Revision notes for Macroeconomic

Macroeconomics 2 (Royal Melbourne Institute of Technology)

Macroeconomics

Week 1;

Scarcity; limited availability of society's resources.
Economics; study of how society manages their scarce resources.
Opportunity cost; best alternative to be given up in order to obtain another good or service.
Positive statements; claims to describe the world as it is.
Normative statements; claims to prescribe how the world should be.

Opp. Cost = what you give up/what you gain

Role of assumption in economics;
In economics, when economists are making theories, or conducting studies, they may assume that there are only two goods in the market or assume there is perfect competition between two distributors in the market.

Week 2;

For an economy as a whole;

Income = Expenditure because;

- Every transaction has a buyer and seller
- Every dollar of expenditure from buyer is a dollar of income to seller

GDP; the total measure of income and expenditure of an economy.

GDP(Y) IS THE SUM OF;

- CONSUMPTION (C)
- INVESTMENT (I)
- GOVERNMENT PURCHASES (G)
- NET EXPORTS (NX)

$$Y = C + I + G + NX$$

Components of the GDP;

Consumption; the spending of households on good on services.
Investment; the spending on capital equipment, inventories and structure.
Government purchases; the spending on goods and services by local, state and federal governments. Exclusive of transfer payments, because payments are made for non-existing goods.
Net Exports; Exports – Imports

GDP can be classified as

- Nominal GDP; values the production of goods and services at CURRENT prices.
- Real GDP; values the production of goods and services at CONSTANT prices.

Price and quantities

Year	Price of meat pies	Quantity of meat pies	Price of instant noodles	Quantity of instant noodles
2009	$3	100	$2	50
2010	4	150	3	100
2011	5	200	4	150

Year	Calculating nominal GDP
2009	($3 per meat pie x 100 meat pies) + ($2 per instant noodles x 50 instant noodles) = $400
2010	($4 per meat pie x 150 meat pies) + ($3 per instant noodles x 100 instant noodles) = $900
2011	($5 per meat pie x 200 meat pies) + ($4 per instant noodles x 150 instant noodles) = $1600

Year	Calculating real GDP (base year 2009)
2009	($3 per meat pie x 100 meat pies) + ($2 per instant noodles x 50 instant noodles) = $400
2010	($3 per meat pie x 150 meat pies) + ($2 per instant noodles x 100 instant noodles) = $650
2011	($3 per meat pie x 200 meat pies) + ($2 per instant noodles x 150 instant noodles) = $900

GDP Deflator; it is the measure of the price level calculated as a ratio of nominal GDP to real GDP times 100.

GDP Deflator = Nominal GDP/ Real GDP * 100

Year	Calculating the GDP deflator
2009	($400/$400) x 100 = 100
2010	($900/$650) x 100 = 138
2011	($1600/$900) x 100 = 178

FACTS of GDP;

- It tells us the standard of living of people
- It is an indirect measure of happiness and success in an economy

Week 3;

Inflation; measured in **CPI** refers to a situation in which overall pricing is on a rise.
Inflation rate; percentage change in the price level from previous value.
CPI; It is the consumer price index, which measures the overall cost of goods and services bought by a typical consumer.

Calculation of CPI;

Step 1; Fix the basket by determining which prices are most important to consumer.
Step 2; Find the prices of goods in each basket for each point in time.
Step 3; Calculate the basket's cost at different times.
Step 4; Designate one year the base year and use it to compare with other years.
Step 5; Compute the inflation rate using the following equation.

$$\text{Inflation rate year 2} = \frac{CPI\ Year\ 2 - CPI\ Year\ 1}{CPI\ Year\ 1} \text{x } 100$$

Calculating the CPI and the inflation rate: An example

Step 1: Survey consumers to determine a fixed basket of goods		
4 apples, 2 movie tickets		
Step 2: Find the price of each good in each year		
Year	Price of apples	Price of movie tickets
2009	$1	$5
2010	2	7
2011	3	10

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Calculating the CPI and the inflation rate: An example

Step 3: Calculate the cost of the basket of goods in each year	
Year	Cost of basket
2009	($1 per apple x 4 apples) + ($5 per movie ticket x 2 movie tickets) = $14
2010	($2 per apple x 4 apples) + ($7 per movie ticket x 2 movie tickets) = $22
2011	($3 per apple x 4 apples) + ($10 per movie ticket x 2 movie tickets) = $32

– How does this differ calculating nominal GDP?

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Calculating the CPI and the inflation rate: An example

Step 4: Choose one year as a base year (2009) and calculate the consumer price index in each year	
Year	Consumer price index
2009	($14/$14) x 100 = 100
2010	($22/$14) x 100 = 157
2011	($32/$14) x 100 = 229

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Calculating the CPI and the inflation rate: An example

Step 5: Use the consumer price index to calculate the inflation rate from previous year	
Year	Inflation rate
2010	(157 - 100)/100 x 100 = 57%
2011	(229 - 157)/157 x 100 = 45%

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Another example of calculating the CPI and Inflation rate;

- Base year is 2016
- Basket of goods cost 600$ in 2016 (Base year)
- Same basket of goods cost 1000$ in 2020.
- CPI = (1000/600) x 100 = 166.7
- Inflation rate is 66.7%.

Problems in measuring cost of living;

- Substituion bias
  Basket does not reflect the change when consumers switch to substitute goods that are less expensive.
- Introduction of new goods
  Basket does not reflect the change in purchasing power brought on by new products.
- Unmeasured quality changes
  An upgraded TV or DVD player will result in either and increase or decrease in dollar value.

GDP Deflator; reflection of prices of all goods and services produced domestically.
CPI; reflection of prices of all goods and services consumers purchased.

Correction of economic variables;

- Price indexes are used to correct for the effects of inflation when comparing dollar figures from different times.
- Phar Lap (a famous horse) had winnings of $19,000 in 1930.
- How much is it in for example 2007 dollars? Any guesses?
- Winnings in 2007 dollars = winnings in 1930 dollars × (price level in 2007/price level in 1930)
- From the ABS statistics the CPI in 2007 was 158.4, and in 1930 it was 4.7
- $19,000 × (158.4/4.7) = $640,331

Interest; payment made in the present represting an action of the future.
Nominal interest rate; it is the interest rate usually reported and not corrected for infaltion. It is the interest that the bank pays.
Real interst rate; the nominal interest rate that is corrected for the effects of the inflation.

Real Interest Rate = Nominal Interest Rate – Inlfation

Eg; you borrow 1000$ for one year,

- Nominal interest rate was 15 percent
- During the year inflation was 10 percent

Real Interest Rate = Nominal Interest Rate – Inflation
= 15 – 10
= 5 percent real interest rate.

Week 4;

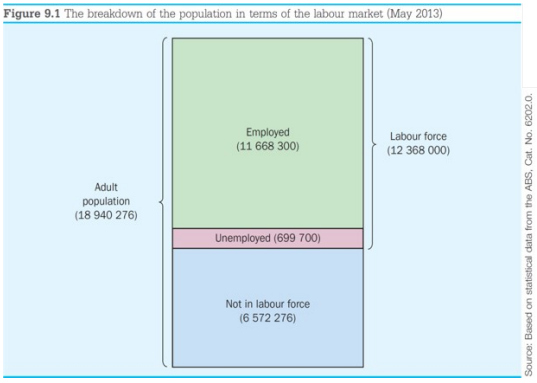
Unemployment;

- The long run problem on unemployment focuses on reducing the natural rate of unemployment.
- The short run problem focuses on reducing the cyclic rate of unemployment.

Unemployment is measured by the ABS, using a survey known as 'Labour Force Survey'. This survey consists of three categories,

- Employed
- Unemployed
- Not in the labour force

Figure 9.1 The breakdown of the population in terms of the labour market (May 2013)



Unemployment Rate = Number unemployed/labour force * 100

Labour Force Participation Rate = Labour forces/adult population

Discouraged Workers; people who would like to work but have given up looking for jobs after an unsuccesful search, don't show up in unemployment statistics.

Some may claim to be unemployed to receive financial support and/or assistance.

Underemployed; people who haven't gotten as much employment time or experience.

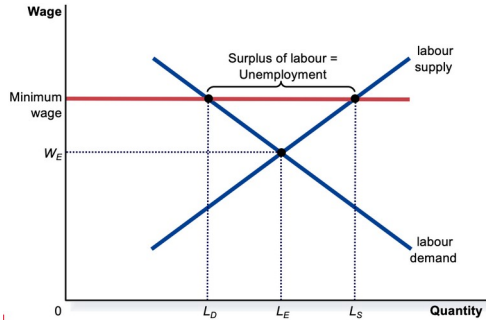
Types of unemployment;

Frictional unemployment; refers to the unemployment that results from the time that it takes workers to match with jobs. Job search by these workers are limited to search based on their available skillset.

Structural unemployment; resulted from the insufficiency in jobs in the market.

Classical unemployment; minimum-wage laws, unions, efficiency wages.

Minimum wage laws; when the minimum wage is set above the equilibrium, unemployment occurs.



Union; worker association that bargains with employers over wages and working conditions.
Efficiency Wages; wages paid by organisation to improve worker efficiency.

Firms may prefer higher than equilibirum wages for the following reasons;

- Worker health; better paid workers eat better, and thus are more producitve.
- Worker turnover; higher pay = higher chance of not leaving for other jobs.
- Worker effort; higher wages motivate workers to put forward their best effort.
- Worker quality; higher wages attract a better pool of workers to apply for jobs.

Asymmetric information; the incident in which one individual(s) have more information than the other during a transaction.
Adverse selection; occurs when one person knows more of the attributes of a good than another, leaving the other at the risk of buying low quality products.
Moral Hazard; behaving different to the way in which one asks you to.

The Production Function;

Y = F(L, K, H, N, A)

- ***Y* = quantity of output**
- ***F( )* is a function that shows how the inputs are combined - available production technology**
- ***L* = quantity of labour**
- ***K* = quantity of physical capital**
- ***H* = quantity of (intangible) human capital**
- ***N* = quantity of natural resources**
- ***A* = (intangible) technological knowledge**

Week 5;

Types of financial instituitions;

- Financial markets (DIRECT)
  Instituitions through which borrowers can directly borrow from savers
  Bond market
  Stock market
- Financial Intermediaries (INDIRECT)
  Banks
  Managed Funds
- Credit unions
- Pension
- Insurance company

What is a bond?

A bond is a certificate of indebtedness (IOU) that specifies obligations of the borrower to the holder of the bond.

Characteristics of a bond;

Term; length of time until maturity
Credit risk; the probability that the borrower will fail to pay back in full
Tax treatment; the ways in which tax laws treat the interest of the bond.

What is a share?

It is a claim to a partial ownership in a firm.

Equity Financing; the sale of stock to raise money.

What type of information do newspaper stock tables consist of?

- Price
- Volume
- Dividends
- Price-earnings ratio

Financial intermediaries: Indirect borrowing;

1. Banks
   take deposits from people who want to save and use deposits to to make loans for those whom want to borrow.
   pay depositers interest on their loans, and charge borrowers slightly higher interest on their loans.
   banks help create a medium of exchange through the issue of cheques and credit cards.

National saving;

$S = I$
$I = Y - C - G$
$S = I$
$Y - C - G = (Y - T - C) = (T - G)$

$$\mathbf{S = (Y - T - C) + (T - G)}$$

Private Saving; amount remaining after households pay for their consumption and taxes.

$$\mathbf{Private\ Saving = (Y - T - C)}$$

Public Saving; amount of tax revenue the governemnt has left after paying for its spending.

$$\mathbf{Public\ Saving = (T - G)}$$

Week 6;

Money; set of awssets in the economy that people regularly use to buy goods and services from other people. Money is a medium of exchange.