Chapter 5 - Introduction to Macroeconomics

Introduction
• Macroeconomics looks at the big picture:
  – Demand for:
  – Average price of:
  – Consumption by:
  – Investment by:
• Macroeconomists develop theories to:
• Specifically, macroeconomists are interested in what makes an economy grow.
  – Growing economy =

The National Economy
• The common yardstick to measure the size of the economy is ____________________:
  – The market value of final goods and services produced in a particular geographic region during a given period.
• For the U.S. economy, we use ____________________ (GDP):
  – We use GDP to compare different economies or to track the same economy over time.

Economic Fluctuations and Growth
• With capitalism,
• Economic fluctuations are the rise and fall of economic activity relative to the ____________________.
• The business cycle shows the different components of economic fluctuations:
  –
• Business Cycle Diagram:
  – The economy’s output increases due to:
    • Increases in the amount and/or quality of resources.
    –
    • Improves in the “rules of the game”
• Contraction
  –
• Recession
  –
• Depression
Short History of the U.S. Economy

- Hard times and prosperity (cycle of ________________).
  - 1873-1879 = _______________
  - 1890s = unemployment at _______%
  - Great Depression = deepest contraction and unemployment at _______%.

- John Maynard Keynes wrote the most famous economics book of the 20th century,
- Keynes believed that the government could get the economy out of recessions by:
  - Keynes policy was supported by the increase in government spending during ____________.

- Oil Crisis in ______ and ________
  - OPEC restricted the supply of oil and prices soared.
  - Stagflation = _______________
    - Keynes policies were ineffective to fix stagflation.

- President Reagan cut taxes in 1981,
- However, federal spending increased and the government began running a ________________.
- President H.W. Bush and President Clinton both raised taxes.
  - Under Clinton (1998),
    - 1980-2001:
      - Small recession in 2001

- Reasons for current recession:


Lecture Notes: Chapter 6 - Productivity & Growth

Introduction
  • Differences in income reflect differences in:
  • Standards of living are different between countries, and:
  • Think: How has standard of living changed from the Industrial Revolution to when you grandparents were your age to now?
  • The single most important determinant of a nation’s standard of living is:

  • Growing productivity is critical to raise:
• Growth rates:
  – U.S. average income (real GDP per person) has grown by 2% per year
  – Asian Tigers ( ) average income has risen by 7% per year
  – African countries (Chad, Nigeria, Malawi) have stagnated and average income has not changed over the last decade.

Theory of Productivity and Growth
• Standard of living is measured by:
  • Differences in living standards can be summed up in one word -
  • Productivity =
    – Example: Cast Away
    • Tom’s standard of living is directly tied to his level of productivity.

• Determinants of Productivity:
  – Physical capital per worker:
    – Ex:.
  – Human capital per worker:
    • Human capital –
    – Ex:
  – Natural resources per worker:
    – Ex:

• Other factors affecting productivity:
  –
    • Usually improves the quality of capital.
    – Example:

  – Rules of the Game
    –
    • Encourages investment by owners which increases productivity.
    • Diminishing returns to physical capital
      –
      • Implication of diminishing returns =
        – Example: 1960-1990 - U.S. and South Korea devoted a similar share of GDP to investment.
        » U.S. grew at _______ per year.
        » South Korea grew at _______ per year.
Effect of Technology

• The information revolution that started in 1996 has lead to a boost in productivity.

• Cost of communication (internet) ↓ -- Does technology cause unemployment?

--- Example:

-- Although technological change may displace some works in the short run -

Lecture Notes: Chapter 7 - Tracking the U.S. Economy

The Product of a Nation

• National Income Accounts
  -- Remember, GDP:

  -- GDP can be measured either by total spending on U.S. production or by total income received from that production.

  • Rationale:
    • Expenditure Approach:

  • Income Approach:

  • Note: GDP only counts _______________ produced goods.

  • Note: Final goods are goods sold to the final, or end, user.

  • Intermediate goods:

    -- Sales of intermediate goods are excluded from GDP to avoid ____________________.

GDP Based on the Expenditure Approach:

-- 4 Components:

  •
    -- Purchases by households -

  •
    -- Spending on new capital goods.

  •
    -- Spending by local, state, and federal government.

  •
    -- The value of the country’s exports minus the value of its imports.

    » NX =

  • GDP (Y) =

  • Composition of U.S. GDP in 2008

    -- GDP =
Limitations of National Income Accounting:

- Some production is not included in GDP
  - Leisure, Quality, and Variety
- GDP does not reflect all costs
  - Welfare

**GDP is useful, but:**

**Nominal vs. Real GDP**

- Nominal GDP =
- Real GDP =

GDP measures total spending, if spending rises, one of two things must be true:
- 1.
- 2.

Economists want to separate these two effects.

**Numeric Example:**

- Assume the economy is only producing two goods
  - Bagels and Coffee

- Calculate nominal GDP:
  - Nominal GDP =
• Calculate Real GDP
  – First, choose one year as:
    • Always pick the first year in sequence.

• Use GDP to calculate inflation =

• Plug GDP price indexes into rate formula to calculate inflation rate:
Consumer Price Index (CPI)

• CPI is another way to calculate _____________.

• CPI measures changes over time in the cost of buying a:

• If CPI rises, the typical family has to spend more dollars to maintain the same standard of living.

• Calculated and reported monthly by:

• 5 step process to calculate CPI:
  – Step 1:
    • Determine which goods are most important to the typical consumer –

  – Step 2:
    • Find the prices for each good and service in the basket for each point in time.

  – Step 3:
    • Use data to compute cost of basket in different years.

  – Step 4:
    • Base year –

  – Step 5:
    • Use CPI index to calculate the inflation rate

Example:
Step 1:
• Basket =

Step 2:

Step 3:
What’s really in the CPI basket?

Current CPI Data:

Problems with CPI

1. Consumers respond to higher prices by substituting towards goods that have become relative less expensive.

   • Example: The fixed basket includes 5 apples. If the price of apples increase, you substitute towards pears. However, the index thinks you just bought the more expensive apples.

2. New goods means a great variety to choose from.

   • Example: Cell Phones
For any given number of dollar, the cell phone made people better off. To achieve the same level of economic well-being required a smaller number of dollars.

3.
—If quality of a good deteriorates from one year to the next, the value of the dollar falls, even if the price of the good does not change, because you have getting a “lesser good”.
—BLS tries to estimate quality, but it is very difficult to measure.

Example:

**Difference between GDP Price Index and CPI**

1. Different Goods
2. New Goods

**Chapter 8 - Unemployment and Inflation**

**Unemployment**

Fun Fact: Reelection of incumbent presidents often hinge on the unemployment rate.
A country’s standard of living is influenced by the amount of unemployment it typically experiences.

The unemployment rate is the most widely reported measure of the:
The BLS has the job of measuring unemployment:
Based on answers to survey questions,

Employed

Unemployed

Not in the Labor force

Formulas:
Labor Force: Total number of workers.
• Labor Force =
  – Unemployment Rate: Percentage of labor force that is unemployed.
  • Unemployment Rate =

  – Labor-Force Participation Rate:

  • L.F.P. Rate =

• Recent Data:
  –
  • Adult Population:
    • Employed:
    • Unemployed:
      – Labor Force =
      – Unemployment rate =
      – LFP Rate =

• Problems with Official Unemployment Figures:
  – 1. People who report:
    • Reasons: qualify for government assistance or working under the table.

  – 2. Discouraged Workers
    • People who:

  – 3. Underemployment
    • Workers who:

* Unemployment rate is useful but an imperfect measure of joblessness.

• Sources of Unemployment:
  – 1.
    • Unemployment that occurs because job seekers and employers need time to find each other.

    – Policy makers and economists are ______ concerned with frictional unemployment.

  – 2. Seasonal Unemployment
    •
      – Example:
      – BLS adjusts for seasonal unemployment.
Policy makers and economists are ______ concerned with seasonal unemployment.

3. Unemployment because (1) the skills demanded by employers do not match those of the unemployed, or (2) the unemployed do not live where the jobs are.

- Occurs because:

  » Example:

  - Structural unemployment poses more of a problem because:

4. Cyclical Unemployment

- Increases during contractions (recessions) and decreasing during expansions.

  * Unemployment Compensation:

  - Average 40% of a person’s wage for 6 months.

  - Evidence suggests that those collecting unemployment benefits remain out of work weeks longer than those with benefits.

Inflation

- Inflation =
- Hyperinflation =
  - Zimbabwe and Germany
- Deflation =

- Two sources of inflation:
  - Demand-pull inflation
    - 1960s (Vietnam War and expanded Social Programs).
  - Cost-push
    - 1970s (OPEC oil shocks).

- Anticipated versus Unanticipated Inflation:

  • Arbitrary causes winners and losers.
  - If inflation is higher than expected, the _____________ are those who agreed to sell at a price that anticipated lower inflation and the _____________ are those agreed to pay that price.
If inflation is lower than expected, the ________ are those who agreed to pay a price that anticipated higher inflation, and the _________ are those who agreed to sell at that price.

• Inflation and Interest Rates:
  • Lenders are rewarded for forgoing present consumption, and borrowers are willing to pay a premium to spend now.
  • The interest rate is the amount paid per year as a percentage of the amount borrowed.
  • Nominal interest rate = 
    • Tells you:
    • Real interest rate = 
      • Tells you:
  • Lenders and borrowers are more concerned about:
    • However, the real interest rate is only known after the fact –
      • Lenders and borrowers must form expectations about inflation.

  • The higher the expected inflation, the ________ the nominal interest rate that lenders require.
  • The lower the expected inflation, the __________ the nominal interest rate.

• Why is inflation unpopular?
  • With inflation, prices of goods and services increase. However,
    • Prices and wages are two sides of the
      • People view higher incomes as well-deserved rewards for their labor, but
      • Most people do not realize that as labor productivity increases, higher wages will be paid, therefore
      • If nominal wages keep up with inflation,