Introduction to Economics – Chapter Three

Slide 1

* Competitive market.  
  Main characteristic are a large presence of buyers and sellers.   
  Pricetakers, buyers and sellers are not able to modify the price.   
  Pricemaker…  
  Price is given by the driving force of the …
* To understand how sellers and consumers behave

Slide 2. – Key elements

* D.c. (consumer as whole)
* S.c. (producer as a whole)

Slide 3 – Analysis of the demand (behavior of buyers)

* A line that describes
* We consider buyers as whole
* Demand curve, the relationship between the price and the demand

Slide 4 – How to draw a demand curve

* Simple one
* Demand curve from a mathematical function

Quantity = x axis

Price = y axis

Demand

Demand schedule for cotton

* Two columns, one for the price and one for the quantity for the cotton demanded at any particular price
* P(price) = a-b Q (quantity)  
  Price and quantity move in opposite direction
* Q = c-d P  
  (Direct Demand) Quantity demanded that depends on the price  
  To draw it, we transform it into indirect demand function, namely Y = a-b X (Indirect demand function)

Example:

Demand Q^d (Quantity of d demanded as a whole) = 50 – 2 P  
Q 🡪 X axis, P 🡪 Y axis

To represent graphically we have to transform the direct demand function into an indirect demand function  
Considering the demand curve, this should be a converse function

-2 P = Q^d – 50 🡪 2P = 50 – Q^d 🡪 P = 50/2 – ½ Q^d 🡪 P = 25 – 0.5 Q^d (which is like Y = a- b Q)

* A movement along the curve is a change in quantity when the price changes

Slide 5

Law of demand

* Higher price, smaller quantity (negative relationship between quantity demanded and market price)

Pitfalls

A change in demand (changes on the whole demand) ≠ a change in the quantity demanded

1. A change in demand (from D1 🡪D2), in this case it is a positive shock
2. A change in quantity demanded (always D1, but different quantity in demand curve and same price)

Shifts of the demand curve

* Demand shock is a shift towards left (negative)/ right (positive) of the demand curve

Negative shift 🡪 left = same price, lower quantity and lower wiliness to pay

* If there is a positive shock in the demand side, same price and able/willing to consume more quantity

Positive shift 🡪 right

Increase/Decrease of the demand, what are the factors?

1. Prices of related goods or services
2. Income
3. Tastes
4. Expectations
5. Number of consumers

Changes in price of related goods: substitute

Substitutes = …

* A general change in price of one good lead to a decrease/increase in demand for the other (like Pepsi and Coca Cola)

Changes… Compliments

Compliments = …

* Price of one good will affect the demand for its compliments
* increase of one good 🡪 decrease the demand for its compliment (directly proportional) (?)

Changes in income

Depends on the nature of the good

* Normal good: Income increases 🡪 D increases (positive shock)
* Inferior good: Income increases 🡪 D decreases (negative shock)

Changes in tastes or preferences

* Seasonal changes
* Particular influencer [How influencers affect the real consumption (to hype one particular good)]

Changes in expectations

Buying according to their expectations on

* the direction of future prices, in order to obtain the lowest possible price
* important in both macro and micro economics
* economics is a social science because takes into account the psychological functions

Changes in the number of consumers

* changes in the demand
* less babies 🡪 less demand for diapers

Individual demand curves and the market demand curve

1. demand 🡪 30 (2 dollars)
2. demand 🡪 20 (2 dollars)

Two groups of consumers (a) and (b). Initially the market was populated only by a, then b added up.

What I have to do to calculate the horizontal sum for any specific price:

30:2 + 20:2 = 50:2 dollars (c)

1. Market demand curve 🡪 50 (2 dollars) which is the new market demand for a specific good (the horizontal sum)

To sum up

Q^d = 100- 4 P (direct) 🡪 -4P = Q^d – 100 🡪 4P = Q^d – 100 🡪 P= 100/4 – ¼ Q ^d 🡪 P = 25-0.25 Q^d (indirect)

1. Graph (Q 🡪X, P 🡪Y)  
   - X = 100  
   - Y = 25  
   - Slope = -0.25
2. Represent Changes in Income  
   - (Normal Good) Increase Income 🡪 Positive Shock Demand Curve (From D1 🡪 D2)  
   - (Inferior Good) Increase Income 🡪 Negative Shock

Interest in Books (same formula)

* Negative shock in the demand curve if

Supply

* Represents the behavior of seller that can be represented graphically (supply curve, relationship between price and quantity put into the market)

The supply schedule and the supply curve

* Two columns, one for …
* Dots = relationship between quantity of cotton supply at every specific price

As price rises 🡪 quantity supplied rises

An increase in supply

Movement along the supply curve (how the quantity supply changes when the price changes) ≠ shift of the supply curve

* Shifts are due to exogenous factors

Shifts of the supply curve

Case 1: Same curve

Case 2: Different curve 🡪 Positive shock, increase in supply/ Negative shock, decrease in supply

Understanding the shift of the supply curve

1. Changes in input prices(also the labor cost would change)
2. The prices of related goods or services
3. Technology
4. Expectations
5. The number of producers

Changes in input prices

* Decrease in the price of an input 🡪 increase in profits and encourages more supply
* Laws, policies and regulations influence this

Changes in the price of related goods or service

* Single producer usually 🡪 mix of various products
* This situation 🡪 the quantity of what is produced (gas) also depends on the other products (from the same raw material) produced by the same producer (crude oil, heating oil)
* Increase the production of the product of which the price increases (focus on that good if I am a producer) so that my profits will increase
* This means …

Other goods can be complements in production

* 2 products that are complements in production because they are extracted/share the same technology (the same machine extracts at the same rate both gas and oil)
* How does the natural gas change if the supply of oil increases and the price of gas stays the same? The supply of natural gas also increases (if the machine extracts both at the same time, both of them will increase supply)

Changes in technology (affect the average cost of production, better tech allows to produce more at a lower price)

* A better technology is available 🡪 positive shock is expected
* But if it is not available anymore 🡪 Negative shock is expected

Changes in expectations

* Sellers 🡪 adjust to get the highest price

Changes in number of producers

* Entry 🡪 increases supply (positive shock of supply)
* Exit 🡪 decreases supply (negative shock of supply)

The individual supply curve and the market supply curve

1. 1 (1 dollar) or 2 (2 dollars)
2. \*new entry\* 1 (2 dollars)

Horizontal sums of the single groups of producers 🡪 3 units [a (2) + b(1)] (2 dollars)

Supply, demand and market equilibrium

* Markets move towards equilibrium, which is the price has moved to a level in which the quantity of… Qs (quantity supplied) = Qd (quantity demanded) at a certain price 🡪 equilibrium
* Graphically calculation 🡪 Qs = Qd   
  ex: price 1 dollar (eq price) and 10 units in quantity (eq quantity)
* Market eq. is the intersection of the demand curve and the supply curve

1. Why do all sales…
2. Why does the market price…
3. Why does the market price…

1 – Why does the market price fall it it is above the eq price?

* What happens if the price is greater that then eq price?  
  Producers are willing to produce more per dollar while the consumers are willing to consume less per dollar (if the price increases) and there is a surplus of good which is the quantity of product which is not sold. What happens now, producers try to sell the surplus at a lower price (market reaches slowly the eq price and eq point)
* Why does the market price rise if it is below the equilibrium price?  
  Consumers consume more units at a certain price, but producers cannot keep up with the supply and do not manage to arrive at market eq. at some point. So a shortage is what happens, then producers increase both the production and the price to reach the equilibrium

Finding the equilibrium price and quantity

* At this specific prime, Qs = Qd (no incentive)
* Modifications of the behavior 🡪 price and other incentives

What happens when the demand curve shifts

CASE 1  
E1 (P1; Q1) 🡪 Increase in the demand 🡪 E2, new equilibrium is here

CASE 2

E1 🡪 Increase in supply 🡪 E2, Supply curve right-shifts and price lowers   
 🡪 Decrease in supply 🡪 E2, Higher price (left-shift)

Simultaneous shifts of supply and demand (opposite forces)

Case 1

* Large Increase in demand (due to increase in income) and small decrease in supply (due to increase in input)

Case 2

* Small increase in demand, large increase in supply



Positive shock of both demand and supply (not opposite forces)

Case 1

* Contemporary increase in supply and demand  
  Eq. Quantity is more than the initial eq. Q.  
  E