Consumer Surplus

* Relationship with the demand curve

Producer Surplus

* Relationship with supply curve

Total surplus

* Market is efficient or not

Market inefficiency

Consumer Surplus  
Difference in value between the market price and what consumers would we be willing to pay for a certain good.

Example: The demand curve for used textbooks

* Step-shaded demand curve
* X and Y are the same as always
* Order the potential consumers according to the maximum price they are willing to pay for a specific good

Consumer surplus

\*each consumer is only willing to pay for **1 book  
Market with limited number of consumers**

* In this case there are only 3 consumers able to face the cost of the books (market price is 30 dollars)
* Aleesha (59 dollars), she is benefited because the individual consumer surplus is the difference between the dollar she is willing to pay and the market price (59-30 = 29 dollars saved)
* The total consumer surplus, just need to sum up the individual consumer surplus. It is the area above the market price

Consumer Surplus (2)

\*Infinite number of consumers

\* Usual linear demand curve

* How to calculate the consumer surplus in this case, even if it is linear (approximation of a step-shade curve into a linear one)
* Total consumer surplus at a fixed price = area of the triangle above the market price which is fixed and below the demand curve = ½ (base x height)
* Idea of the benefit of participating into this market
* Value/ benefits of consumers in monetary term, in participating in this demand curve

Consumer surplus rises with a fall in price

* Market price decreases, increase in consumer surplus for two reasons  
  People who were benefiting, benefit even more now (larger consumer surplus)  
  New consumers can enter the market (new consumer surplus)

How the gains in consumer surplus are split

* Decreasing price, consequence we observe a much larger consumer surplus due to an increase to larger surplus of those already present into the market and new surplus of those who just entered the market

Producer surplus

A way to measure the same value but from the production side. It is the difference between the market price and the price at which firms are willing to supply the product. It is the monetary benefit for producers/sellers of participating into the market.

The supply curve for used textbooks

* Almost the same as before
* Only Andrew, Betty and Carlos will be able to sell, because the price they are willing to sell is below the market price
* The surplus here is different, it is the producer surplus (the difference between the market price and the cost of the book for the producer).
* Total producer surplus, is the sum of the individual producer surplus

Producer Surplus (2)

* Very large number of potential sellers, represent the supply curve with a straight line
* How to define the total producer surplus (very competitive market): area below the market price and above the supply curve (which limits it, under it there would be a loss because the cost of production will be higher that the price of the good

To sum up:

Consumer surplus

* Definition
* What it really is and how to calculate it
* The step-shaded demand curve

Total Consumer Surplus

* Definition, what it really is, how to calculate it (triangle area)

Producer Surplus

* Definition, what it really is and how to calculate it
* Supply curve is a proxy of
* Step-shade supply curve

Total Producer Surplus

* Definition, what it really is and how to calculate it

Lesson 12/02/19

**Producer surplus rises if the price increases**, for two reasons

* Producers already present in the market will get a greater surplus
* New Producers entering the market and getting a surplus

You can easily see the increase in producer surplus to original sellers (rectangle) and the producer surplus gained by new sellers (triangle)

**Total surplus is maximized at market equilibrium**

* Market allow us to reach an equilibrium, which is efficient. Plus it is impossible to influence one part of the economy without affecting the other parts
* MARKETS ARE A REMARKABLY EFFECTIVE WAY TO ORGANIZE ECONOMIC ACTIVITY: THEY GENERALLY MAKE SOCIETIES AS WELL OFF AS POSSIBLE GIVEN THE AVAILABLE RESOURCES.

**Total Surplus: the sum of the producer and consumer surpluses**

* In market equilibrium both consumer and producer surpluses are maximized
* It maximizes CS. and PS. From the principle that says there are gains from trade
* Benefits that consumers get from buying this specific good is maximized, the same is for producers when selling their products

EX: If you impose a Quota or the quantity traded is lower (let’s say 800 instead of 1000) [FIGURA]

* It becomes an inefficient market and there is room for improvement in the market (not maximizing the benefits from trading so the willingness to pay of consumers is greater than the cost of production for sellers).
* 200 units (that could be traded) are not traded in the market even though the CS. Is gre
* The only case in which it is not possible to increase the total surplus is in a condition of Equilibrium.

**3 Potential ways to increase the total surplus, three ways you might (unsuccessfully) try to increase the total surplus**

1. Reallocate consumption among consumers
2. Reallocate sales among sellers
3. Change the quantity traded

It can be easily shown that these three options reduce the efficiency obtained with market equilibrium: markets are efficient.

**Why reallocating consumption lowers consumer surplus**

* A (this consumer) will participate into the market, while B will be out (his willingness to pay is lower) [NO INTERVENTION}

Inefficiency: giving the book to B for 25 dollars  
We are giving a consumer with a lower willingness to pay, a specific good (we lose 10 dollars)  
We are not taking into consideration the value that agent A gives to the book   
We are losing 10 dollars

**Why reallocating sales lowers producer surplus**

* X’s cost of production is lower than the market price (X participates), while Y will not [NO INTERVENTION]

Reallocating:  
Loss in producer surplus, because we are forcing a producer to sell the book even though its cost of production its higher than its profits  
  
Inefficiency because Y is forced to participate even though the market price is lower than the cost of production

W**hy changing the quantity lowers total surplus**

* Government decides that the quantity traded must be somewhere below 1000 **[PROBLEM FOR PRODUCERS]**
* Units not traded are missed opportunity for both Consumers and Producers

Reduction of total benefits that Producers and Consumers can have

Reduction of total surplus

Creation of Inefficiency

What if the contrary happens? A greater number of books should be traded (1200) **[PROBLEM FOR CONSUMERS]**

* Consumption of books is subsidised by the government which is also forcing a consumption of good
* Forcing the market over the equilibrium market create inefficiency, because

Notice that:

* Willingness to pay (WTP) vs Willingness to sell (WTS)
* 200 units are traded even though they are not supposed to

Inefficiency because the cost of production its higher than its cost on the market

**The efficiency of markets**

**Once the market is in equilibrium, there is no way to increase the gains from trade. Competitive markets are usually efficient:**

1. They allocate consumption of the good to the potential **buyers who most value it.  
   -** Consumers that have more willingness to pay
2. They allocate sales to the potential **sellers** who most value the right to sell the good (e.g., **who** **have the lowest cost**).
3. They ensure that **all transactions are mutually beneficial:** Every consumer who makes a purchase values the good more than every seller who makes a sale.

**As a result: any way of allocating the good other than the market equilibrium outcome lowers total surplus.**

**Why markets typically so well**

* EQ. Maximize CS, PS, Total Surplus. It maximizises the gains from trade, in this sense the economy as whole is efficient

An efficient market equilibrium maximizes total surplus – the gains to buyers and sellers in that market.

When each and every market in the economy maximizes total surplus, then the economy as a whole is efficient

Theoretical result: it is virtually impossible to find an economy in which every market is efficient

**Well-functioning markets are effective because of:**

1. property rights: system in which valuable items in the economy have specific owners who can dispose of them. In a system of property rights, by purchasing a good you receive “ownership rights”.   
   - Are what make the
2. economic signals: any piece of information that helps people and businesses make better economic decisions. Example: prices!

**Why private property matters**

Property rights are what make the mutually beneficial transactions in any market possible.

Property rights create and protect incentives to trade with others—and to innovate.

* Lack of P.R. 🡪no incentives to trade, to make it profitable

**Why good economics signals matter**

Equilibrium prices signal to resources exactly where they are most valued: they convey information about other people’s cost and their willingness to pay.

* Crisis are important, but when they are not transparent they cause a collapse of an entire market

1. Prices translate complex information into an easy signal for producers:   
   Profits rise in industries when consumers want more of that industry’s products.  
   Profits decline in industries when consumers want less of that industry’s products

**The efficiency of markets**

Three caveats

1. Although a market may be efficient, it isn’t necessarily fair.  
   (**nothing about equity**)
2. Markets sometimes fail: when this occurs, markets no longer maximize total surplus  
   - Why does it fail?
3. Even when the market equilibrium maximizes total surplus, this does not mean that it results in the best outcome for every individual consumer and producer. Other things equal, each buyer would like to pay a lower price and each seller would like to receive a higher price.   
   So, if the government were to intervene in the market, the outcome would no longer be efficient (see Price controls and quotas and taxes)  
   - Analysis of when the government enter into the economy and tries to improve D. and S.

**Equity and Efficiency**

Efficiency is important, but society also cares about equity.

Sometimes societies choose to have governments intervene in markets to increase equity (even though it reduces efficiency).

**A few words of Caution**

Markets aren’t always efficient; sometimes they fail.

Inefficient: Opportunities are missed. Some people could be made better off without making other people worse off.

*When a market is inefficient, we have what is known as market failure.*

**Three main ways in which markets sometimes fall short of efficiency:**

1. Market can fail when, in an attempt to capture more surplus, one party prevents mutually beneficial trades from occurring. Ex: Monopoly or oligopoly (second module)
2. Negative externalities: actions of individuals sometimes have side effects on the welfare of others that markets do not take into account. Ex: pollution.
3. Asymmetric information: information about a good that some people possess but others don’t. Ex: the market for “lemons”.   
   - Agents do not always have the same amount of information or even the access to those information.

**The market for “lemons”**

* Market for second-hand cars analyzed in the original article by Akerlof (Quarterly Journal of Economics,1970)
* Purchasers and suppliers have different information about the quality of the goods being sold (The Market for Lemons)

Akerlof introduces …

* There are 100 people who want to sell their cars and 100 people who want to buy a car.
* Everyone knows that 50 cars are “plums” (good cars) and 50 cars are “lemons” (bad cars).
* The current owner of each car knows its quality but the perspective purchasers do not know whether any given car is a plum or a lemon
* The owner of a lemon is willing to sell it for $1000 and the owner of a plum is willing to sell it for $2000.
* The buyers of the car are willing to pay $2400 for a plum and $1200 for a lemon.
* If it is easy to verify the quality of the cars there will be no problems in this market. The plums will be sold at some price between $2000 and $2400 and the lemons at some price between $1000 and $1200.  
  - Agreement within Cons. and Sellers, if there is symmetric information  
  - Asymmetric information, the buyers cannot observe the quality of the car. What happens?
* But what happens to the market if the buyers cannot observe the quality of the car?

*In this case the buyers have to guess about how much each car is worth*

* *We assume that, if a car is equally likely to be a plum or a lemon, then typical buyer would be willing to pay the expected value of the car.*
* *Using the numbers described above, this means that the buyer would be willing to pay*

*(1/2)\*1200+(1/2)\*2400=$1800*

*But who would be willing to sell their car at that price?*

* *The owners of the lemons certainly would, but the owners of the plums wouldn’t be willing to sell their cars – by assumption they need at least $2000 to part with their cars.*
* *The price that the buyers are willing to pay for an “average” car is less than the price that the sellers of the plums want in order to part with their cars.*
* *This means that at the price of $1800 only lemons will be offered for sale.*
* *But if the buyer was certain that he would get a lemon, then he would not be willing to pay $1800 for it.*
* *In fact, the equilibrium price in this market would have to be somewhere between $1000 and $1200. For a price in this range only owners of lemons would offer their cars.*
* *Even though the price at which buyers are willing to buy plums exceeds the price at which sellers are willing to sell them, no such transactions will take place.*
* *Why there is this market failure?*

* *Why there is this market failure?*
* *The problem is that there is an externality between the sellers of good cars and bad cars; when an individual decides to try to sell a bad car, he affects the purchasers perception of the quality of an “average” car and thus hurts the people who are trying to sell a good car.*
* *The cars that are most likely to be offered for sale are the ones that people want most to get rid of. The act of offering to sell something sends a signal to the prospective buyer about its quality.*

Chapter 5

Conflict of interests between

* Buyers want still to buy at a lower price
* Sellers want to sell their products at a higher price

When the government sits at the table usually implements policies to regulate CS and PS and modify market equilibrium

**Interferences in markets have consequences**

* Higher price provide wrong signals for the economy because they give distrorted information

**Price Controls**

* Definition, legal restrictions on how high or low a market price may go. There are two main types\_  
  Price Ceiling: maximum price (below market price)  
  Price floor: minimum price (i.e. minimum wage)

**How price ceilings cause inefficiency**

Price ceilings cause predictable side effects

Ex: **The market for apartment**

* Government poses price ceilings

The effects of a price ceiling

1. Shortage of the service or good available in the market

Price controls cause losses

* Deadweight loss:   
  Policy intervention is what it is called D.L.

A price ceiling causes inefficiently low quantity

* CS, reduction
* PS, reduction
* Total Economy, inefficiency (D.L.)

Winners and losers from rent control

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Inefficient allocation to customers

Price controls distort signals that would help the goods get allocated their highest-valued uses

-Consumers… because part of the trade do not take place

-So producers… this is a consequence, good get misallocated

-misallocation of goods have even further consequences