

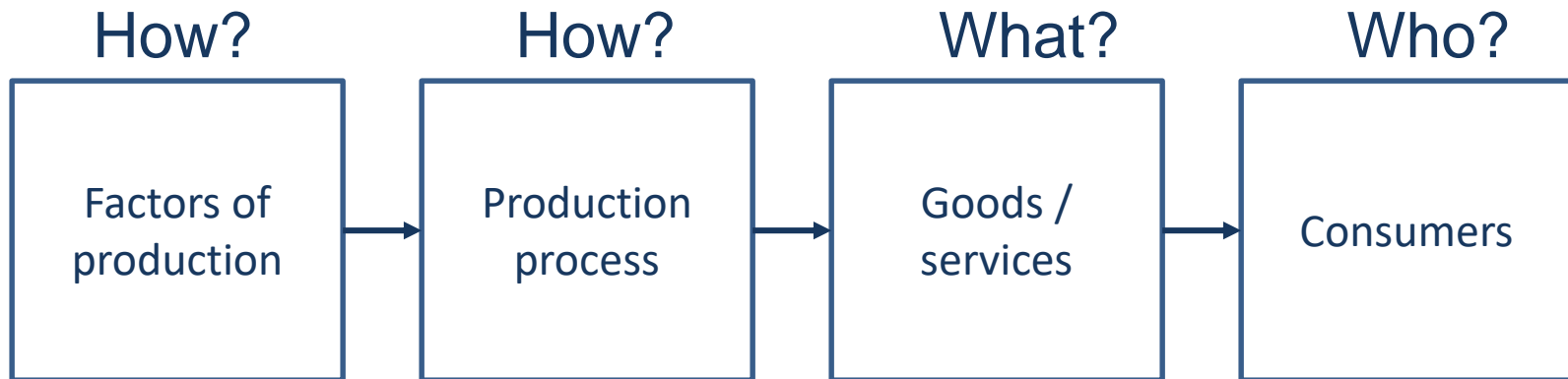


INTRODUCTION TO ECONOMICS

Martin Grančay, PhD.

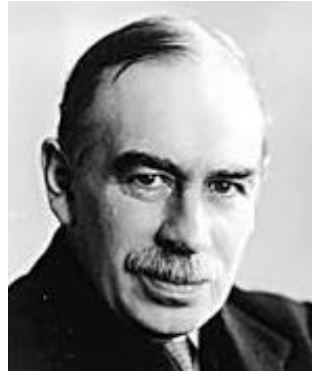
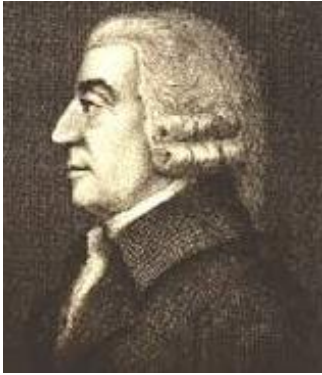
A few basics

- Economics**: social science concerned with the production, distribution and consumption of goods and services
- basic questions: **What? How? For whom?**
- Adam Smith, David Ricardo, John Stuart Mill, John Maynard Keynes, Joan Robinson, Paul Samuelson, Paul Krugman...



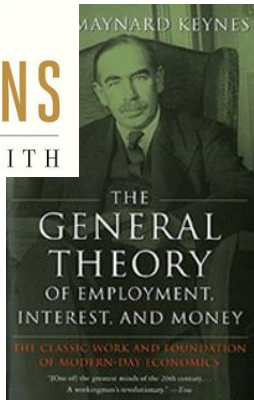
- Economy**: the state of a country or region in terms of the production and consumption of goods and services and the supply of money.

Famous economists



The LANDMARK WORK of MODERN ECONOMIC THOUGHT

The
WEALTH
of
NATIONS
ADAM SMITH



Paul Krugman

Macroeconomics, trade, health care, social policy and politics. [More -](#)

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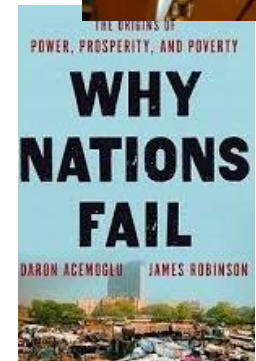


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A few basics

- Macroeconomics**: observes and analyzes how entire countries, full of many industries and consumers, function (national product, inflation, unemployment, export, import...)
- Microeconomics**: focuses on the actions of individuals and firms (preferences, motivation, elasticity, cost, revenue, profit...)

-Economic units:	Households	C
	Firms	I
	Government	G

- GDP**: GDP is the total value of all the final goods and services produced within a country's borders in a specific time period.

$$\text{GDP} = C + I + G + \text{NX}$$

Countries by GDP (2021)

	<i>Economy</i>	<i>(millions of US dollars)</i>
1	United States	22,996,100
2	China	17,734,063
3	Japan	4,937,422
4	Germany	4,223,116
5	United Kingdom	3,186,860
6	India	3,173,398
7	France	2,937,473
8	Italy	2,099,880
9	Canada	1,990,762
10	Korea, Rep.	1,798,534
59	Slovak Republic	114,871
205	Kiribati	181
206	Nauru	133
207	Tuvalu	63

World Bank, 2022.

Countries by GDP ppp (2021)

<i>Ranking</i>	<i>Economy</i>	(millions of international dollars)
1	China	27,312,548
2	United States	22,996,100
3	India	10,218,573
4	Japan	5,396,819
5	Germany	4,815,479
6	Russian Federation	4,785,445
7	Indonesia	3,566,265
8	Brazil	3,435,882
9	France	3,424,152
10	United Kingdom	3,344,468
72	Slovak Republic	179,815
191	Marshall Islands	249
192	Nauru	164
193	Tuvalu	61

World Bank, 2022.

GDP per capita (2021)

<i>Ranking</i>	<i>Economy</i>	Atlas methodology (US dollars)
1	Bermuda	116,540
2	Switzerland	90,360
3	Norway	84,090
4	Isle of Man	83,920
5	Luxembourg	81,110
6	Ireland	74,520
7	United States	70,430
8	Denmark	68,110
9	Iceland	64,410
10	Singapore	64,010
47	Slovak Republic	20,250
193	Mozambique	480
194	Somalia	450
195	Burundi	240

World Bank, 2022 (Atlas methodology).

GDP per capita ppp (2021)

<i>Ranking</i>	<i>Economy</i>	Purchasing power parity (international dollars)
1	Singapore	102,450
2	Qatar	92,080
3	Bermuda	87,340
4	Luxembourg	83,230
5	Norway	82,840
6	Ireland	79,450
7	Switzerland	75,860
8	Macao SAR, China	72,260
9	Hong Kong SAR, China	70,700
10	United States	70,480
47	Slovak Republic	32,450
190	Congo, Dem. Rep.	1,170
191	Central African Republic	1,090
192	Burundi	800



World Bank, 2022 (PPP).

GDP ppp (1990 and 2021)

	1990	2021
China	1,114,092,362,966.4	27,312,548,291,585.8
United States	5,963,144,000,000.0	22,996,099,999,999.9
India	1,048,235,107,013.5	10,218,572,963,096.8
Japan	2,466,212,851,047.6	5,396,818,536,177.7
Germany	1,545,176,827,060.2	4,815,479,144,638.9
Russian Federation	1,187,861,838,305.4	4,785,445,021,584.5
Indonesia	559,227,723,733.0	3,566,265,111,446.9
Brazil	997,366,926,074.9	3,435,882,150,019.3
France	1,027,398,703,008.4	3,424,151,722,749.7
United Kingdom	978,052,039,034.8	3,344,467,827,748.8

World Bank, 2022.

Largest companies (2021)

Rank ↕	Name ↕	Industry ↕	Revenue ↕	Profit ↕	Employees ↕	Headquarters ^[note 1] ↕
			USD Millions			
1	Walmart	Retail	▲ \$572,754	\$13,673	2,300,000	 United States
2	Amazon	Retail	▲ \$469,822	\$33,364	1,608,000	 United States
3	State Grid	Electricity	▲ \$460,616.9	\$7,137.8	871,145	 China
4	China National Petroleum	Oil and gas	▲ \$411,692.9	\$9,637.5	1,090,345	 China
5	Sinopec Group	Oil and gas	▲ \$401,313.5	\$8,316.1	542,286	 China
6	Saudi Aramco	Oil and gas	▲ \$400,399.1	\$105,369.1	68,493	 Saudi Arabia
7	Apple	Electronics	▲ \$365,817	\$94,680	154,000	 United States
8	Volkswagen	Automotive	▲ \$295,819.8	\$18,186.6	662,575	 Germany
9	China State Construction	Construction	▲ \$293,712.4	\$4,443.8	368,327	 China
10	CVS Health	Healthcare	▲ \$292,111	\$7,910	258,500	 United States

By revenue. Fortune, 2022.

Goods

-human wants and needs of the economic units are satisfied by means of **goods**

-*tangible* goods vs. *intangible* goods

-*free* goods vs. *economic* goods

Scarcity in economics: limited resources
 utility

-*consumption* goods vs. *investment (capital)* goods

-*necessity* goods vs. *luxury* goods

Goods

-goods based on **rivalry** and **excludability** of consumption

	<i>Excludable</i>	<i>Non-excludable</i>
<i>Rivalrous</i>	PRIVATE GOODS Ice cream, car, furniture, meat, smartphone...	COMMON-POOL RESOURCES Water, fish, wood, pastures...
<i>Non-rivalrous</i>	CLUB GOODS Cable TV, cinema, paid websites, toll highways, private parks...	PUBLIC GOODS Clean air, national defense, street lights...

Rational consumer

-**rational consumer**: bases his/her decision-making process on making choices that result in the optimal level of benefit or utility for him/her

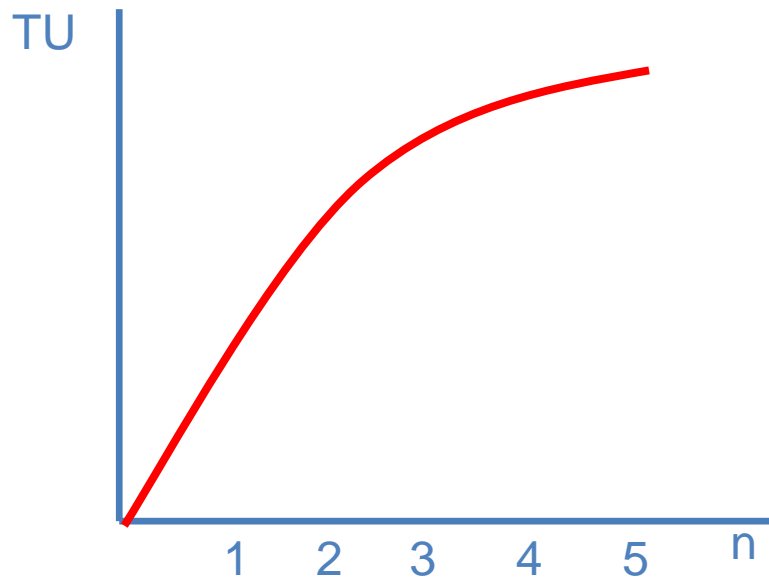
1. They have **preferences** – what do they want to consume?

Utility: Total utility \uparrow , Marginal utility \downarrow

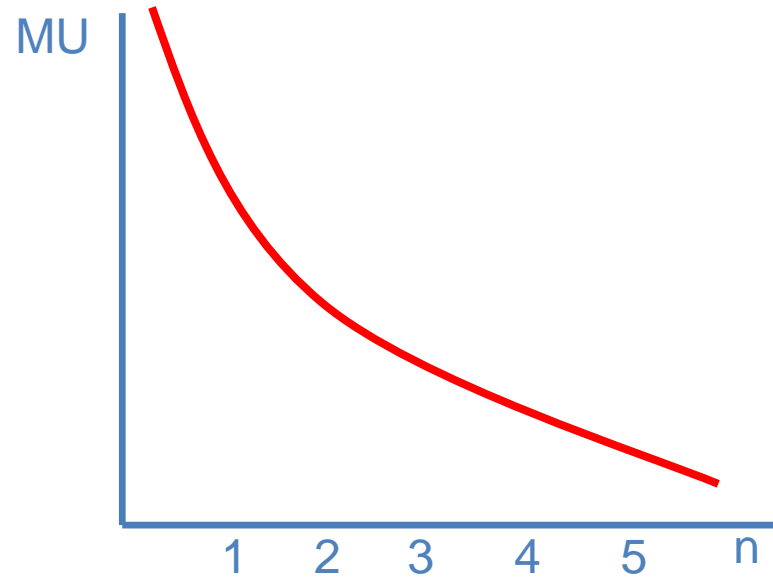
2. They have **budget constraint** – what can they afford?

Utility

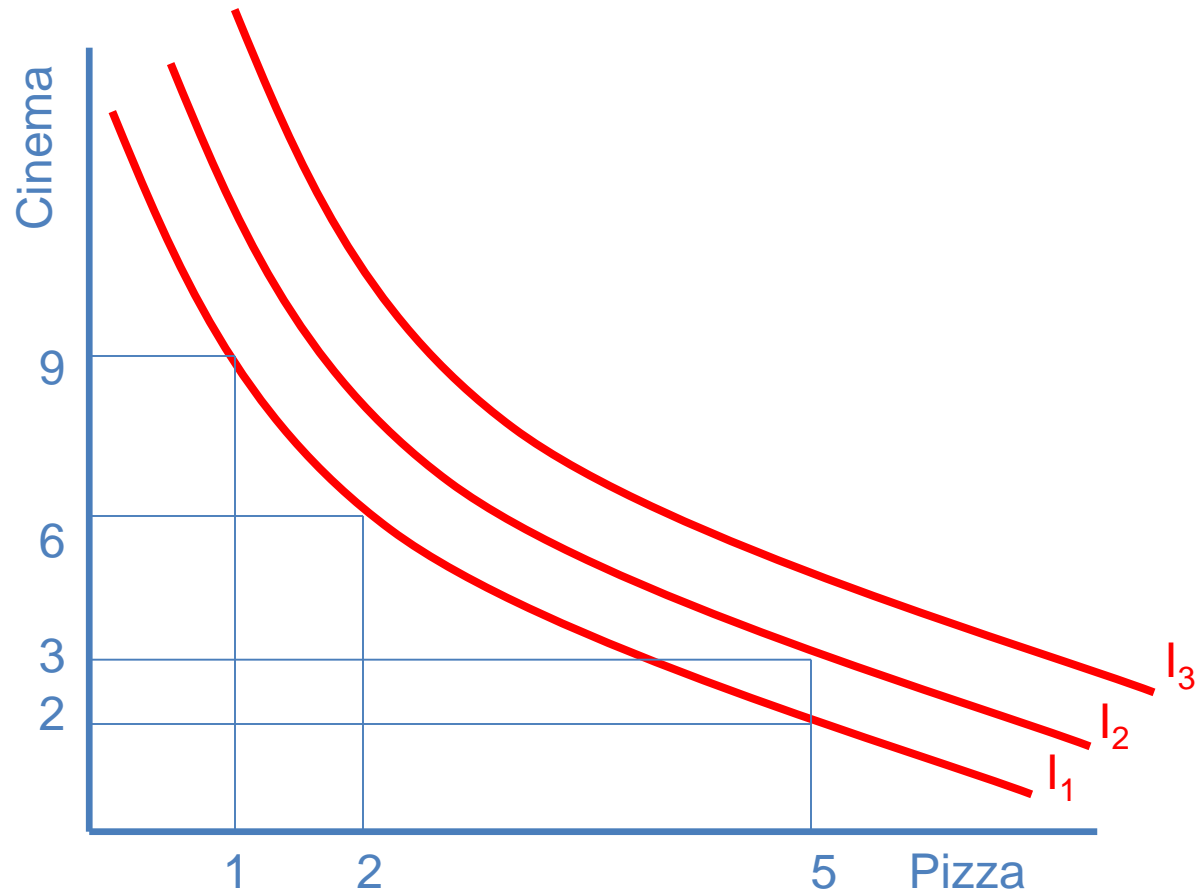
Total utility



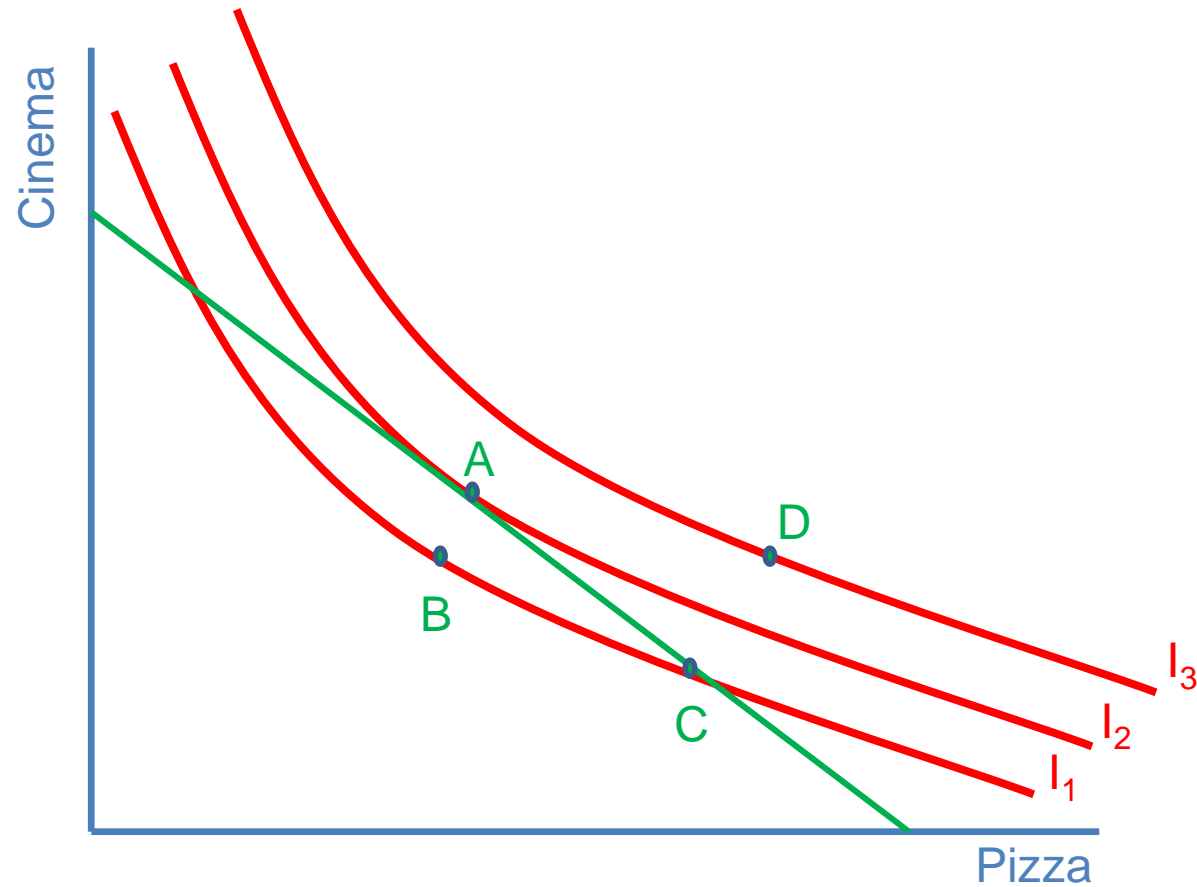
Marginal utility



Indifference curves



+ budget constraint



Rational consumer?

...

Are we rational consumers in reality?

- imperfect information
- influence of other consumers
- habit persistence, brands
- laziness, poor maths...

-field studying this: behavioral economics

Factors of production

Land: soil, natural resources, water...

- difficult to quantify
- it might appear to be a free good, but it is not
- renewable resources, non-renewable resources

Labor: human effort used in production

- humans are not born as factors of production = education
- quantity and quality of labor are influenced by population, people's physical skills and mental abilities, laws...

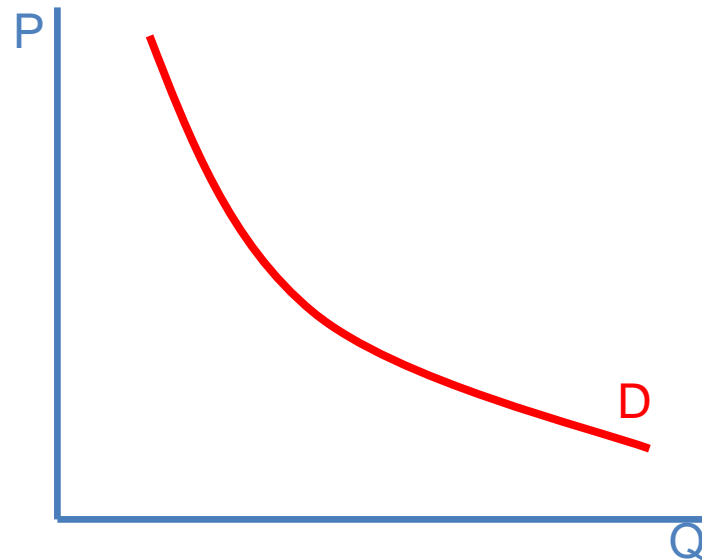
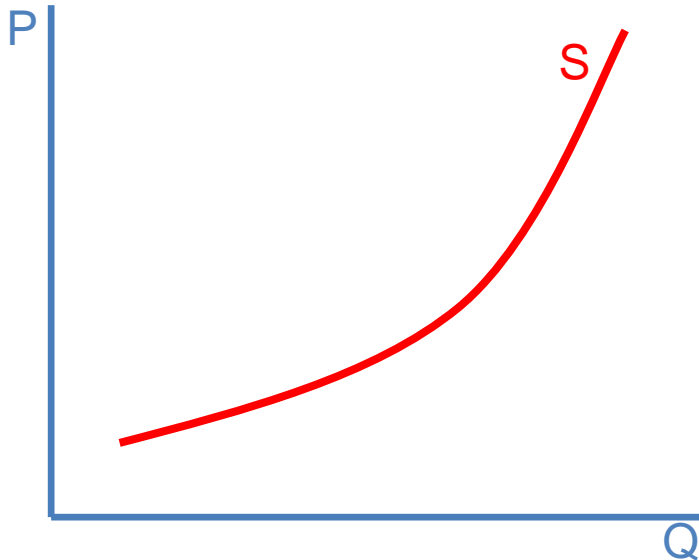
Capital: is a secondary factor of production

- it is used to produce goods which will be used for producing other goods

A different combination of factors of production is needed for production of different goods, depending on place, the type of good, company...

Supply and demand

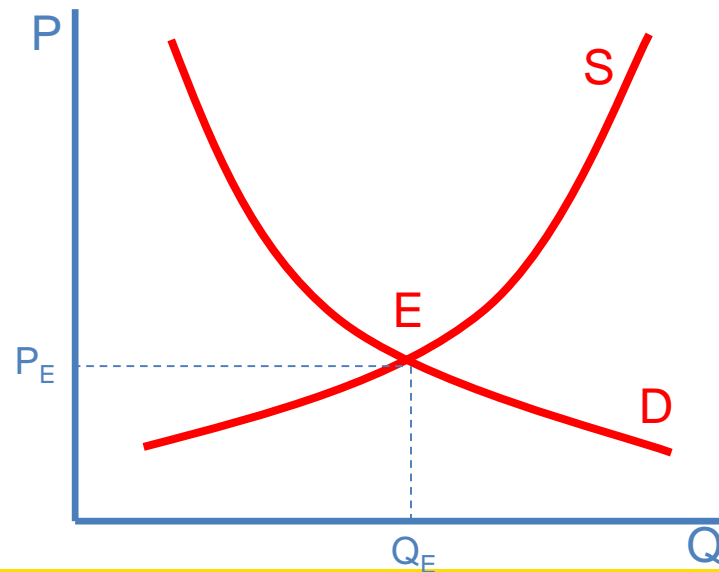
- supply**: the quantity of goods that the producers are willing to sell at the market as a function of price
- demand**: the quantity of goods that the consumers are willing to buy as a function of price



Does supply create demand, or does demand create supply?

Market

-a place where supply and demand meet, goods are bought and sold, **equilibrium price** and **equilibrium quantity** are determined



Price elasticity of supply

-measures the relationship between change in quantity supplied following a change in price

$$E_S = \Delta Q / \Delta P$$

Elastic supply

$$E_S > 1$$

Inelastic supply

$$E_S < 1$$

Unitary elasticity

$$E_S = 1$$

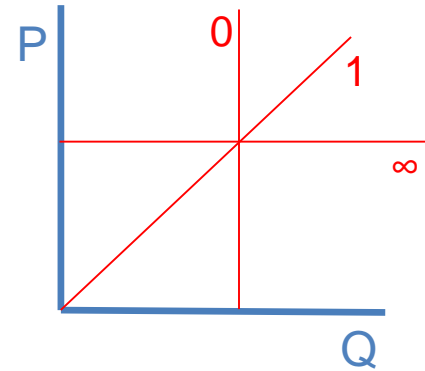
Infinite elasticity

$$E_S = \infty$$

Zero elasticity

$$E_S = 0$$

(perfect elasticity)
(perfect inelasticity)



Determinants: climate, available technologies, type of goods, mobility and availability of inputs, storage, time...

Price elasticity of demand

-measures the relationship between change in quantity demanded following a change in price

$$E_D = -\Delta Q / \Delta P$$

Elastic demand

$$E_D > 1$$

Inelastic demand

$$E_D < 1$$

Unitary elasticity

$$E_D = 1$$

Infinite elasticity

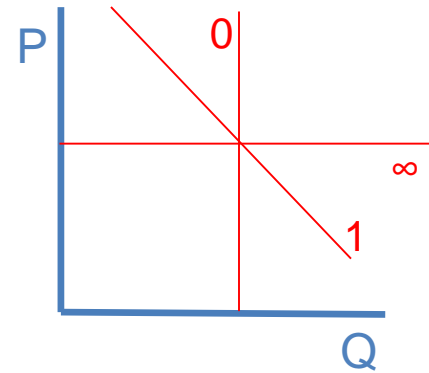
$$E_D = \infty$$

Zero elasticity

$$E_D = 0$$

Negative elasticity

$$E_D < 0$$



(perfect elasticity)

(perfect inelasticity)

Determinants: time, type of goods, type of consumer, availability of substitutes, consumption habits, traditions, competition, product life cycle, marketing...

Income elasticity

-measures the relationship between change in quantity demanded following a change in income

$$E_Y = \Delta Q / \Delta Y$$

Elastic

$$E_Y > 1$$

Inelastic

$$E_Y < 1$$

Unitary elasticity

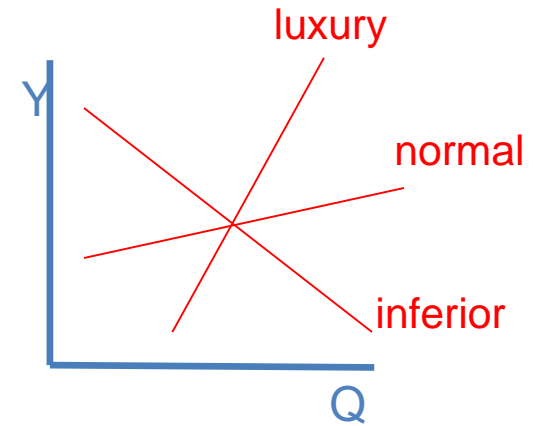
$$E_Y = 1$$

Negative elasticity

$$E_Y < 0$$

Zero elasticity

$$E_Y = 0$$



Determinants: time and original income

Business administration

- business administration**: a part of microeconomics, includes all aspects of overseeing and supervising business operations and related fields (accounting, finance, marketing...); it focuses on firm, its organization, activities, relationships etc.
- entrepreneurship**: purposeful activity that the entrepreneur carries out on his own behalf and on his own responsibility with the intention to achieve a pre-determined goal (often profit)
- firm/business/company**: a commercial organization that usually operates on a for-profit basis and participates in selling goods or services to consumers.
- it procures inputs and uses them to produce outputs

Economics in school...



March 8, 2004