Chapter 7 「 Consumers, Producers, and the Efficiency of Markets : Market Allocation 」

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The Market's Allocation of Resources

- In a market economy, the allocation of resources is decentralized, determined by the interactions of many self-interested buyers and sellers.
- Is the market's allocation of resources desirable? Or would a different allocation of resources make society better off?
- To answer this, we use total surplus as a measure of society's well-being, and we consider whether the market's allocation is efficient. (Policymakers also care about equality, though the focus here is on efficiency.)

Efficiency

An allocation of resources is efficient if it maximizes total surplus.
Efficiency means:

- The goods are consumed by the buyers who value them most highly.
- The goods are produced by the producers with the lowest costs.
- Raising or lowering the quantity of a good would not increase total surplus.

Total surplus = (value to buyers) – (cost to sellers)

Figure 1: Total Surplus

Evaluating the Market Equilibrium

Market eq'm: P = \$30, Q = 15,000, Total surplus = CS + PS
Is the market eq'm efficient?

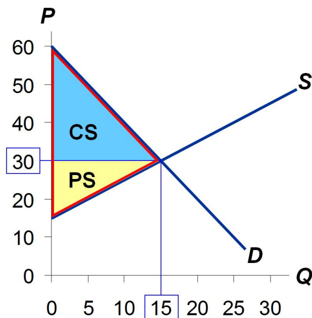

Figure 2: The Market Equilibrium

Which Buyers Consume the Good?

Every buyer whose WTP is $30 will buy. Every buyer whose WTP is < $30 will not. So, the buyers who value the good most highly are the ones who consume it.

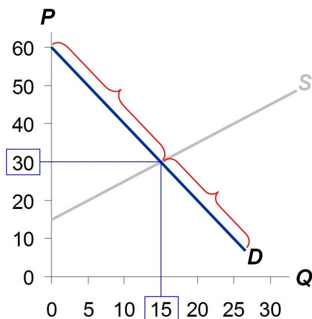

Figure 3: The Market Equilibrium

Which Sellers Produce the Good?

Every seller whose cost is \$30 will produce the good. Every seller whose cost is $>$ \$30 will not. So, the sellers with the lowest cost produce the good.

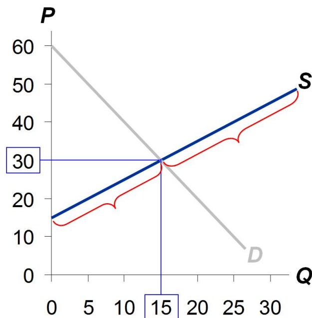

Figure 4: The Market Equilibrium

Does Eq'm Q Maximize Total Surplus?

At $Q = 20$, cost of producing the marginal unit is \$35 value to consumers of the marginal unit is only \$20. Hence, can increase total surplus by reducing Q. This is true at any Q greater than 15.

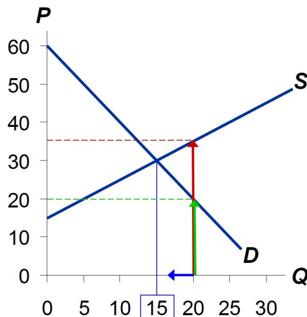

Figure 5: The Market Equilibrium and Total Surplus

Does Eq'm Q Maximize Total Surplus?

At $Q = 10$, cost of producing the marginal unit is $25 value to consumers of the marginal unit is $40 Hence, can increase total surplus by increasing Q. This is true at any Q less than 15.

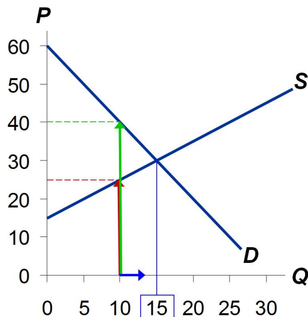

Figure 6: The Market Equilibrium and Total Surplus

Does Eq'm Q Maximize Total Surplus?

The market eq'm quantity maximizes total surplus:
At any other quantity, can increase total surplus by moving toward the market eq'm quantity.

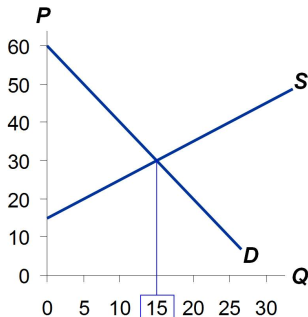

Figure 7: The Market Equilibrium

Adam Smith and the Invisible Hand

Passages from The Wealth of Nations, 1776

"Man has almost constant occasion for the help of his brethren, and it is vain for him to expect it from their benevolence only. He will be more likely to prevail if he can interest their self-love in his favor . . .,

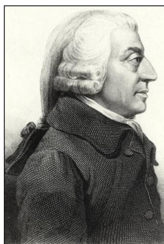

Figure 8: Adam Smith

Adam Smith and the Invisible Hand

and show them that it is for their own advantage to do for him what he requires of them . . . It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest . . . Every individual . . . **neither intends to promote the public interest, nor knows how much he is promoting it . . .. He intends only his own gain, and he is in this, as in many other cases, led by an invisible hand to promote an end which was no part of his intention.** Nor is it always the worse for the society that it was no part of it. By pursuing his own interest he frequently promotes that of the society more effectually than when he really intends to promote it."

The Free Market vs. Gov't Intervention

- The market equilibrium is efficient. No other outcome achieves higher total surplus.
- Gov't cannot raise total surplus by changing the market's allocation of resources.
- Laissez faire (French for "allow them to do"): the notion that gov't should not interfere with the market.

Gov't Intervention

- Suppose resources were allocated not by the market, but by a central planner who cares about society's well-being.
- To allocate resources efficiently and maximize total surplus, the planner would need to know every seller's cost and every buyer's WTP for every good in the entire economy.
- This is impossible, and why centrally-planned economies are never very efficient.

CONCLUSION

- This chapter used welfare economics to demonstrate one of the Ten Principles:
  Markets are usually a good way to organize economic activity.
- Important note:
  We derived these lessons assuming perfectly competitive markets.
- In other conditions, we will study in later chapters, the market may fail to allocate resources efficiently . . . .

CONCLUSION

- Such market failures occur when:
  - a buyer or seller has market power - the ability to affect the market price.
  - transactions have side effects, called externalities, that affect bystanders. (example: pollution)
- We'll use welfare economics to see how public policy may improve on the market outcome in such cases.
- Despite the possibility of market failure, the analysis in this chapter applies in many markets, and the invisible hand remains extremely important.

Summary

- The height of the D curve reflects the value of the good to buyers - their willingness to pay for it.
- Consumer surplus is the difference between what buyers are willing to pay for a good and what they actually pay.
- On the graph, consumer surplus is the area between price and the D curve.

Summary

- The height of the S curve is sellers' cost of producing the good. Sellers are willing to sell if the price they get is at least as high as their cost.
- Producer surplus is the difference between what sellers receive for a good and their cost of producing it.
- On the graph, producer surplus is the area between price and the S curve.

Summary

- To measure of society's well-being, we use total surplus, the sum of consumer and producer surplus.
- Efficiency means that total surplus is maximized, that the goods are produced by sellers with lowest cost, and that they are consumed by buyers who most value them.
- Under perfect competition, the market outcome is efficient. Altering it would reduce total surplus.