Economics for Business Environment

Unit 7

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Lecture Outline

1. Introduction
2. Measuring the Standard of Living
3. Cost of living
4. Unemployment

Introduction

- Economics have a long history of ideas and theories.
- Before the first economist, there were philosophers that talked about economic issues
- Probably the first was Hesiod (around 750 BC).
- He was the first to discuss the topic of scarcity in his work Ἔργα καὶ Ἡμέραι, Erga kai Hemerai (transl. "Works and Days")

Introduction

- Plato and Aristotle discussed various economic issues (they even described the concept of marginal utility!)
- Ibn Khaldun (1332–1406), for some is considered the father of modern economics
- In his work Muqaddimah (Prolegomena), he discussed the forces of Supply and Demand and how to promote economic growth and development.
- During the Enlightment many scholars discussed and introduced various economic ideas (e.g. property rights)

Modern Economics

- *Adam Smith*: The invisible hand (*Classical Economics*)
- *Alfred Marshall*: Mathemantical foundation of economics. Supply and Demand, marginal utility, costs of production (*Neoclassical Economics*)
- *John Maynard Keynes*: Government intervention to promote economic activity (*Keynesian Economics*) *Milton Friedman*: Role for monetary policy (*Monetarism*)
- *Robert E. Lucas*: Rational Expectations (*New classical Economics*)
- Various: Elements from all the above (*New neoclassical synthesis*)

Today's lecture

- Study the economy as a whole.
- Measures of well-being
- Inflation
- Interest Rate
- Unemployment

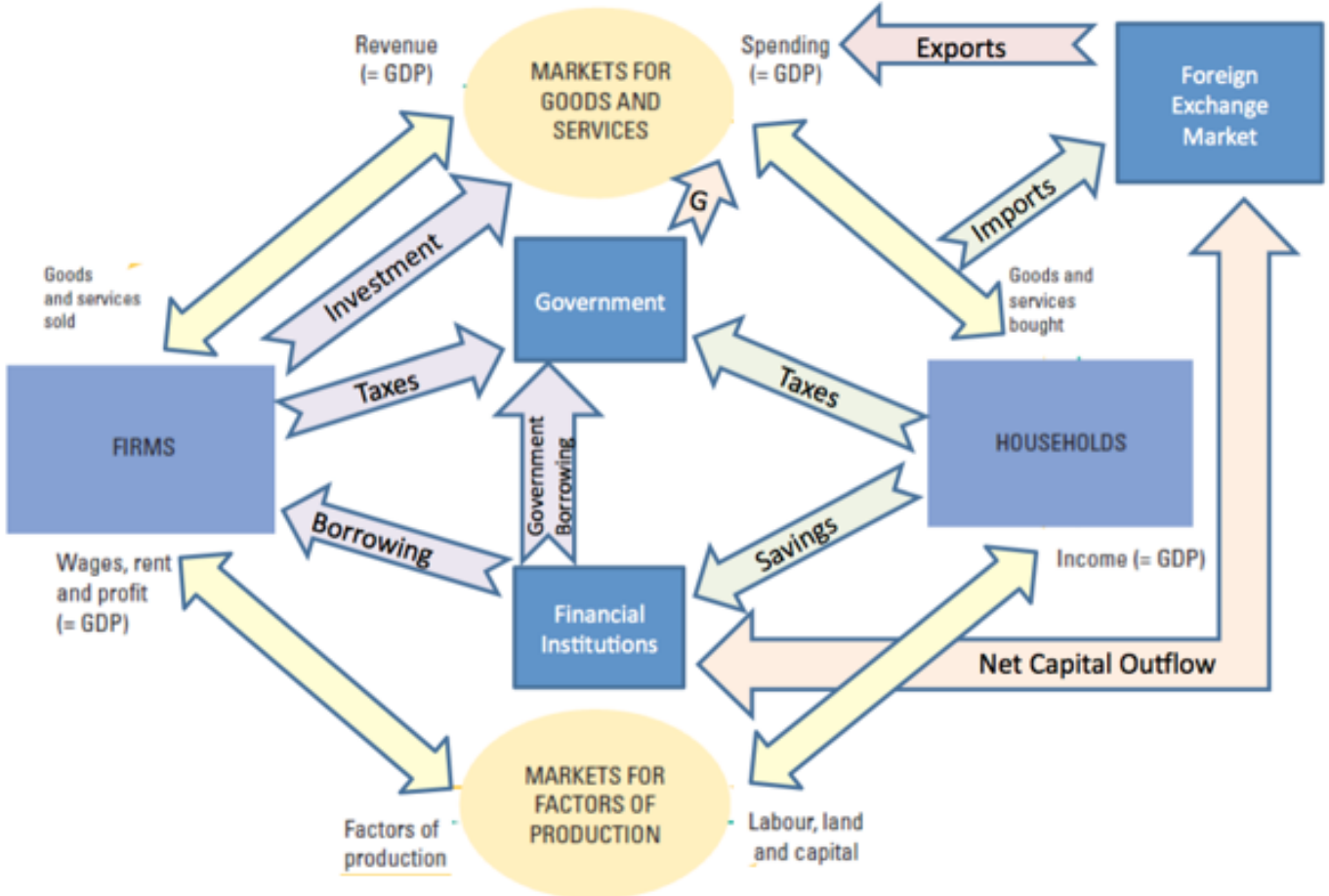
One measure to rule them all

- Gross domestic product (GDP)
- To be able to discuss and compare whole economies we need a way to calculate their production.
- Revenue Approach
- Expenditure Approach

Income and Expenditure Approach

- In any economic system the expenditure should be equal to the revenue.
- This means that we can either use the different forms of income or expenditure in the economy to calculate GDP
- The diagram demonstrates the circular-flow of income within the economy

Circular-Flow Diagram



Gross Domestic Product

Gross Domestic Product

GDP is the market value of all the final goods and services produced in the country in a given period of time.

Other measures used in some cases:

- Gross National Product (GNP): Total income earned by nationals
- Net National Product (NNP): GNP minus depreciation
- Other: National income, personal income, disposable income.

Income Identity

$$GDP(Y) = C + I + G + NX$$

- **Consumption:** Spending on goods and services by consumers
- **Investment**: Spending on Capital (new equipment, structures, inventories, new housing)
- **Government Spending**: Spending on goods and services by the government
- **Net Exports**: Export minus imports

Nominal vs Real

Consider the following prices in £:

Good/Service	1500s	Today
Beer	0.12	3.50
Rent (excl. London)	3.00	700
Bread	0.10	1.00
Oxford Uni (per year)	8.50	22000

Can you say when was bread cheaper? Was it in 1500s or today?

Nominal vs Real

Consider the following per year wages in $:

Job	1900s	Today
Janitor	720	30000
Unskilled worker	600	18000
Lawyer	2000	150000
Mayor	10000	160000

Can you say who is earning more? A mayor in 1900s or today?

Nominal vs Real

To be able to compare we need to take into consideration the price level in the economy.

- It is important to distinguish between real and nominal terms.
- The wages in the table are nominal values
- We cannot compare nominal variables.

Nominal vs Real

Nominal GDP

Nominal GDP is the market value of all the final goods and services produced in the country at current prices

Formula Nominal GDP

$$Nominal\ GDP_{2018} = Price^{1}_{2018} * Quantity^{1}_{2018} + Price^{2}_{2018} * Quantity^{2}_{2018}$$

Nominal vs Real

Real GDP

Real GDP is the market value of all the final goods and services produced in the country taking into account changes in prices

- To calculate real GDP we need to choose a base year
- Then we use the prices of that year to calculate real GDP.
- To calculate real GDP_{2018} with base year 2010:

Formula Real GDP

$$Real\ GDP_{2018} = Price^{1}_{2010} * Quantity^{1}_{2018} + Price^{2}_{2010} * Quantity^{2}_{2018}$$

GDP Deflator

GDP Deflator

A measure of the price level using the ratio of nominal to real GDP

GDP Deflator

$$GDP\ Deflator = \frac{Nominal\ GDP}{Real\ GDP} * 100$$

GDP Growth

Real GDP Growth

The rate at which GDP changed in a specific time period

$$\text{Growth rate of real GDP}_t = \frac{\text{GDP}_t - \text{GDP}_{t-1}}{\text{GDP}_{t-1}}$$

Cost of Living

Following the numbers in the tables presented above,

- a janitor used to earn \$720 a century ago and they earn around \$30000 today.
- If the price of bread was 7 cents and now is 65 cents.
- When is/was the janitor earning more?
- If the price of a house was \$3000 in 1910 and now the same house costs around \$250000.
- When is/was the janitor earning more?

Cost of Living

The janitor in our simple example

- could buy around 10000 loafs of bread in 1900s vs 45000 today per year (4.5 times more!)
- needed to save for about 5 years to be able to buy a house, while now they need to save for more than 8 years.

Wages increased, but so did prices!

Cost of Living

What changed in the previous example?

It is the *purchasing power* of the janitor that has significantly changed.

Purchasing power

The value of goods and services you can buy with one unit of a currency

Measuring the Cost of Living

In economics the cost of living refers to:

Cost of living

The amount of money people need to maintain the standards of living in terms of the goods and services they can afford to buy

Measuring the Cost of Living

In reality we need to take a snapshot of the prices in the economy to understand how prices change over time.

Price level

A snapshot of the prices in an economy at a particular period of time

Measuring the Cost of Living

Prices change over time, usually upwards.

Inflation

*The rate at which prices **increase** over a period of time*

If prices decrease, then we call this phenomenon ***deflation***.

Consumer Price Index

Statistical offices around the world use different statistics to keep track of how prices change.

Consumer Price Index

The CPI is a measure of the overall prices of the foods and services bought by a typical consumer.

In the UK the Office of National Statistics, every month, measures the prices of goods consumed by the typical consumer and calculates and reports the CPI.

Consumer Price Index

To calculate CPI:

$$\text{CPI}_t = \frac{\text{Cost of basket of goods}_t}{\text{Cost of basket of goods}_{baseyear}}$$

and for the inflation rate:

$$\text{Inflation}_t = \frac{\text{Price Index}_t - \text{Price Index}_{t-1}}{\text{Price Index}_{t-1}}$$

CPI Issues

The CPI is not a perfect measure (as most measures in Economics!):

- ***Substitution Bias***: Prices change from year to year but not all goods' prices change at the rate. Consumers tend to substitute goods that had a significant increase in price. CPI involves a fixed basket of goods that in some cases tends to overstate inflation.
- ***Introduction of new goods***: A new good may provide an easier and cheaper method to consume the same good or service. CPI and the fixed basket of goods ignores this.

CPI Issues

- ***Unmeasured quality change***: If the quality of a good falls from one year to the other the value of your money has changed and this cannot be reflected in the CPI.
- ***Relevance of the CPI***: Lastly, CPI involves a typical consumer and in general many individuals are a lot different than the typical consumer. The spending patterns of all of us are not the same and CPI may be irrelevant for some.

Unemployment

- One of the most important issues in economic policy making is decreasing unemployment.
- Losing a job or not being able to find a job has a negative impact on an individual's life.
- In simple terms, unemployment affects the standard of living.

What is Unemployment?

- Intuitively, anyone who does not have a job.
- There are a few issues with this definition.
- What about all of you, do you consider yourselves unemployed?
- One of the most important aspects is being "available" to work.

Measuring Unemployment

Governments have two main ways to measure unemployment:

- *Claimant count*: All those who claim unemployment benefits.
- *Labour force surveys*:

Unemployment

Some key terms to define unemployment correctly.

- *Employed*: All people who worked for payment during last week.
- *Unemployed*: All people at the working age who are not employed AND looking for a job (willing to work).
- *Working age*: All people 16 or older and below the retirement age.
- *Economically active*: people who are not in employment due to reasons such as being in full-time education, raising a family etc.

Unemployment

More key terms to define unemployment correctly.

- *Labour force*: Total number of workers (employed and unemployed).
- *Participation rate*: The percentage of the adult population in the labour force.
- *Unemployment rate*: The percentage of of the labour force that is unemployed.

Causes of Unemployment

- *Natural unemployment*: The normal rate around which the unemployment fluctuates.
- *Frictional unemployment*: unemployment that is caused because it takes time for workers to search for jobs that best suit their tastes and skills.
- *Structural unemployment*: unemployment that results because the number of jobs in some labour markets are not sufficient to provide a job to everyone.

Structural Unemployment

- *Occupational Immobility*: e.g. A mine closes and people lose their job their skills are not easily transferable.
- *Geographical Immobility*: e.g. An opportunity might be available for these miners that is 200 miles away.
- *Technological Change*: Jobs become obsolete due to changes in technology
- *Structural changes in the economy*: Economies evolve through time, all started with the main focus being agriculture because growing food was important for our survival, then we shift to manufacturing and now developed economies focus on services.