Supplementary Note

EC1101E Introduction to Economic Analysis

September 26, 2023

First Fundamental Theorem of Welfare Economics

Lecture 3 Summary Notes Supplementary Part

1. Any market equilibrium is efficient, when
   - There are markets and market prices for all goods.
   - All buyers and sellers are competitive price-takers.
   - Each person's utility depends only on his own consumption.
2. **Market Failures**: When any of the assumptions do not hold, there will be a Market Failure
   If markets are **not perfectly competitive**, then resources may **not** be allocated efficiently.
   Examples(Markets are **not perfectly competitive**):
   i.e., a buyer or seller has market power — the ability to affect the market price.
3. Transactions have **externalities**

Concept Check Questions

Most of them comes from Tutorial and Lecture

1. [Lecture 3 Concept Check] The price elasticity of a curve is the slope of the curve.
2. [Lecture 3 Concept Check] On a linear demand curve, the price elasticity of demand isconstant along the curve.
3. [Lecture 3 Concept Check] On a linear supply curve going through the origin, the priceelasticity of supply is constant along the curve.
4. [Lecture 3 Concept Check] The market equilibrium is efficient.
5. [Lecture 3 Concept Check] The government cannot raise total surplus by changing the market's allocation of resources.
6. [Lecture 4 Concept Check] A tax that has no deadweight loss cannot raise any revenue for thegovernment.
7. [Lecture 4 Concept Check] A tax that raises no revenue for the government cannot have anydeadweight loss.
8. [Extension to B5(a)] When a subsidy of 100 is given to the seller, the newmarket equilibrium price is equal to the price that sellers receive.
9. [Extension to B5(b)] Consumers suffer and bear greater tax burden thanproducers when demand is more inelastic than supply. Similarly, they also suffer and receive lesssubsidy incidence when demand is more inelastic than supply.
10. [Extension to B5(b)] Consumers and producers will always split the taxburden.(i.e. neither party will have to bear the full tax burden)
11. [Extension to B5(b)] A subsidy of S100 to the buyer increases consumersurplus more than a subsidy of S100 to the seller.

12. [Extension to B4(c)] If the government imposes a price floor that is 1 below theequilibrium price, what is the new market price and how many toy airplanes are sold?
13. [Extension to B4(c)] Label (below) and explain the consumer surplus, producer surplus,black market profit and deadweight loss from the price ceiling.
14. [L5 Concept Check] A firm maximizes profit by producing whereprice equals marginal cost.
15. [L5 Concept Check] A firm's marginal cost of producing a goodalways equals the price of the good.
16. [L5 Concept Check] A firm's marginal revenue from selling a goodalways equals the price of the good.
17. [Extension to Q5] Due to the non-rivalrous nature of public goods, people are incentivised tobe free riders.
18. [Extension to 06] In a market with negative externalities, a corrective tax will always lead tothe socially efficient allocation outcome.
19. [Section A Q6(d) Extension to Q5] When deciding whether to levy a corrective tax onconsumers or producers, the government should be careful to levy the tax on the side of the marketgenerating the externality.
20. [Extension to Q6] When the government reduces a binding price ceiling, the consumersurplus decreases.
21. [Section A Q6(b)] A tax that raises no revenue for the government cannot have anvdeadweightloss
22. [Section A Q6(a)] A tax that has no deadweight loss cannot raise any revenue for thegovernment.

<u>Quiz Review</u>

Summarize the quiz questions

1. Hobbes bakes cookies and makes lemonade. Calvin also bakes cookies and makes lemonade, but Hobbes is better at both. Which of the following is possible?
   I. Trade can benefit both Calvin and Hobbes.
   II. Trade will benefit Calvin but not Hobbes.
   III. Trade will benefit neither Calvin nor Hobbes.
2. If some piece of information causes sellers to expect the price of a non perishable good to rise in the future, but buyers take the same information and believe it will have no impact on price, the result is ____.
3. Inefficiency exists in an economy when a good is
   I. not produced because buyers do not value it very highly.
   II. not being consumed by buyers who value it most highly.
   III. not being produced by the lowest-cost producers.
   IV. being produced with less than all available resources.
4. A technological advance in the production of PlayStations will __________________ consumer surplus in the market for PlayStations and __________________ producer surplus in the market for PlayStation games.

5. In which of the following cases is it most likely that an increase in the size of a tax will decrease tax revenue?
   A. The price elasticity of demand is large and the price elasticity of supply is small.
   B. The price elasticity of demand and the price elasticity of supply are both small.
   C. The price elasticity of demand is small and the price elasticity of supply is large.
   D. The price elasticity of demand and the price elasticity of supply are both large.
6. You are responsible for economic policy in the country of Zaphon. Recently, the neighboring country of Ophrah decided to cut off all exports of oranges to Zaphon. Abigail, one of your advisors, suggests that you should impose a binding price ceiling in order to avoid a shortage of oranges. Elisabeth, another advisor, argues that without a binding price floor, a shortage will certainly develop. Iscah, a third advisor, says that the best way to avoid a shortage of oranges is to take no action at all. Which of your three advisors is most likely to have studied economics?
7. Suppose the market for vaccinations is perfectly competitive. Without government intervention in the vaccination market, which of the following statements is correct
   I. At the equilibrium quantity, the social marginal benefit exceeds the private marginal cost.
   II. The equilibrium quantity is efficient because the market is perfectly competitive.
   III. A per-shot subsidy could turn an inefficient situation into an efficient one
8. Leah and Rebecca are roommates. Leah likes to study with loud music while Rebecca needs peace and quiet when she studies. Leah would be willing to pay $5 a night to listen to music while Rebecca would be willing to pay $10 a night for peace and quiet.
   A. Leah should pay Rebecca $7.50 a night to listen to music.
   B. Neither of them should have to pay.
   C. Leah should pay Rebecca $15.00 a night to listen to music.
   D. Rebecca should pay Leah $2.50 a night to not listen to music.
   E. Rebecca should pay Leah $7.50 a night to not listen to music.
9. Why has the value of ivory threatened the extinction of the elephant, whereas the value of beef has enhanced the survival of the cow?
   A. Cows are a common resource, whereas elephants lie under the jurisdiction of governments.
   B. Elephants are a common resource, whereas cows are privately owned.
   C. Cows are private goods, while elephants are public goods.
   D. Elephants are larger than cows, and require more economic resources.
   E. Elephants live in Africa, where economic resources are scarce.