Ch.4: Consumption, Saving, and Investment

- 4.1 Consumption and Saving
- 4.2 Investment
- 4.3 Goods Market Equilibrium

- Focus now on the Demand side for G&S
- Assumption: NX=0 (Closed Economy)
- Gov’t Spending treated as given (exogenous)

Consumption and Saving

- C: 60% of total spending
- PDY = C + S for an individual
- Motive for Saving: Consumption - Future Consumption Trade-Off
- What are the factors that affect consumer spending?

Current Income

- What would you do with a one-time $4000 study grant award?
- Both C and S should rise with an increase in Y
- How would you arrange to pay a sudden $2000 tax bill adjustment?

Current Income

- Desired Consumption (C^d): aggregate Q of goods and services households want to consume, given Y and other factors
- Desired National Saving (S^d): aggregate national saving given C^d
- With NFP=NX=0, S=Y-C-G, so that

$$S^d = Y - C^d - G \qquad (4.1)$$

- If Y increases by 5 does C inc. by 5?
- Relationship: $C^d = c_o + c_y Y$ (4.2)

  "the Keynesian C function"

Expected Future Income

- What would you do today if you were told you will receive a $2000 study grant at the end of this semester?
- Current C increases and S falls. Why?
- How do we measure expected future income? See Fig. 4.1

Wealth

- What would you do today if you found out the price of the stock you bought last month doubled in market value?
- Current C would increase, S would fall. Why?
- What do we call these sudden changes in wealth?
- Why did consumption patterns vary little when the stock market crashed in 1987?

Expected Real Interest Rate

- What would you do today if you held a bond paying 10% nominal interest and expectations of inflation changed from 5% to 2%?
- What would happen to the price of this bond on markets?
- Two Effects: Income Effect
  Substitution Effect

Taxes

- How would savings change if the government announced all investment income would be taxed at 66%?
- What is the actual real return on investment? Formula:
- Is it possible to have a negative after-tax return?

Fiscal Policy

- Government Purchases with offsetting Taxes
- Government Purchases with offsetting bond sales (higher future taxes)
- Tax changes only (with offsetting tax changes in the future)
- Ricardian Equivalence Proposition: tax cuts do not affect desired consumption or saving

4.2 Investment

- What are the possible uses of Firm Resources?
- Decision like that of the household: Profits paid today vs profits earned tomorrow
- Why is I important?
- Why is I so volatile?

Desired Capital Stock

- Desired capital stock: level of capital that maximizes expected profits
- MPK: benefit of one additional unit of capital
- User Cost of Capital: expected real cost of one additional unit of K over time
- Costs: depreciation cost rp_k
  interest cost (opp. cost of funds) dp_k
- p_k: r: d:
- Formula: $uc = rp_k + dp_k$

Desired Capital Stock

- Profit-maximizing level of capital stock:

  $MPK = uc$

- Changes in $K^{d:}$
- (1) r, d, p_k
- (2) technological change - input quality increase

Taxes and K^d

- Compare after-tax MPK to uc
- Formula:
- Other issues:
- (1) forms of taxation
- (2) depreciation allowances
- (3) investment tax credit
- (4) EFFECTIVE TAX RATE see Table 4.2

Investment Measures

- Gross I: total purchase/construction of capital goods
- Net I: change in the capital stock
- Net I = Gross I less depreciation
- If gross I exceeds the replacement of depreciated capital, the capital stock grows
- See Fig. 4.5
- Lags and Investment: Not all capital expenditures can be used in production immediately!

Inventories and Housing

- Inventories: unsold or unfinished goods and raw materials
- Why do firms hold inventories?
- Why are inventory holdings volatile?
- Why/how does the concept of MPK and uc apply to:

  inventory?

  housing?

4.3 Goods Market Equilibrium

- Equilibrium: Q supplied = Q demanded
- What brings about equilibrium?
- $Y = C^d + I^d + G$ (4.8)
- The above identity may not hold when the income-expenditure identity always holds. Why?
- The goods market is in equilibrium when:

$$\mathbf{I^d = S^d} = Y - C^d - G \quad (4.9)$$