Interest Rates & Investment Demand

Coach Burnett
AP Macroeconomics

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What is investment?

- *Money spent or expenditures on:*
  - *New plants (factories)*
  - *Capital equipment (machinery)*
  - *Technology (hardware & software)*
  - *New houses*
  - *Inventories (goods sold by producers)*

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Expected Rates of Return

- *How do businesses make investment decisions?*
  - ***Cost/benefit analysis***
- *How do businesses determine the benefits?*
  - ***Expected rate of return***
- *How do businesses count the cost?*
  - ***Interest costs***
- *How do businesses determine the amount of investment they undertake?*
  - ***Compare expected rate of return to interest cost***
    - ***If expected return > interest cost, then invest***
    - ***If expected return < interest cost, then do not invest***

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Real (r%) v. Nominal (*i*%) Interest Rates

- *What's the difference?*
  - *Nominal is the observable rate of interest. Real subtracts out inflation (π%) and is only known ex post facto.*
- *How do you compute the real interest rate (r%)?*
  - $r\% = i\% - \pi\%$
- *What then, determines the cost of an investment decision?*
  - *The real interest rate (r%)*

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The Investment Demand Curve (ID)

- *What is the shape of the Investment demand curve?*
  - *Downward sloping*
- *Why?*
  - *When interest rates are high, fewer investments are profitable; when interest rates are low, more investments are profitable*
  - *Conversely, there are few investments that yield high rates of return, and many that yield low rates of return*

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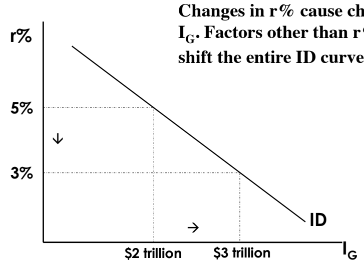
The Investment Demand Curve

Changes in r% cause changes in I_G. Factors other than r% may shift the entire ID curve



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Shifts in Investment Demand (ID)

- *Cost of Production*
  - *Lower costs shift ID →*
  - *Higher costs shift ID ←*
- *Business Taxes*
  - *Lower business taxes shift ID →*
  - *High business taxes shift ID ←*
- *Technological Change*
  - *New technology shifts ID →*
  - *Lack of technological change shifts ID ←*
- *Stock of Capital*
  - *If an economy is low on capital, then ID →*
  - *If an economy has much capital, then ID ←*
- *Expectations*
  - *Positive expectations shift ID →*
  - *Negative expectations shift ID ←*

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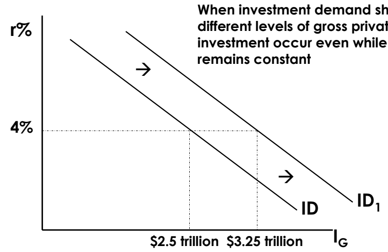
Shifts in Investment Demand

When investment demand shifts, different levels of gross private investment occur even while r% remains constant



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Instability of Investment

- *Durability*
  - *Capital has a long life-span, therefore once it is built there is no immediate need for further investment*
- *Variability of Profits*
  - *Profitability is subject to the forces of competition, cyclical changes in the economy, and human management decisions*
- *Irregularity of Innovation*
  - *Innovation does not proceed in a smooth linear fashion, instead there are bursts of innovation followed by periods of relative stability*
- *Variability of Expectations*
  - *Political, social and natural phenomenon shape our positive and negative expectations of the future*

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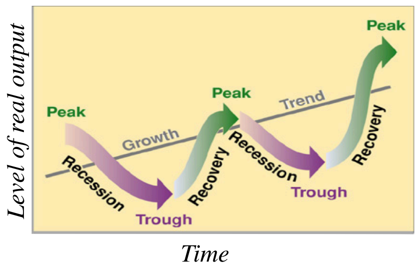
Instability of Investment

- *Many economists believe that investment instability is the chief cause of the business cycle.*



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