



## Notes – Topic 8

### Topic 8: Business Cycles

- I. Introduction
  - a. The world has seen an unprecedented growth trend in the last two centuries.
    - i. US economy growing at an average annual rate of 3% (total GDP growth)
    - ii. Total size of economy doubles every 25 years.
    - iii. Per-capita GDP doubles every 35 – 40 years (given the rate of population growth).
    - iv. Most times in history growth was at or near zero – centuries with no growth in standards of living.
    - v. Clearly we're doing something "right"
  - b. Looking at smaller periods of time (perhaps a year), many small shifts occur:
    - i. D
    - ii. These fluctuations around the long-term trend are called the Business Cycles (popularly "Boom and Bust Cycles")
- II. Phases
  - a. Expansion → Economy is growing at a healthy rate.
  - b. Downturn → Economy losing momentum. Rates of growth dropping.
  - c. Recession → Negative total GDP growth.
    - i. Severe recessions used to be called "depression." Term last used in the 1930s.
    - ii. Popular definition: Two consecutive quarters of contracting GDP.
  - d. Trough → Growth bottoms out and then expansion begins again.
  - e. A lot of talk about "new economy" killing business cycles, but there's *always* such talk during long expansions. The cycle always repeats.
  - f. 1990s was unprecedented expansion.
    - i. Longest peacetime expansion ever.
    - ii. Slowed dramatically in 2001 to point where *for practical purposes* we're in recession.
    - iii. No two quarters of contracting GDP, but slowed from 6% to 0% growth – same effect.
- III. Predicting Business Cycles.
  - a. Nearly impossible to predict when cycle will turn and how far it will rise or fall.
  - b. For one thing, we never know until "after the fact." GDP is only recorded quarterly and then altered based on more data later.
  - c. Progress toward predicting has been very slow; probably will never succeed.
  - d. Efforts to Predict
    - i. Very dedicated.
    - ii. Computer models accepting hundreds of variables
      1. Perform fairly well in the short-run, providing no exogenous shocks occur (WTC attack, for example).
      2. Less reliable over more time. Just doesn't work.
    - iii. Leading Indicators.
      1. Business and social statistics that come out at a point in time and tend to anticipate what will happen within a year.
      2. Stock prices
      3. Unemployment claims
      4. Residential construction permits.
      5. Orders for capital.
    - iv. Indicators tend to be hyperactive. "We've predicted five of the last two recessions."
- IV. The Great Depression
  - a. Most famous business cycle downturn in history.
  - b. 1930s in US but different times in different nations.

- c. US hit hardest
    - i. Real GDP shrank by  $\frac{1}{4}$  (3% to 4% normally thought to be a “big” recession)
    - ii. Unemployment stuck at exceedingly high numbers (25%), especially in 1931 to 1932
  - d. Social suffering and Devastation enormous
    - i. Life savings lost.
    - ii. People who'd previously never lost their jobs were suddenly unemployed.
    - iii. Foreclosures on houses and farms
    - iv. Homelessness on unforeseen levels.
    - v. Hunger
  - e. Caused intellectual crisis in economic system.
    - i. Previously much faith in market system. Thought no possibility of sustained depression.
    - ii. All recessions previously were relatively short and seemed to correct themselves with no intervention.
    - iii. Great Depression cast serious doubt on that faith.
    - iv. J.M. Keynes would attempt to revise macroeconomics.
- V. Aggregate Demand
- a. Looks like ordinary demand curve, but plotted with Price-Level on the vertical and GDP on the horizontal.
  - b. Inverse relationship between price-level and real output.
  - c. Ceteris Paribus
  - d. Demand in the economy for *all* goods and services.
  - e. Reasons for downward slope are very complicated (see Textbook M:309 to 311)
  - f. Shifts in Aggregate Demand Curve
    - i. Since “ $Y = C + I + G + NX$ ” any change in the terms on the right will shift the aggregate demand curve.
    - ii. Consumption
      - 1. Expectations (consumer confidence). More likely to spend money if consumers have confidence. More confidence shifts curve outward.
      - 2. Incomes. With more income, curve shifts outward.
      - 3. Taxes. As taxes fall, consumers essentially have more income and will demand more.
    - iii. Investment
      - 1. Expectations. (Business Confidence). Same effect as changed in consumer confidence.
      - 2. Real Interest Rates (r). Price of funds used for investment. Higher rates make businesses want to invest LESS. *One of the most important relationships in macroeconomics.*
      - 3. Business Taxes. Same effect as consumer taxes.
    - iv. Government Spending.
      - 1. Essentially government can set whatever spending it wants within political constraints.
      - 2. More spending brings more demand. Also a very important relationship.
    - v. Net Exports.
      - 1. Don't really have to understand. Will be covered in International Economics topic.
      - 2. Foreign Incomes (countries with whom we trade). If foreign incomes increase they should be buying more of our exports. There's no reason we'd be buying more of their imports though, so the aggregate demand curve shifts to the right.
      - 3. Exchange rates. Will return in detail much later.
- VI. Aggregate Supply and Equilibrium
- a. Plotted on same axes as aggregate demand curve.
  - b. Curve determined by institutional and technological factors.

- c. Positive correlation between price level and amount of "stuff" suppliers want to produce.
- d. Much debate over whether the slope of the curve.
  - i. A modest slope would mean as the aggregate demand curve shifts outward the price level increases and real output increases.
  - ii. A very shallow aggregate supply curve means that as the aggregate demand curve shifts outward real output increases but the price level remains constant. This is common in a lax economy.
  - iii. A very steep aggregate supply curve means that as the aggregate demand curve shifts outward the price level increases but not real output. This is common in economies producing to their full potential.
- e. Supply curve *only* shows relationship between price level and aggregate supply.
- f. Factors Shifting Aggregate Supply Curves
  - i. Difference between temporary shifts and permanent shifts
  - ii. Temporary Inward Shifts
    - 1. Temporary supply-side difficulties.
    - 2. Factors that increase cost of production in a wide range of industries for a short period of time.
    - 3. Ex: Oil Shocks.
    - 4. This is the worst-case scenario. Simultaneous decrease in real output and increase in price-level.
    - 5. Called "stagflation."
  - iii. Temporary Outward Shifts
    - 1. Fortuitous, positive circumstances.
    - 2. Ex: Very good harvest in agricultural sector. Means price of food is lower, which means people won't be asking for raises as much, which keeps prices elsewhere low.
    - 3. This is the best-case scenario. Increase in real output and decrease in price level.
  - iv. Permanent Outward Shifts
    - 1. Caused by only one thing: Increase in economy's potential output.
    - 2. Most increases in are gradual and happening constantly over time.
    - 3. Might happen for three reasons.
      - a. Production technology in general increases. Always happening slowly.
      - b. Additional resources become available. Oil discovered, perhaps. Also happening constantly via adding to physical and human capital.
      - c. Changing social, cultural, or political institutions to encourage production. Clearing out "red tape."
  - v. Permanent Inward Shifts
    - 1. Decrease in productive capacity.
    - 2. Very unusual. Happens only with regression in technology, reduction in resources, or negative social policies.
    - 3. Destruction of physical capital due to war or force majeure.
    - 4. Reduction in capital resulting from low level of investment – so low it cannot replace capital that's wearing out.
    - 5. Mass emigration – labor force contracting significantly. Ireland in the 1800s – shrinking potential GDP.
    - 6. Most common reason would be changes in institutions.

## VII. John Maynard Keynes

- a. Wrote during the Great Depression. "General Theory of Employment, Interest, and \_\_\_\_." Called "General Theory."
- b. Demonstrates why capitalist economies do not automatically adjust to full capacity of production.

- c. Previously thought market economy *would* self-correct to limit severity of any business-cycle downturn.
- d. Economists had no explanation for Great Depression
- e. Keynes suggested economies *could* get stuck and generally *wouldn't* self-correct. Government intervention required.
- f. Definitely not a socialist or radical – thought markets were fundamentally fine, but government should seek to manage economy at macroeconomic level.
- g. Reason for economy getting stuck in depression was due to aggregate demand (previously thought to be aggregate supply)
  - i. If demand falls (leftward shift), firms won't be able to sell everything so they'll have to cut back production and fire workers.
  - ii. The newly unemployed workers would consume less, causing the aggregate demand curve to shift further to the left.
  - iii. Due to falling consumption, firms would have to invest less, which would lead to more unemployment.
- h. What causes the initial shift in aggregate demand?
  - i. Could be anything that affects aggregate demand, but most likely investment.
  - ii. Investment is the most volatile – unexpected and significant swings occur.
  - iii. Mainly psychological reasoning. Investment depends on the psychology of business leaders' states of confidence.
    - 1. Very subjective.
    - 2. Vulnerable to panics when a few people (key leaders – Bill Gates types) panic, causing *everyone* to panic.
  - iv. Not *all* recessions caused by investment, but generally investment does fall preceding a recession.
  - v. Current recession (2002) is the result of spontaneous fall in investment
    - 1. Firms over invested in Internet technologies in the 1990s and accrued enormous debts.
    - 2. By the beginning of the millennium, CEOs realized they had too much technology to use and began investing far less.
- i. Key point is that volatile aggregate demand (Investment particularly) is the active element in determining business cycles.
- j. When vicious cycle first begins, the government should step in and break the cycle by increasing its own spending.
  - i. Doesn't really matter *what* they spend on.
  - ii. Facetiously: Government should dig big holes and fill them with money so firms will invest in the capital required to dig it up.
  - iii. An increase in government spending is roughly the same as a decrease in taxes.
    - 1. Profits rise so investment rises, or income rises so consumption rises.
    - 2. Not quite as good, since tax cuts must first go through households and firms before being re-circulated so some is lost.
- k. World War II confirmed these ideas.
  - i. Increased production to help Britain and then further increased production to join the war.
  - ii. Unemployment fell and output rose – booming economy.
- l. Keynesian ideas dominated economics from WWII through the 1970s.
  - i. Golden age of economics.
  - ii. Then in 1970s, recession occurred that defied analysis in Keynesian terms.
  - iii. OPEC shock – an aggregate supply problem – caused inflation to rise and output to fall.
  - iv. No demand-side change could possibly create such a scenario; the problem had to be supply-side.
- m. Today, Keynesian ideas definitely incorporated in economics but many other ideas too.