

الأجزاء المحذوفة لمراجعة الامتحان النهائي

INTRODUCTION TO
economics
money demand
equilibrium resources
scarcity
supply
efficiency
optimization
cost

Lecture 1

Chapter 1: The challenge of economics

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Economics and other subjects/sciences	
Economics and philosophy	Should we be concerned with the ethics of the free-market or should economics be value-free?
Economics and politics	How do political pressures affect economists and economic theories?
Economics and psychology	How psychological approaches have challenged the traditional economic view of rational choice theory.
Economics and sociology	How social class and cultural factors affect micro and macroeconomic variables.
Economics and mathematics	How mathematical models are used to underpin economic models and theories.
Economics and physics	The use of physics tools in statistical analysis.
Economics and anthropology	How understanding human culture/society is important to economics.
Economics and biology	How biological science influences economics.
Economics and ecology	Widering economics focus impact on humans to long-term environmental sustainability.

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Lecture 1
1-3- The Top 4 Definitions -3-

Four definitions, each referring to particular stage of the growth of the subject of economics, are presented here. They are:

- a- Smith's Wealth Definition
- b- Marshall's Welfare Definition
- c- Robbins' Scarcity Definition
- d- Samuelson's Growth Definition

WORTH DEFINITION
WELFARE DEFINITION
SCARCITY DEFINITION
GROWTH DEFINITION

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Lecture 1
1-3- The Top 4 Definitions -3-

c- Scarcity Definition of Lionel Robbins (the New Age):
"Economics is a science which studies human behaviour as a relationship between ends and scarce means which have alternative uses."

d- Growth Definition of Samuelson (the Modern Age):
"Economics is the study of how men and society choose with or without the use of money to employ scarce productive resources which could have alternative uses to produce various commodities over time, and distribute them for consumption, now and in the future among various people and groups of society."

Scarcity Definition of Economics
Concept of Scarcity
The Scarce Resource

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Lecture 1
1-4-1- The Fields of Economics

- Behavioural Economics
- Ecological Economics
- Environmental Economics
- Health Economics
- Information Economics
- International Economics
- Labour Economics
- Monetary Economics
- Population Economics
- Public Finance
- Urban Economics

SCOPE OF ECONOMICS

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Lecture 1
1-3- The Top 4 Definitions -3-

a- Wealth Definition of Adam Smith, the father of economics (the Classical era):
"Economics as a science which inquired into the nature and cause of wealth of Nations".

b- Welfare definition of Alfred Marshall (the Neo-Classical era):
"Economics is the study of man in the ordinary business of life".

Wealth Definition of Economics
Welfare Definition of Economics

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Different Definitions Of Economics

WEALTH DEFINITION
WELFARE DEFINITION
SCARCITY DEFINITION
GROWTH DEFINITION

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Lecture 1
11-4-2- B- GOODS -2-

Private Goods
They're excludable goods. The consumer cannot use them without paying for them. They are also rival goods, which reduce availability for other consumers, resulting in rivalry.

Common Goods
They are non-excludable goods, so everyone can use them without paying. They are rival.

Public Goods
Public goods are non-excludable and non-rival. They are available to everyone and are not in danger of running out.

Club Goods
They are subtypes of public goods that are excludable but non-rivalous.

the goods

Lecture 2

Chapter 2: Demand and Supply in a context of a Market Economy

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Lecture 2 IV- Movements and shifts along supply and demand curves -2-

IV-1- Movements along curves

- A movement along the supply curve means that the supply relationship remains constant.
- Therefore, a movement along the supply curve will occur when the price of the good changes and the quantity supplied changes in accordance to the original supply relationship.
- In other words, a **movement** occurs when a **change** in quantity supplied is caused only by a change in price, and vice versa.

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Lecture 2 IV- Movements and shifts along supply and demand curves -3-

IV-2- Shift along curves

- A **shift** in a demand or supply curve occurs when a good's quantity demanded or supplied changes even though the price remains the same.
- Shifts in the demand curve imply that the original demand relationship has changed, meaning that quantity demanded is affected by a factor other than price.

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Lecture 2 IV- Movements and shifts along supply and demand curves -3-

IV-2-1- Shift in Supply

Change in supply refers to a **shift**, either to the left or right, in the entire price-quantity relationship that defines a supply curve.

Essentially, a change in supply is an increase or decrease in the quantity supplied that is paired with a higher or lower supply price.

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Lecture 2 IV- Movements and shifts along supply and demand curves -4-

IV-2-2- Factors that shift supply curves

Factors that shift supply curves left or "in"

1. A decrease in productivity
2. A decrease in technology
3. An increase in input costs
4. An increase in the price of a related output

Factors that shift supply curves right or "out"

1. An increase in productivity
2. An increase in technology
3. A decrease in input costs
4. A decrease in the price of a related output

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Lecture 2 IV- Movements and shifts along supply and demand curves

IV-1- Movements along curves

IV-2- Shift along curves

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Lecture 2 IV- Movements and shifts along supply and demand curves -5-

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Lecture 2 IV- Movements and shifts along supply and demand curves -5-

IV-2-2- Shift in Demand

A shift in demand means that at any price (and at every price), the quantity demanded will be different than it was before.

Following is an example of a shift in demand due to an income increase.

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Lecture 2 IV- Movements and shifts along supply and demand curves -7-

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Lecture 2 IV- Movements and shifts along supply and demand curves -8-

Factors that Shift the Demand Curve

1. The Wealthy Factors
 - a. Changes in the price of related goods or services
 - b. Changes in income
 - c. Changes in tastes
 - d. Changes in the number of consumers
 - e. Changes in the number of potential consumers

Factors that Shift the Supply Curve

1. The Wealthy Factors
 - a. Changes in the price of related goods or services
 - b. Changes in technology
 - c. Changes in the number of producers
 - d. Changes in the price of related goods or services
 - e. Changes in the number of potential producers

Chapter 3:

The consumer behaviour

Lecture 3

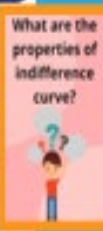
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Lecture 3
I-4- Indifference Curves -3-

I-4-1- Properties of Indifference curves:

- Completeness:** each basket lies on only one indifference curve
- Transitivity:** Indifference Curves do not cross
- This curves:** Indifference Curves are not "thick"
- Negative Slope:** when a consumer likes both goods (MU_x and MU_y are positive), the indifference curve is downward sloping. The consumer's preferences are convex

What are the properties of indifference curve?



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Lecture 3
I-6- The Marginal Rate of Substitution -1-

- The **Marginal Rate of Substitution (MRS)** is the change (loss) in one good needed to offset the change (gain) in another good.
- In this case, MRS is the trade-off (loss) of y for a small increase in x.

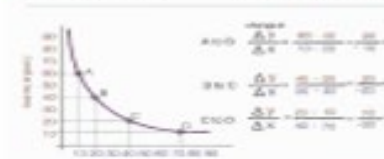
$$|MRS_{xy}| = dy/dx = MU_x/MU_y$$


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Lecture 3
I-6- The Marginal Rate of Substitution -3-

Example:

Indifference Curves:



Marginal Rate of Substitution:

Change in	Change in	MRS
Good X	Good Y	
ΔX	ΔY	
100	20	5
200	10	2
300	6.67	1.5
400	5	1.2
500	4	1
600	3.33	0.8
700	3	0.7
800	2.5	0.6
900	2.22	0.5
1000	2	0.4

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Lecture 3
I-6- The Marginal Rate of Substitution -3-

Indifference Curve Analysis:

x is gained, so how much y must be given up alternatively, if x is given up, how much y can we get?

The MRS is equal to the slope of the indifference curve (slope of the tangent to the indifference curve).



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Lecture 3
I-6- The Marginal Rate of Substitution -3-

- At any point on an individual's indifference curve, an individual consumes different baskets of goods while remaining at the same utility.
- The individual is willing to **sacrifice** (lose) one thing or someone instead of another thing (one good for another).
- An individual must be compensated by an increase in one good if the other good decreases.



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Lecture 3
I-6- The Marginal Rate of Substitution -4-

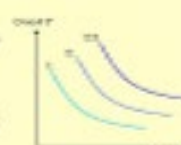
Indifference Curve Analysis

Indifference Curve:

- A consumer's indifference curve shows the combinations of two goods that give the consumer the same level of utility.

Marginal Rate of Substitution:

- The rate at which a consumer is willing to substitute one good for another while staying at the same utility level.



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Lecture 3
I-6- The Marginal Rate of Substitution -3-

Combination	Orange' quantities	Apples' quantities	Substitution
1	20	1	
2	18	1	$\frac{20-18}{1-1} = 2$
3	16	1	$\frac{18-16}{1-1} = 2$
4	14	1	$\frac{16-14}{1-1} = 2$
5	12	1	$\frac{14-12}{1-1} = 2$

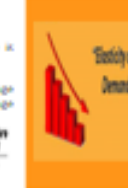
EXAMPLE

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Lecture 3
III- Elasticity

III-1- Price Elasticity of Demand

- The response of consumers to a change in price is measured by the **price elasticity of demand**.
- The **price elasticity of demand** is the percentage change in quantity demanded divided by the percentage change in price.

$$\text{Price elasticity (E)} = \frac{\text{percentage change in quantity demanded}}{\text{percentage change in price}}$$


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Lecture 3
III- Elasticity

- The price of popcorn went up 20% and the quantity demanded went down 10%.
- The price elasticity of demand is:

$$\frac{\text{percentage change in quantity demanded}}{\text{percentage change in price}} = \frac{-10\%}{20\%} = -0.5$$

EXAMPLE

Lecture 4

Theory of consumer choice

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Lecture 4
III- Impact of Income on Consumer Choices

Normal good

A normal good is a good with incremental increases or decreases in utility as quantity changes, demonstrating a predictable and simple linear relationship as income increases or decreases, demonstrates a graphical representation of the effects of income changes upon preference map.

Inferior good

Inferior goods, or goods that are less preferable, will demonstrate inverse relationships with income compared to normal goods.

- That is to say that an increase in income will not necessarily result in an increase in quantity for the inferior good, as the consumer derives minimal utility in purchasing the inferior good compared to other goods.
- Inferior goods are often sacrificed as income rises and consumers gain more choices/options.
- This can be represented in:

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Lecture 4
III- Impact of Income on Consumer Choices

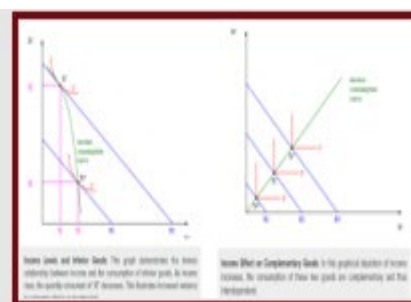
	Normal Good	Inferior Good
Increase in Income	Increased Demand	Decreased Demand
Decrease in Income	Decreased Demand	Increased Demand

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Lecture 4
III- Impact of Income on Consumer Choices

	Complement	Substitute
Increase in Price	Decreased Demand	Increased Demand
Decrease in Price	Increased Demand	Decreased Demand

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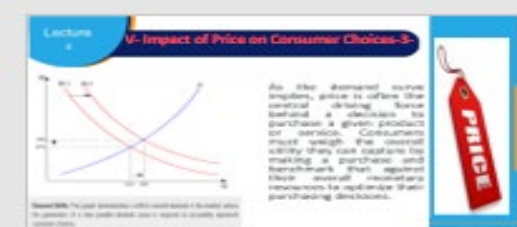
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Lecture 4
V- Impact of Price on Consumer Choices-2-

V-1- Deriving Overall Demand

- The derivation of a demand curve is done by calculating what price consumers are willing to pay for a given quantity of a good or service.
- For normal goods or services, demand is illustrated with a downward sloping curve, where the quantity on the x-axis will generally increase as the price on the y-axis decreases (and vice versa).
- The quantity demanded may change in response to both shifts in demand (and the location of a new demand curve, as demonstrated in) and movements along the established demand curve.

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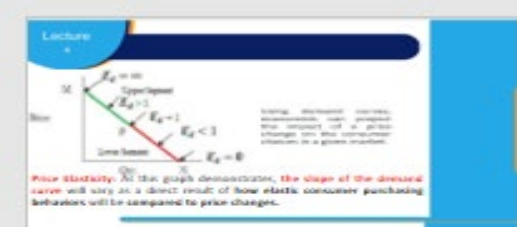
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Lecture 4
V- Impact of Price on Consumer Choices-4-

V-2- Price Elasticity

- A critical consideration of product/service pricing is the price elasticity of a given good, which indicates how responsive demand is to a change in price.
- Price elasticity is essentially a measurement of how much any deviation in price will drive the overall quantity purchased up or down, understanding to what extent consumer purchasing decisions will be dictated by pricing.
- A highly elastic good will see consumers much less likely to purchase when prices are high and much more likely to purchase when prices are low, while a good with low elasticity will see consumers purchasing the same quantity regardless of small price changes.

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Lecture 5

Chapter 5:

The Theory of the Firm



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Lecture 5
IV- The Revenue

Revenue is measured in three ways:

- Total revenue:** the total amount received from selling a given output.
 $TR = P \times Q$
- Average Revenue:** the average amount received from selling each unit.
 $AR = TR / Q$
- Marginal revenue:** the amount received from selling one extra unit of output.
 $MR = TR_n - TR_{n-1}$ in period of time

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Lecture 5
V- The Profit

Normal Profit
The minimum amount required to keep a firm in its current line of production.

Abnormal or Supernormal Profit
It's the Profit made over and above normal Profit.
Abnormal Profit may arise in situations where firms have market power.
Abnormal Profits may indicate the existence of welfare losses.
Could be taxed away without altering resource allocation.

Sub-normal Profit
It's the Profit below the normal Profit.
Firms may not exit the market even if sub-normal Profits made if they are able to cover variable costs.
Cost of exit may be high.
Sub-normal Profits may be temporary (or perceived as such).

Lecture 6

Chapter 6: Business Economics and Quantitative Techniques

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Lecture 6
1- The Production Function in Short and Long Run

1.2- The Slopes of the Product Curve

- The total product curve in (a) shows the output produced for different amounts of labor input.
- The average and marginal products in (b) can be obtained (using the data in Table 6.1) from the total product curve.
- At point A in (a), the marginal product is 20 because the tangent to the total product curve has a slope of 20.
- At point B in (a) the average product of labor is 20, which is the slope of the line from the origin to B.
- The average product of labor at point C in (a) is given by the slope of the line OC.

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Lecture 6
1- PRODUCTION WITH ONE VARIABLE INPUT (LABOUR)

To the left of point A in (b), the marginal product is above the average product and the average is increasing; to the right of A, the marginal product is below the average product and the average is decreasing.

As a result, A represents the point at which the average and marginal products are equal, where the average product reaches its maximum. At B, where total output is maximized, the slope of the tangent to the total product curve is 0, it is the marginal product.

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Lecture 6

Properties of Iso-quants

- An Iso-Quant curve like an indifference curve is a downward sloping curve towards the right.
- A Higher Iso-Quant represents large output.
- Any two Iso-Quant can intersect each other.
- Iso-Quant are convex to the origin.
- In between two Iso-Quants there may be number of Iso-quants.
- Units of output shown on Iso-quant are purely arbitrary.

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TABLE 6.1 Production with Two Variable Inputs

Capital Input	LABOR INPUT				
	1	2	3	4	5
1	20	40	60	80	90
2	40	80	120	160	180
3	60	120	180	240	270
4	80	160	240	320	360
5	90	180	270	360	400

Isoquant Curve showing all possible combinations of inputs that yield the same output.

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Lecture 6
II- Law of variable proportion or short run production function

II.1- Definition

- This law is also called **the Law of Proportionality**.
- This law states that change in output due to the change in any one input by the same rate.
- It states: "The law of variable proportion states that if the inputs of one resource is increased by equal increment per unit of time while the inputs of other resources are held constant, total output will increase, but beyond some point the resulting output increase will become smaller and smaller."

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Lecture 6
II- Law of variable proportion or short run production function

"The law of variable proportion states that if a variable quantity of one resource is applied to a fixed amount of other inputs, output per unit of variable input will increase but beyond some point the resulting increase will be less and less and with total output reaching a maximum before it finally begins to decline."

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Lecture 6
II- Law of variable proportion or short run production function

II.2- Assumptions of the Law of variable proportion

- The law is based on **no change in the technology**.
- All units of the variable factor are **homogeneous**.
- Only one factor is variable**, others remaining constant. Only applicable under **short run**.
- The products are measured in physical units, example: quantity, tonnes etc.
- It is assumed that all variable factors are equally efficient.

Lecture 7

Chapter 7:

The Market Structures in Economics: Perfect & Imperfect Competition

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Lecture 7

II- The Market structures based on the number of sellers

b-Classification of Monopoly:

Monopolies are classified according to circumstances they arise from, that is, cost structure of the industry, possibly the result of law, or by other means.

Natural Monopoly	Legal Monopoly	Cartel Monopoly
It is a market situation where is a single firm can supply the entire market due to the fundamental cost structure of the industry.	It is sometimes called as de jure monopoly, a form of monopoly which the government grants to a private individual or firm over the product or services.	It is a form of monopoly which exists as the sole producer and distributor of goods and services is by means of cartel (legal or illegal), so that most of the time it violates the principle of free market just to avoid competition.

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Lecture 7

a-Classification of Oligopoly

Pure or Perfect Oligopoly	Imperfect or Differentiated Oligopoly	Collusive Oligopoly	Non-collusive Oligopoly
If the firms produce homogeneous products.	If the firms produce differentiated products.	If the firms cooperate with each other in determining price or output or both.	If firms in an oligopoly market compete with each other.

Lecture 8

Chapter 8:

Introduction to Macroeconomics

14 ★

Lecture 8
I- What Is Macroeconomics?

Macroeconomic Theory

- describes and explains the **regularities** of macroeconomic processes and events;
- aims to **explain** macroeconomic phenomena;
- helps to understand the **cause-and-effect** relations in the aggregate economy;
- serves the base for elaboration of principles, tools and measures of macroeconomic policy that might prevent or improve economic performance and act as the best way over to the **welfare** of the society;
- provides the framework to make **forecasts** of future economic development; to **predict** future economic problems.

Macroeconomics represents a **fascinating intellectual occupation** that has **great practical importance**.

The Importance of Macroeconomics

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Lecture 8
I- What Is Macroeconomics?

- Why do **businesses** grow? Would our children live better than we do?
- Why are some countries **richer** than others? Why do some **countries** are growing faster than others?
- Why **recessions** and **expansions** occur in the economy?
- Why is there **unemployment**? Is it a necessary part of **Economic life**? Why unemployment is low in some countries and high in the others?
- Why **prices** grow? What is the cost of **inflation** for the society?
- Is it better for an Economy to have **budget deficit** or **budget surplus**? **Trends** **deficit** or **Trends** **surplus**? Is it a lesson in a **historical** or the **World Financial Markets**?

Keynes' Approach: Basic Propositions

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Lecture 8
I- What Is Macroeconomics?

- Why interest Rates fluctuate? What impact have the changes in the **Money and Stock Markets** on the economy?
- What are the determinants of the **Exchange Rates**? Is it good to have a strong or a weak domestic currency?
- Is **Government Policy** able to affect long-term economic growth? Can it eliminate or at least smooth economic fluctuations during the **Business Cycle**?
- How economic changes in one country affect the situation in others?

Answer: Study Macroeconomics and be informed!

Keynes' Approach: Basic Propositions

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Lecture 8
I- What Is Macroeconomics?

- Up to the **19th Century**, Macroeconomics didn't exist as a separate discipline.
- These events had the **fundamental importance** for the development of Macroeconomics:

1. The beginning of the collection of economic information and systematization of **aggregate data** (the period of the **1st World War**) that provided the **empirical base** for Macroeconomic research.
2. The substantiation of the fact that the **Business Cycle** is a **recurring phenomenon** (1920s - Wesley Clair Mitchell)
3. The **Great Depression** (1929-1933), the **World Economic Catastrophe** (the **Great Crash**) that contradicted the postulates of Classical Economists about the **Self-Correcting Economy**.

The History of Macroeconomics

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Lecture 8
I- What Is Macroeconomics?

- The main economic problem is the **scarcity of resources**, which hence are fully used, and the economy is always at its **potential level of output**.
- The scarcity of resources poses the **fundamental problem** of production → the analysis of economy's behavior from **aggregate supply side** (supply-side analysis).
- The **short-run** acts in the economy; **supply creates its own demand**; because **both resources agents (household and firms) and a large**
- The problem of expanding of production possibilities is **emerging** slowly; the **market** adjustment is a long-term process → (the description of economy's behavior is the **long run** (long-run analysis)).

Classical School: Basic Propositions

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Lecture 8
I- What Is Macroeconomics?

The central point of Keynes' theory

- The **Market Economy** does not guarantee the economy's stability, and, therefore, to counteract **slumps** and **recessions** and high **unemployment** government should intervene in the economic performance and conduct the **stabilization policy**.
- During 25 years after the **2nd World War** – the period of fast economic growth in most countries – the belief that government is able to prevent recessions by actively using **fiscal and monetary policy**.
- But in the middle of the 1970s – we had a high **inflation**; the combination of high inflation with stagnation, i.e. low and even negative rates of economic growth and high unemployment →

The conclusion: the key source of instability is the stabilization policy itself → **neoclassical counterrevolution**.

Keynes' Approach: Basic Propositions

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Lecture 8
I- What Is Macroeconomics?

- The **short** factor and the **long** factor are related to each other: 1) **short** effect and **long** effect; the **interest rate** can be the **money market** (rather than in the **capital** bank or capital market).
- **Equilibrium** in the markets is reached **not just at the full-employment level**.
- **Factor** **market** equilibrium are stable to provide the level of aggregate demand required to obtain the potential level of output, and, therefore, **government intervention** and **government regulation** is needed.
- **Government** **intervention** policy affects economy in the short-run, and price rigidity, which relatively for not long period in the description of the economy's behavior in the **short run** (production analysis).

Keynes' Approach: Basic Propositions

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Lecture 8
I- What Is Macroeconomics?

Macroeconomics as a science is permanently developing → changes concern both the cause of events and problems under study and of answers and remedies proposed.

These changes are the result of the impact of two groups of factors:

- The appearance of new theories, while old theories are rejected as not consistent with economic reality or as outdated in the light of new concepts.
- The permanent development of the economy itself, that poses new questions and requires new answers.

Development of Macroeconomics

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Lecture 8
I- What Is Macroeconomics?

- The diversity of approaches to the explanation of macroeconomic events and especially problems of macroeconomic policy is caused by the fact that different groups of macroeconomists construct their theories by using different assumptions, may differently interpret the same events, and therefore, come to different theoretical and practical conclusions and give different political recommendations.
- This diversity of ideas is due to the complexity of macroeconomic problems and allows to examine them comprehensively, thoroughly and from different points of view.

Diversity of Macroeconomic Theories

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Lecture 8
III- Principles of Macroeconomic Analysis

Macroeconomics is the social science and the controlled experiment is impossible. Besides, economic phenomena are very complex. That's why economists use models.

Economic model is a stylized representation of the economy, a generalization and abstraction of reality that seeks to isolate a few of the most important determinants (causes) of an economic event in order to provide a better understanding of that event.

Economic models are constructed and used:

- to simplify the analysis of complex economic reality;
- to examine the relationship between economic phenomena and the regularity of their development;
- to understand what goes on in the economy and how the economy works;
- to develop policies that might prevent, correct, or alleviate economic problems and improve the situation in the economy;
- to forecast the development of economic process.

Lecture 9

Chapter 9:

The National Income Accounting

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Lecture 9 IV- GDP vs. GNP

IV-1- The GDP Deflator

- The **GDP deflator** is a measure of the overall level of prices.
- Definition:

$$\text{GDP deflator} = 100 \times \frac{\text{nominal GDP}}{\text{real GDP}}$$

- One way to measure the **economy's inflation rate** is to compute the percentage increase in the GDP deflator from one year to the next.

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Lecture 9 IV- GDP vs. GNP

Example:

year	Nominal GDP	Real GDP	GDP Deflator
2005	\$8000	\$8000	100.0
2006	\$8250	\$7300	114.6
2007	\$10,000	\$8400	120.0

Compute the GDP deflator in each year:

2005: $100 \times (\$8000/\$8000) = 100.0$

2006: $100 \times (\$8250/\$7300) = 114.6$

2007: $100 \times (\$10,000/\$8400) = 120.0$

ACTIVE LEARNING & Computing GDP

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Lecture 9 VI-Net National Product (NNP) vs National Income (NI)

V-1- The Net National Product (NNP)

- The **Net National Product (NNP)** is **Gross National Product (GNP)**, the total value of finished goods and services produced by a country's citizens overseas and domestically, minus depreciation.

$$\text{NNP} = \text{GNP} - \text{depreciation}$$

- Depreciation** is the estimate of the amount of capital (invested in assets of the economy) that will wear out or will be used up in producing GNP.

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Lecture 9 VI-Net National Product (NNP) vs National Income (NI)

V-2- The National Income (NNP)

$$\text{NI} = \text{NNP} - \text{indirect taxes}$$

Indirect taxes are subtracted because they have no equivalent in production.

Direct Taxes: Taxes put on income directly (income taxes)

Indirect Taxes: Taxes put on income indirectly (sales and excise taxes)

حظ سعيد