OUTLINE — October 30, 2017

- Multiplier, review
- Investment Spending & Its Determinants

Midterm 2: Wed., Nov 1, 7-8:30 pm
Rooms & Review Sessions posted on Piazza
Same rules

Changes in Equilibrium

What happens to equilibrium output (Y_E) if planned spending increases initially by 100?

Any initial Δspending results in a much larger ΔY_E because
1) Δspending → Δoutput
2) Δoutput → ΔY
3) ΔY → ΔYD → ΔC

Definition of size of multiplier:

Open Economy

Any initial Δspending results in a much larger ΔY_E because
1) Δspending → Δoutput
2) Δoutput → ΔY
3) ΔY → ΔYD → ΔC
   and ΔY → ΔIM

Open Economy with IM=f(Y)

- Suppose IM depend upon income (Y)
  - Marginal propensity to import (mpm)
    mpm =

- so ΔIM =

- Suppose mpm = 0.1   and   ΔY = 1,000
  ΔIM =

Multiplier definition & formulas

Definition of multiplier?

| Closed economy multiplier | Open economy multiplier |

Multiplier Process   Investment: Definitions   Investment Determinants

Example (Imports constant: mpm=0)

$C = 100 + 0.9 \cdot YD$ ➔ m.p.c. = _____
Suppose $\Delta I = +100$

Multiplier Process   Investment: Definitions   Investment Determinants

Multiplier definition & formulas

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Multiplier Process   Investment: Definitions   Investment Determinants

Example (open economy: mpm>0)

$C = 100 + 0.9 \cdot YD$ ➔ mpc = _____
$IM = 50 + 0.1Y$ ➔ mpm = _____
Suppose $\Delta I = +100$

Multiplier Process   Investment: Definitions   Investment Determinants

Change of Equilibrium

Investment Spending

- Investment is business spending for
  -
  -
  -

- "Investment" has nothing to do with stocks and bonds

A New Frozen Yogurt Machine?

- Machine Cost = $10,000

- Expected additional revenue = $ 22,000
- Expected additional costs = $ 21,500

→ Expected new net revenue = $ 500

→ Expected $ return =

Expected rate of return (rr^e)
  =

Profit-max strategy for buying capital

- Compare
    Expected rate of return (rr^e)
  and interest rate (i)

- If rr^e > i, then

- If rr^e < i, then

- Same strategy regardless of source of money

Investment Demand

Project	Cost	rr^e
A	$10,000	14 %
B	$5,000	10 %
C	$8,000	4 %

i = 2 %

i = 8 %

i = 12 %

Multiplier Process   Investment: Definitions   **Investment Determinants**

Investment Demand Curve

Multiplier Process   Investment: Definitions   **Investment Determinants**

Investment depends on Interest Rates

- Interest Rates (i) matter

- Expected rates of return matter

Multiplier Process   Investment: Definitions   **Investment Determinants**
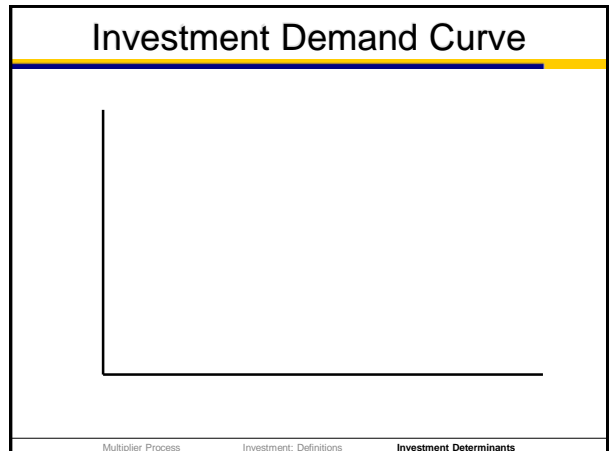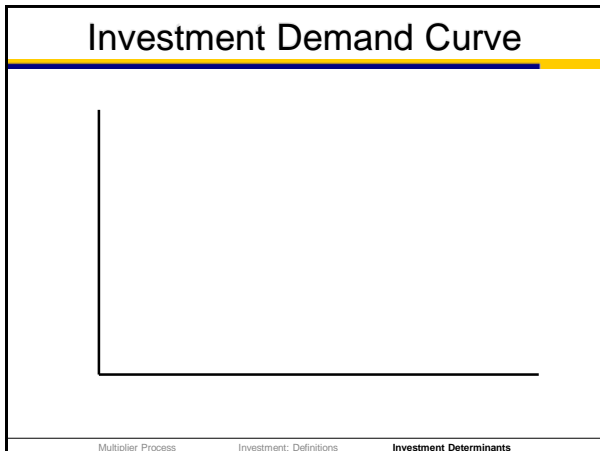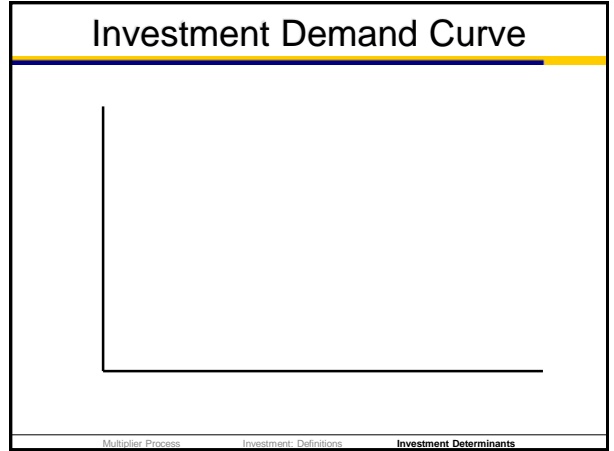
What happens to Investment if . . .

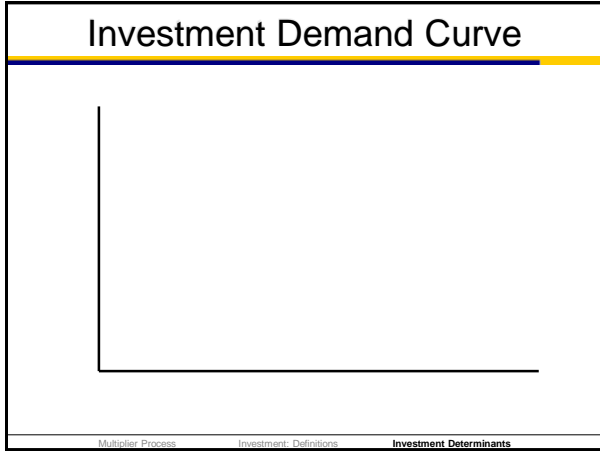- Expected sales decline?

- Expected energy costs rise?

- Interest rates fall?

- Banks refuse to lend to most businesses (credit crisis)?

Multiplier Process   Investment: Definitions   **Investment Determinants**

Investment Demand Curve

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Investment Demand Curve

Credit (or, Financial) Crisis of 2008

- Def: "market failure" permeates financial markets
  - Disequilibrium: Lenders won't lend. No interest rate will clear market.

- Asymmetric information problems in financial markets
  - Adverse selection
    - Lenders have difficulty assessing riskiness of potential borrowers

  - Moral hazard
    - After signing contract, borrowers may change behavior, increasing risk of default

  - Solutions to asymmetric info problems enable markets to function

Investment depends on . . .

- Interest Rates (i) matter
  $\uparrow$ i $\rightarrow$ $\downarrow$ Investment
  $\downarrow$ i $\rightarrow$ $\uparrow$ Investment

- Expected rates of return (rrᵉ) matter
  $\uparrow$ rrᵉ $\rightarrow$ $\uparrow$ Investment
  $\downarrow$ rrᵉ $\rightarrow$ $\downarrow$ Investment

- Credit availability – manifestation of a credit crisis – matters
  $\uparrow$ Credit availability $\rightarrow$ $\uparrow$ Investment
  $\downarrow$ Credit availability $\rightarrow$ $\downarrow$ Investment

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