Ch 28 Expenditures Multipliers

Principles of Macroeconomics

Econ 102

Outline

- Fixed prices and Expenditure Plans
- Real GDP with a Fixed Price level
- The Multiplier
- The Multiplier and the Price level

Fixed Price

- When the price is fixed, then Aggregate Demand will be dependent on Aggregate Expenditure (spending)

$$AE = C + I + G + X - M$$

- If there is an increase in aggregate spending, while the income stays constant, then AD curve will shift
- Remember from Ch 27 that an increase in real GDP would increase AE that would increase real GDP
  - Based on circular flow of income and spending

Expenditure Components (1)

- Looking at each components, we can figure out how AE can increase while having income to be constant
- For C (or private consumption spending),
  - Any individual who have an income will have to pay tax to get disposable income
  - Disposable income is then being used to either buy goods or for savings
  - Any change to behavior regarding savings or spending would affect AE
    1. Change in disposable income
    2. Real interest rate
    3. Wealth
    4. Expected future income

Consumption Function

- Private consumption spending depends on:
  1. Autonomous consumption → independent of disposable income
  2. Induced consumption → dependent on disposable income
- How much would an individual spend (for consumption) based on an increase in disposable income is called <u>Marginal Propensity to Consume</u> (MPC)

$$MPC = \frac{\Delta C}{\Delta Y_D}$$

  - If disposable income increases by 100 SR, I will spend 80 SR for buying stuff. That means the MPC = 0.8

Saving Function

- Saving is based on disposable income and private consumption spending

$$S = Y_D - C$$

- Marginal Propensity to Save (MPS) tells you how much would an individual save based on an increase in disposable income

$$MPS = \frac{\Delta S}{\Delta Y_D}$$

  - If disposable income increases by 100 SR, I will save 20 SR for buying stuff. That means the MPS = 0.2

$$MPC + MPS = 1$$

Imports

- Private consumption spending also includes purchasing imported goods and service
- However, real GDP is based on goods and services produced within the country
  - Imports have to be excluded
- Buying imported goods depends on disposable income
  - Marginal Propensity to Import tells us about how individual would spend on imported goods and services when their income increases

$$MPtoImport = \frac{\Delta M}{\Delta Y}$$

Expenditure Components (2)

- From expenditure plans we have C and M
- We are left with I, G, and X
  - These will be considered exogenous spending (independent of income)
  - Autonomous and exogenous are similar!
- Based on our AE equation, we have:
  - Exogenous spending coming from I, G, X, and partially from C
  - Endogenous spending (or induced spending) from M and partially from C

Aggregate Expenditure and real GDP

- Since an increase in AE would also increase real GDP, and an increase in real GDP would also increase AE,
  - There exist a point where real GDP is equal to AE

$$Y = AE$$
$$Y = AE = C + I + G + X - M$$

  - This is called equilibrium expenditure or equilibrium GDP
- Think about income is from the perspective of producers (in terms of production of goods and services) while spending is from the perspective of the consumer (in terms of purchases)
  - When spending ≥ income, firms will see that their products are sold out but consumer still want more. Firms will increase production → income increases
  - When spending ≤ income, firms will see that their products are not sold out. Firms will reduce their production → income decreases

Equilibrium Expenditure (1)

- When the economy is operating above the equilibrium, it means that income is greater than aggregate spending
  - Goods and services produced is greater than what consumers want to purchase
  - Firms will cut production and effectively lowers real GDP

Equilibrium Expenditure (2)

- When the economy is operating below the equilibrium, it means that income is lower than aggregate spending
  - Goods and services produced is less than what consumers want to purchase
  - Firms will increase production and effectively raises real GDP