

# Lecture # 17 – Perfect Competition and Economic Welfare

## I. Economic Rent

- The *New York Times* article on rising stock market prices and firm profits illustrates how economic rents also occur when there is a lack of competition.
  - Firms may attempt to erect barriers to entry to prevent competition from eroding profits.
  - At the same time, the promise of high profits may encourage innovation.
  - This article illustrates the importance of understanding the assumptions behind economic models.
    - Thus, we now turn our attention to how competitive markets yield efficient outcomes, as well as the implications if our assumptions of competition do not hold.

## II. The Efficiency of the Competitive Market

- Recall the key questions regarding the allocation of scarce resources that we introduced on the first day of class:
  - How to utilize resources most efficiently
    - What to produce?
    - How to produce it?
      - E.g. how much capital and how much labor
  - How to allocate the goods and services that are produced?
- Now, consider how a perfectly competitive market answers these questions.
  - From marginal analysis, recall that resources are put to their highest value uses when marginal benefit = marginal cost.
  - Note that, in perfect competition, the market equates marginal benefit and marginal cost.
    - Recall that the demand curve tells us how much consumers are willing to pay for goods. This is the marginal benefit that they receive.
    - At the same time, recall that the supply curve comes from a firm's marginal cost curve.
  - Thus, equilibrium occurs where marginal benefit and marginal cost are equal. Also, note that the market price also equals marginal benefit and marginal cost.
    - Thus, both consumer tastes (represented by demand) and opportunity costs of using resources (represented by the supply curve) determine what is produced.
    - Furthermore, profit-maximizing firms will want to produce these goods as efficiently as possible. This determines how resources are allocated to production.
      - Thus, cost minimization leads to efficient use of inputs.
- Note how this relates to our theories of consumer and producer behavior.
  - Consumers choose bundles so that  $MU_x/MU_y = P_x/P_y$
  - Producers set  $P = MC$
  - Thus, in perfect competition:
    - $MU_x/MU_y = P_x/P_y = MC_x/MC_y$
    - Prices act as signals to balance the desires of consumers with the costs of using scarce resources to produce goods.
      - In perfect competition, prices act as a signal of:
        - The value of the good (relates to MU)
        - The cost of the good (relates to MC)
- The interpretation is that the simple act of individuals, each maximizing their own self-interest, leads to an efficient outcome.
  - Adam Smith referred to this as the "Invisible Hand" of the market.
  - Both firms and consumers maximize their own self-interest in response to the signals sent by market prices.

- Note that deviations from equilibrium are less efficient, because marginal cost and marginal benefit are not equal.
  - This is the deadweight loss that we discussed earlier in the semester.
  - For example, if quantity is too low, marginal benefit is greater than marginal cost. The benefits of additional quantity outweigh the additional costs.
- Market failure occurs when the equalities discussed above do not hold.
  - In these instances, government intervention may produce better results.
  - This may occur because a market does not fit the assumptions of perfect competition, or it may occur because the government intervenes in a competitive market.
    - The articles on water pricing illustrates what can happen when a government intervenes.
      - Because water is subsidized in many places, the price consumers pay does not reflect the true costs of using scarce water resources.
      - As a result, users do not have incentive to conserve water.
      - However, these subsidies are popular because they help ensure access to water for low-income families.
        - Thus, alternative policy options, such as block pricing, are often considered as alternatives.
- What do we mean by efficiency?
  - When economists talk about efficiency, they are talking about Pareto efficiency.
  - A Pareto efficient allocation occurs when no one person can be made better off without making someone else worse off.
    - This is the standard goal of economists. If not Pareto efficient, we are being wasteful, because someone could be made happier without making someone else less happy.
  - First Theorem of Welfare Economics – Competition results in a Pareto efficient allocation.

### III. Efficiency and Equity

- Thus far, we have focused only on efficiency. Might the government have a role to play even if the market can allocate resources efficiently?
  - Markets allocate resources based on *ability to pay*. In some cases, this may lead to outcomes that society finds unacceptable.
  - The key point is that efficiency alone is not enough to rank alternative allocations of resources.
  - Explicit value judgments are necessary.
- Note that the First Theorem of Welfare Economics only guarantees that an efficient outcome will occur in a perfectly competitive market. *It does not say whether or not the outcome will be equitable.*
- Thus, we face a tradeoff between efficiency and equity.
  - Governments may choose to intervene in an economy to improve equity, even if the intervention is not efficient.
  - Essentially, efficiency is about how big the economic "pie" is, and equity is about how slices of the pie are divided up.
- Consider our discussion on price gouging after natural disasters.
  - The need for reconstruction after a disaster drives up the price of building materials (and of labor to do the work). It also increase prices for other services needed, such as hotel rooms
  - This higher price serves as a signal of the increased value placed on these goods and services.
    - It helps to allocate resources to areas of greater need.
    - While this is efficient, it also means that those who are rebuilding need to pay more. We will discuss the implications of this, as well as other alternatives, in class.
- The article on license plates in China shows the implications of different methods of allocation.
  - In this case, Chinese cities limit the number of license plates available.
  - Since there is a scarce supply, the allocation of plates must be decided somehow.
  - Beijing uses a lottery
    - Thus, allocation depends on luck
    - The value a potential owner places on a license is not reflected in the decision.
      - This makes a black market possible.
  - Shanghai auctions license plates
    - The auction uses market forces. Those willing to pay the most (e.g. valuing a license plate the most) win the auction.
    - But, this limits license plates to those with high incomes