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**Econ 103 – Class 1 – Saturday, September 25 2010**

Unlimited Resources Vs. Unlimited Desires = Economy

**Objectives of Macroeconomics:**

1- Economic Growth.

2- Price Stability.

3- Full Employment.

4- Fiscal Balance. (Revenue = Expenditure) **R = E**

5- External Balance.(Exports = Imports)

**Econ 103 – Class 2 – Monday, September 27 2010**

Partial Ch. 4

## GDP = Gross Domestic Products.

GDP is the market value of all the final goods and services produced in a country during a given period of time (Normally one year).

**Note: GDP is not affected by depreciation. However, the cost of goods or services such as material costs or labor costs are deducted from the GDP.**

To Calculate the Growth Rate= (GDP2009 / GDP2008 -1) x 100

**Depreciation** meas the loss in value of assets while they are used up in the production

**NDP** is the Net Domestic Production
**NDP = GDP – Depreciation**

**Econ 103 – Class 3 – Wednesday, September 29 2010**

 **Market Value**

**GDP is a market value –** goods and services are valued at their market prices.

A **final good (or service)** is an item bought by its final user during a specified time period.

– A final good contrasts with an **intermediate good**, which an item that is produced by one firm, bought by another firm, and used as a component of a final good or service.

Excluding intermediate good and services avoids double counting.

**GDP** measures the value of production, which also equals total expenditure on final goods and total income.

**Net Export** is the value of exports (X) minutes the value of imports (M). **NX** = **X-M**

**GDP: Y = C + I + G + X – M  (Expenditure Approach)**

**(Check Book : IMPORTANT!!!) Read More About This Approach**

**Depreciation** is the decrease in the value of a firm's capital that results from wear and tear and obsolescence.

**Gross Investment** is the total amount spent on purchases of new capital and on replacing depreciated capital.

**Net Investment** is the increase in the value of the firm's capital.

**Econ 103 – Class 4 – Saturday, October 2 2010**

**Measuring GDP:**

- **The Expenditure Approach (Read Book, Very Important)**

- **The Income Approach:**

Income Categories:
1- Compensation of Employees.
2- Net Interest
3- Rental Income
4- Corporate Profits.
5- Proprietors' Income.

**Two Adjustments must be made to get GDP:**

1. Indirect taxes minus subsidies are added to get from factor cost to market prices.
2. Depreciation (or capital consumption) is added to get from net domestic product to gross domestic product.

**Nominal GDP and Real GDP:**

**Real GDP** is the value of final goods and services produced in a given year when valued at the prices of a reference base year.
- The Common Base Year is 2000 for real GDP

**Nominal GDP:** is the value of goods and services produced during a given year valued at the prices that prevailed in that same year.

**Prices in 2009 x Quantity in 2009 = Nominal**
**Prices in 2008 x Quantity of 2009 = Real**

**Econ 103 – Class 5 – Monday, October 4 2010**

**Real GDP is used for two main purposes:**

- To compare the standard of living over time.
- To compare the standard of living across countries.

**Real GDP per person** is the real GDP divided by he population.  (GDP per Capita)

**The uses and Limitations of real GDP:**

**Long-Term Trend:** A handy way of comparing real GDP per person overtime is to express it as a ratio of some reference year. For example, in 1958, real GDP per person was 12,883 earned, and in 2008, it was 38,422.

**Two features of our expanding living standard are:**
- The growth of potential GDP per person.
- Fluctuations of real GDP around potential GDP.

The value of real GDP is when all the economy's labor, capital, land, and entrepreneurial ability are fully employed is which is called **Potential GDP.**

**How costly is the slowing of real GDP growth rate per person?**
**A: "Lucas Wedge"**

**Lucas Wedge** is the projection of the accumulated gap between what real GDP per person would have been  if the growth rate in the 1960's had persisted.**(Read More on Book, its important)**

**Econ 103 – Class 6 – Wednesday, October 6 2010**

**Lucas Wedge** is the dollar value of the accumulated gap between what real GDP per person would have been if the 1960's growth rate had persisted and what real GDP per person turned out to be.

**Cont. on Uses and Limitations of Real GDP:**

**Real GDP Fluctuations:**
A **Business Cycle** is a periodic but irregular up-and-down movement of total production and other measures of economic activity.

**Every cycle has two phases:**
1- Expansion. (Down to Up) – GDP Growth Rate Increase
2- Recession. (Up to Down) – GDP Growth Rate Decrease

A Recession is a period during which real GDP decreases – its growth rate is becomes lower – for at least two successive quarters.

**Every cycle has two turning points:**
1- Peak (Top)
2- Trough (Bottom)

**Cont. on Uses and Limitations of Real GDP:**

**Limitation: Using Real GDP to compare standard of Living Across Countries:**
Two problems arise in using real GDP to compare living standards across countries:

1. The real GDP of one country must be converted into the same currency units as the real GDP of the other country.
2. The goods and services in both countries must be valued at the same prices.

## Econ 103 – Class 7 – Saturday, October 9 2010

### Unemployment and Full Employment

### What is "Natural Unemployment"?
The unemployment rate at full employment is called the **Natural Unemployment Rate.**

**Full employment** occurs when there is no cyclical unemployment or, equivalently, when all unemployment is frictional and structural.

The natural unemployment rate was high during the early 1980s but had gradually decreased.

### Real GDP and Unemployment Over the Cycle

Potential GDP is the quantity of real GDP produced at full employment.

Potential GDP corresponds to the capacity of the economy to produce output on a sustained basis.

Real GDP minus potential GDP is the **output gap.**

Over the business cycle, the output gap fluctuates, and the unemployment rate fluctuates around the natural unemployment rate.

### Price Level and Inflation

The **Price Level** is the average level of prices and the value of money.

The **Inflation Rate** is the annual percentage change in the price level.
( Delta P over P =   ;  Inflation Rate = P2-P1/P1 )

### We are interested in he price level because we want to:
- Measure the inflation Rate
- Distinguish between real and nominal values of economic variables.

**Econ 103 – Class 8 – Monday, October 11 2010**

**Unemployment and Full Employment**

**Frictional unemployment** is unemployment that arises from normal labor market turnover.

The creation and destruction of jobs requires that unemployed workers search for new jobs.

**Structural unemployment** is unemployment created by changes in technology and foreign competition that change the skills needed to perform jobs or the locations of jobs.

**Cyclical unemployment:** is unemployment created by changes in the business cycle. (Ex, unemployment due to recessions, boom, and trough. In addition, cyclical unemployment could also be caused by rare natural disasters such as floods, earthquakes, and wars.)

Cyclical unemployment is more dangerous than Structural, and Structural is more dangerous than Frictional.

**Natural unemployment:** The employment rate at full employment is called the **natural unemployment rate.**

**Full employment:** occurs when there is **no cyclical** unemployment or, equivalently, when all unemployment is **frictional**, **structural,** and **seasonal.**

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**Real GDP and Unemployment Over the Cycle**

Potential GDP is the quantity of real GDP produced at full employment.
*Potential GDP: is the GDP produced at full employment.*

**Real GDP – Potential GDP = Output Gap**

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# Econ 103 – Class 9 – Wednesday, October 13 2010

## Price Level & Inflation

The **price level** is the average level of prices and the value of money.

The **inflation rate** is the annual percentage change in the price level.
(Inflation Rate = ▲P/P)

We are interested in the price level because of we want to:
- **Measure the inflation rate.**
- **Distinguish between and nominal values of economic variables.**

## Why Inflation Is a Problem

Inflation is a problem for many reasons, but the main one is that once it takes hold, it is unpredictable.

Unpredictable inflation is a problem because it:
- **Redistributed income and wealth.**
- **Diverts resources from production.**

Unpredictable changes in the inflation rates redistribute income in arbitrary ways between employers and workers and between borrowers and lenders.

A high inflation rate is a problem because is diverts resources from productive activities to inflation forecasting.

From a social perspective, this waste of resource is a cost of inflation

At its worse, inflation becomes **hyperinflation – an inflation rate that is rapid.** (Read Book )

## The Consumer Price Index
The **Consumer Price Index,** or **CPI** measures the average of the prices paid by urban consumers for "fixed" basket of consumer goods and services.

*Urban consumers = consumers in cities*

**Constructing the CPI:**

**Three stages to construct Consumer Price Index:**

1. Selecting the CPI basket
2. Conducting a monthly price survey
3. Calculating the CPI

**The Monthly Price Survey**

Every month, BLS employees check the prices of 80,000 goods on 30 metropolitan areas.

**Calculating the CPI:**
**(Check Book : VERY IMPORTANT )**

**Econ 103 – Class 10 – Saturday, October 16 2010**

**Price Level and Inflation**

**CPI =** ( Cost of goods (n) / Cost of goods (n-1) ) x 100

**CPI =** (Cost of basket at current year – period prices / Cost of basket at base – period prices ) x 100

*(CPI Formula is not the inflation rate, the inflation rate will be calculated after you calculate the CPI)*

**Measuring the Inflation Rate**

The major purpose of the CPI is to measure inflation.

The **inflation rate** is the percentage change in the price level from one year to the next.

**The inflation formula is:**

**Inflation Rate** = [ (CPI this year – CPI last year) / CPI last year ] x 100.
or **Inflation Rate** = [ ( $P_n$ / $P_n$ - 1) -1 ] x 100.

**Check Figure 22.7 (b) –** Shows that the **inflation rate is**:

- **High Inflation Rate** when the **price level** is **rising rapidly**
- **Low Inflation Rate** when the **price level** is **rising slowly**

**The Biased CPI** (The **cons** of using CPI to calculate inflation rate)

The CPI might overstate the true inflation for four reasons:
- **New goods bias**
- **Quality change bias**
- **Commodity substitution bias**
- **Outlet substitution bias**

**Q1 – P. 125)**
**Labor Force** = 154294000 **(People That Wants to work & able out of the working age population)**
**Employment** = 146089000 **(People That wants to work & able, and was able to get a job)**
**Working Age Population** = 233410000. **(All People in the Working Age)**

**Answer Method:**
**Unemployment** Formula = (Labor Force) – (Employment)
**Unemployment Rate** Formula = (Number of Unemployment) / (Labor Force) x 100

**Labor Force Participation Rate** Formula = (Labor Force) / (Working Age Population) x 100
**Employment to Population Ratio** Formula = (Employment) / (Working Age Population) x100

*Reminder Note:* Calculating General **CPI = Cost of Basket $_n$ / Cost of Basket $_{base\ year}$**

**Price Level and Inflation**

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**Alternative Price Indexes:**

**1. Chained CPI:** CPI = Cost of Basket in current year ÷ Cost of Basket in previous Year

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**2. Personal Consumption Expenditure deflator:** P.C.E:
PCE Deflator = (Nominal consumption expenditure) ÷ (Real Consumption Expenditure) x100

*Note: Deflator = Nominal ÷ Real x 100*

PCE Deflator is a broader measure of the price level than the CPI because it uses a personal consumption expenditure.
**GDP Deflator is like the PCE deflator except it includes the prices of all goods and services.**

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**Core Inflation Rate:**
The Core Inflation rate is the CPI inflation rate excluding the volatile elements (of food and fuel).
The core inflation rate **attempts to reveal the underlying inflation trend.**

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**The Real Variables in Macroeconomics:**
We can use the GPD Deflator to to deflate nominal variables to find their real values.

For Example,
**Real Wage Rate =** (Nominal Wage Rate ÷ GDP Deflator) x 100

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**END OF CHAPTER 5**
Read the Questions at the end of the chapter

**Econ 103 – Class 13 – Saturday, October 23 2010**

**Q3 – P.125)**

a) **July 2009 – Unemployment Rate: =** # of unemployed / Labor Force
   **Unemployment Rate** = (1000 / 11,000) x 100 = 9.09%

b) **Employment to Population Ratio** = (10,000 / 16,000) x 100 = 62.5%

c) **# of Unemployment =** 1000 + 40 – 150 – 50 = 840.
Note**: Unemployment number =** Job Leavers + Job Losers + Entrants or Reentrants – People
                                    Withdrawing from labor force – People Hired or Recalled.

d)**: # of Employed** = 10,000 + 150 – 80 – 20 = 10,050

e) **Unemployment Rate =** 840 / 10890 x 100 = 7.7%

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**(H.W.: Develop a Formula Sheet for All Chapters)**

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**CHAPTER: 6 – The Basics of Economic Growth**

Economic growth is the **sustained** expansion of production possibilities measured as the increase in real GDP over a given period.

**(*Look up PPF Diagram on book*)**

**Calculating Growth Rates:**
The **economic growth rate** is the annual percentage change of real GDP.
(Look up book for the formula: IMPORTANT) r.gdp current year over r.gdp previous year -1 x 100.

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The standard of living depends on real GDP per person.
**Real GDP per person** is real GDP divided by the population.
Real GDP per person grows only if real GDP grows faster than the population grows.

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**The Magic of Sustained Growth:** The **Rule of 70** states that the number of years it takes for the level of a variable to double is approximately 70 divided by the annual percentage growth rate of the variable.

**Econ 103 – Class 14 – Monday, October 25 2010**

**Economic Growth and Potential GDP:**

- Economic growth occurs when **real GDP** increases.

- However, a one-shot increase in **real GDP** or **a recovery from recession is not economic growth**.

- Economic growth is the sustained, year-on-year increase in **potential GDP.**

**How Potential GDP is determined:**

Potential GDP is the quantity of real GDP produced when the quantity of real GDP produced when the quantity of labor employed is the full-employment quantity.

**To determine potential GDP we use a model with two components:**
- The aggregate production function.   (Ex, Output – Function (L.K) )
- The aggregate labor market.

**Aggregate Production Function:**

The **aggregate production function** tells us how real GDP changed as the quantity of labor changed when all other influences of production remain the same.

**Aggregate Labor Market:**

The **real wage rate** is the money wage rate divided by the price level.

The demand for labor shows the quantity of labor demanded and the real wage rate.
The supply of labor shows the quantity of labor supplied and the real wage rate.

The labor market is in equilibrium at the real wage rate at which the quantity demanded = quantity supplied.

Demand for labor comes from firms.
Supply for labor comes from the new entrants to the labor force.

**1-** The **real wage rate** is the **money wage rate** divided by the price level.
**2-** The real wage rate is the money wage rate divided by the CPI.
**3-** --------------------------------------------- Divided by GDP deflator.
**4-** --------------------------------------------- Divided by Chained CPI.
**5-** --------------------------------------------- Divided by CE deflator

**Econ 103 – Class 15 – Wednesday, October 27 2010**

**What Makes Potential GDP Grow?**

**A:** By dividing real GDP growth into the forces that increase:

- Growth in the supply of labor
- Growth in labor productivity

**Growth in the supply of Labor:**

Aggregate hours, the total number of hours worked by all the people employed, change as a result of changes in:

1- Average hours per worker
2- Employment-to-population ratio
3- The working-age population growth

Population growth increases aggregate hours and real GDP, but to increase GDP per person.....
Check Book

**Growth in Labor Productivity:**

**Labor Productivity** is the quantity of real GDP produced per an hour of labor.

Labor productivity equals real GDP divided by aggregate labor hours.

If Labor becomes more productive, firms are willing to pay more for a given number of hours so the demand for labor increases.

**In the labor market**: An increase in labor productivity increases demand for labor.

# Preconditions for Labor Productivity Growth:
**The growth of labor productivity depends on:**
- Physical Capital Growth
- Human Capital Growth
- Technological Advances

**Physical Capital Growth:** The accumulation of new capital increases capital per worker and increases labor productivity.

**Human Capital Growth:** Human capital acquired through education, on-the-job training, and learning-by-doing is the most fundamental source of labor productivity growth.

**Technological Advances:** Technological Change – the discovery and the application of new technologies and new goods – has contributed immensely to increasing labor productivity.

**Supply of Labor Growth:**
**+**
**Productivity of Labor Growth:**
**=**
**Real GDP growth**
**= Population Growth + Real GDP per person Growth**

**Why Labor Productivity Grows:**

The quantity of real GDP produced, **Y**, depends on the quantity of labor, **L**, the quantity of capital, **K**, and the state of technology, **T**.

The **one-third rule:** On average with no change in technology, a 1% increase in capital per hour of labor brings a 1/3 % increase in labor productivity. (IMPORTANT)

For example, suppose capital per hour of labor grows by 3% and labor productivity grows by 2.5%

The one third rule tells us that capital growth contributed 1/3 of 3%, which is 1%, to labor productivity growth.

The remaining 1.5% of labor productivity growth comes from technological change.

**(MAJOR 1 EXAM UP THIS)**

**EXAM TYPE:**

- **MULTIPLE ANSWER QUESTIONS**
- **REVIEW QUIZZES END OF EACH CHAPTER**
- **END OF CHAPTER QUESTIONS**