income is wages, salaries, and self-employed income
     ii. Capital income includes payments to physical capital, intangible capital, and profits
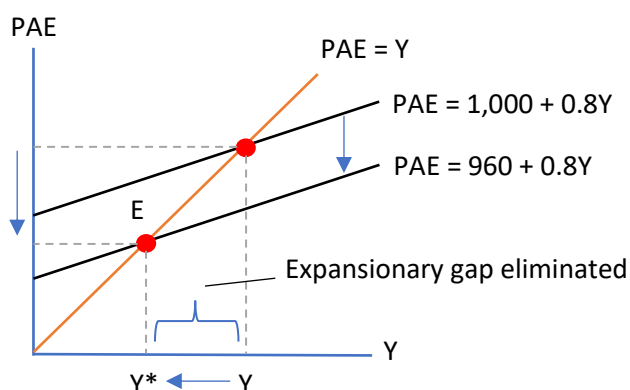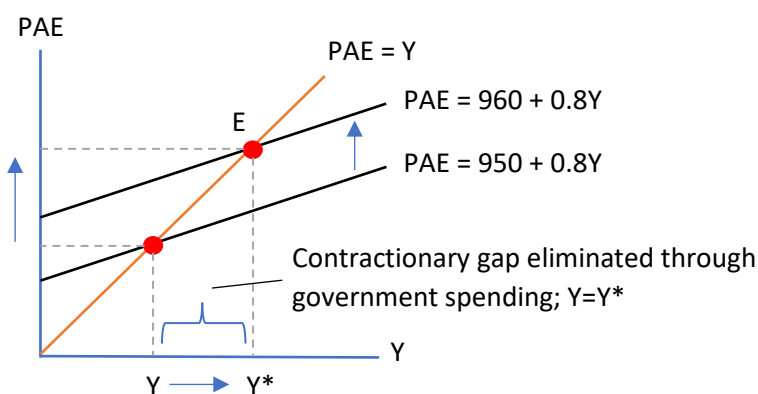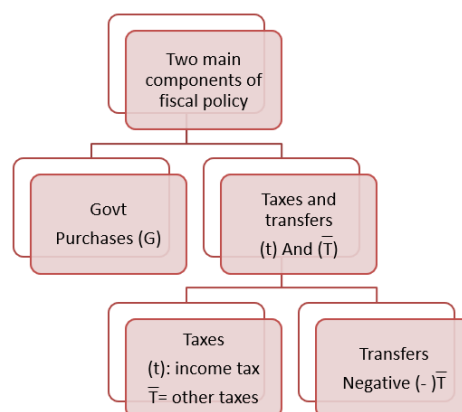   - *Circular flow of income*:
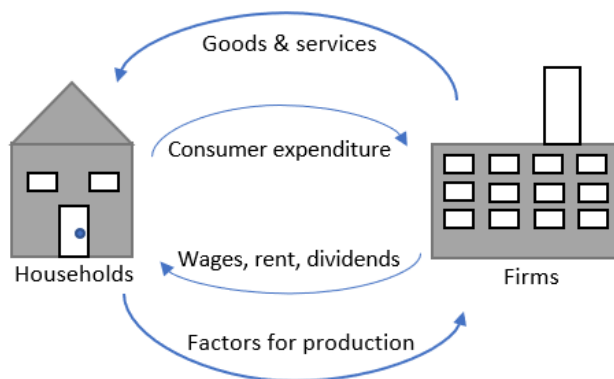
W4 – Fiscal Policy

- **Fiscal policy** refers to decisions about government spending, tax collection and transfer payments
  - Designed/Implemented by the government to achieve a desired level of output

Government Purchases

- G is a direct component of PAE
- The government can eliminate an expansionary gap by *decreasing* G
- Can eliminate a contractionary gap by *increasing* G

PAE

PAE = Y

PAE = 960 + 0.8Y

E

PAE = 950 + 0.8Y

Contractionary gap eliminated through government spending; Y=Y*

Y

Y ⟶ Y*

PAE

PAE = Y

PAE = 1,000 + 0.8Y

PAE = 960 + 0.8Y

E

Expansionary gap eliminated

Y

Y* ⟵ Y

Taxes and Transfers

- Fiscal policy also takes the form of changes to taxes and transfer payments
- **Transfer payments** are payments made by the government to the public, for which no current goods or services are received. Eg, unemployment benefits.
  - Represented by $\bar{T}$ which is net taxes paid to the government
  - Net taxes $(\bar{T})$ = taxes paid less transfers received

- These payments are not for the purchases of current goods and services, and are not part of G. Therefore, these changes do not affect PAE directly
  - They affect the level of disposable income, (Y – T), received by the private sector

W5 – Money & Prices

- The **banking system** consists of commercial banks that accept deposits from individuals and businesses and uses those deposits to provide loans

Bonds

- **Bonds:** A legal promise to repay a debt, including the principle amount, interest, or coupon payments
  Consists of:
  - The *principal amount,* which is the amount originally lent, is paid at some specific date in the future called the *maturation* date
  - *Coupon payments* are regular interest payments made to the owner of the bond (the bondholder), until maturity
- Bonds are **inversely related** to the interest rate
  - The higher the bond price, the lower the interest rate
  - The lower the bond price, the higher the interest rate

Bond price	Coupon (fixed)	Yield (interest)
$100	$10	10/100 = 10%
$50	$10	10/50 = 20%

Stocks

- **Stocks:** A claim to partial ownership of a firm
- Stockholders receive returns on their financial investment in two forms:
  1. A *dividend* (a regular payment received by stockholders for each share that they own); dividends are determined by the firm's managements and usually depend on the firm's recent profits
  2. In the form of *capital gains* when the price of their stock increases in the stock market
- **Stock price = Capital gains + dividends + risk**
  - *Capital gains*: When the firm becomes more valuable, stock prices increase, and you can sell the shares and receive return
  - *Dividends*: Returns when the firm makes a profit
  - *Risk*: Riskier companies attract a premium and stockholders must be compensated for the risk
- **Risk premium:** The state of return that financial investors require to hold risky assets minus the rate of return on safe assets
- **Diversification:** The practice of spreading one's wealth over a variety of different financial investments to reduce overall risk

Money

- **Money:** Any asset used in making purchases
- **Currency:** Notes and coins on issue less holdings of notes and coins by banks
- **M1:** Currency plus current deposits held by banks
- **M3:** M1 plus all bank deposits of the private non-bank sector
- **Broad money:** M3 plus borrowings from the private sector by non-bank depository corporations, less holdings of currency and deposits of non-bank depository corporations
- **Money supply** consists of currency and bank deposits (M3)

Fiscal Policy vs Monetary Policy

- **Inside lag** is the delay between the time a policy change is needed and the time it is implemented
- **Outside lag** is the delay between policy implementation and when the major effects of the policy occur
- *Fiscal policy* takes longer to get implemented (must go through parliament), but once implemented, the major effects are quicker to show
- *Monetary policy* is quicker to be implemented but once implemented, the major effects take longer to show

Fiscal policy		Monetary policy	
Fiscal policy causes shifts in the AD curve as it directly affects the exogenous components of AD		Monetary policy causes shifts in the AD curve when the Central Bank increases or decreases interest rates for 'every given level of inflation' or 'holding inflation constant'. The CB does this by shifting its policy reaction function, then conducting overnight market operations to achieve the targeted interest rates	
There is no fiscal policy that can cause a movement along the AD curve		Monetary policy causes a movement along the AD curve when the Central Bank increases or decreases interest rates as a result of inflation being too high/low. Altering the interest rate will bring the inflation back to the target level	
Pros: ➢ Direct impact on planned spending ➢ Shorter outside lag	*Cons:* ➢ Longer inside lag ➢ Political constraints	*Pros:* ➢ Central Bank independence, no political constraints ➢ Can adjust interest rates in increments ➢ Shorter inside lag	*Cons:* ➢ Indirect effect on planned spending ➢ Can conflict with govt objectives (e.g. higher interest rate may increase exchange rate, reducing exports) ➢ Longer outside lag

<u>Accommodating policy</u>

- **Accommodating policy** is a response to a negative/adverse supply shock by sacrificing the inflation target in order to close an output gap
    - Allows the effects of a shock to remain through self-correction
- Two important implications:
    1. In the *short run*, the economy experiences a period of contraction and higher inflation caused by the inflation shock, followed by an increase in output with inflation rising even higher
    2. In the *long run*, the economy returns to potential output, where it began, but now has a higher inflation rate. A possibly shorter and shallower recession is paid for with a higher long-run inflation rate

<u>Credibility of monetary policy</u>

- **Credibility of monetary policy** is the degree to which the public beliefs the RB will defend its target inflation rate
    - The more credible policy is, the more inflation is anchored