ECO101: Introduction to Microeconomics

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SECTION: 11

LECTURE 09

TOPIC: CONSUMER SURPLUS AND PRODUCER SURPLUS

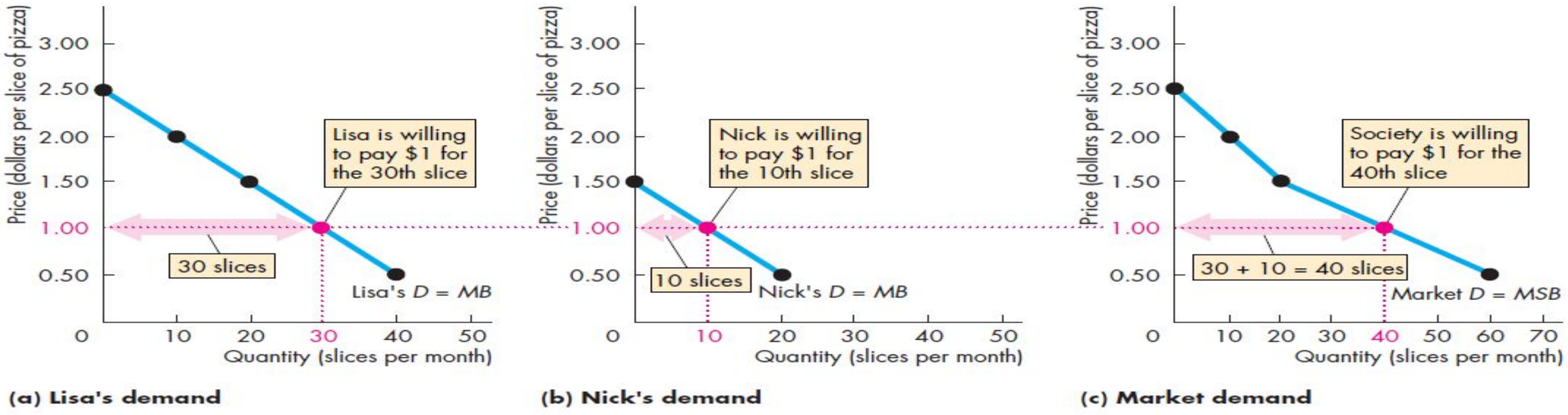
Resource Allocation Method

- The goal of this chapter is to evaluate the ability of markets to allocate resources efficiently and fairly.
- To see whether the market does a good job, we must compare it with its alternatives.
- Resources might be allocated by
  - Market price
  - Command
  - Majority rule
  - Contest
  - First-come, first-served
  - Lottery
  - Personal characteristics
  - Force

Demand, Willingness to Pay, and Value

- "getting value for money." When we use this expression, we are distinguishing between *value* and *price*. Value is what we get, and price is what we pay.
- The value of one more unit of a good or service is its marginal benefit.
- We measure marginal benefit by the maximum price that is willingly paid for another unit of the good or service.
- Willingness to pay determines demand. *A demand curve is a marginal benefit curve*.
- The relationship between the price of a good and the quantity demanded by one person is called *individual demand*.
- The relationship between the price of a good and the quantity demanded by all buyers is called *market demand*.

FIGURE 5.1 Individual Demand, Market Demand, and Marginal Social Benefit

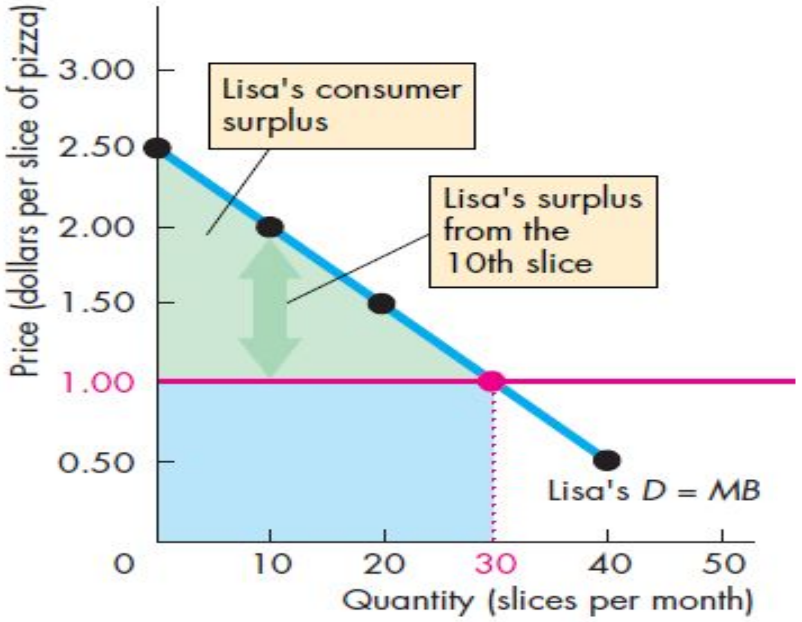


At a price of $1 a slice, the quantity demanded by Lisa is 30 slices and the quantity demanded by Nick is 10 slices, so the quantity demanded by the market is 40 slices. Lisa's demand curve in part (a) and Nick's demand curve in part (b) sum horizontally to the market demand curve in part (c). The market demand curve is the marginal social benefit (*MSB*) curve.

- At what quantity is the market willing to pay $1 for the marginal slice? The answer is provided by the *market demand curve*.
- The market demand curve is the horizontal sum of the individual demand curves and is formed by adding the quantities demanded by all the individuals at each price.
- We call the marginal benefit to the entire society *marginal social benefit*. So the market demand curve is also the *marginal social benefit* (*MSB*) *curve*.

Consumer Surplus

- When people buy something for less than it is worth to them, they receive a consumer surplus.
- **Consumer surplus** is the excess of the benefit received from a good over the amount paid for it.
- We can calculate consumer surplus as the marginal benefit (or value) of a good minus its price, summed over the quantity bought.
- Lisa's consumer surplus is the sum of the surpluses on *all of the slices she buys*. This sum is the area of the green triangle—the area below the demand curve and above the market price line.
- All goods and services have decreasing marginal benefit, so people receive more benefit from their consumption than the amount they pay.

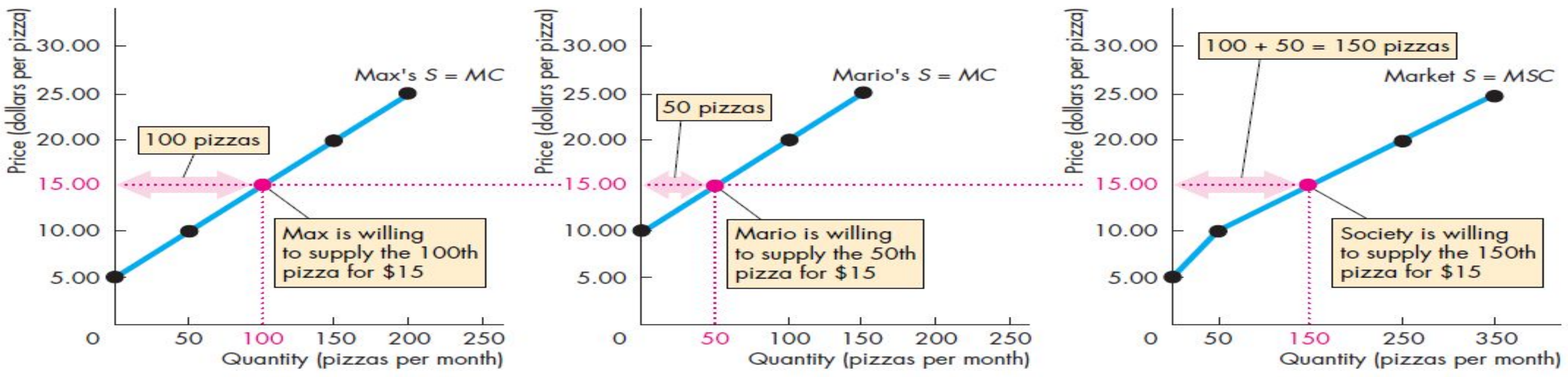


(a) Lisa's consumer surplus

Supply, Cost, and Minimum Supply-Price

- Firms make a profit when they receive more from the sale of a good or service than the cost of producing it.
- Cost is what a firm gives up when it produces a good or service and price is what a firm receives when it sells the good or service.
- The cost of producing one more unit of a good or service is its marginal cost.
- Marginal cost is the minimum price that producers must receive to induce them to offer one more unit of a good or service for sale. The minimum supply-price determines supply.
- *A supply curve is a marginal cost curve.*

FIGURE 5.3 Individual Supply, Market Supply, and Marginal Social Cost



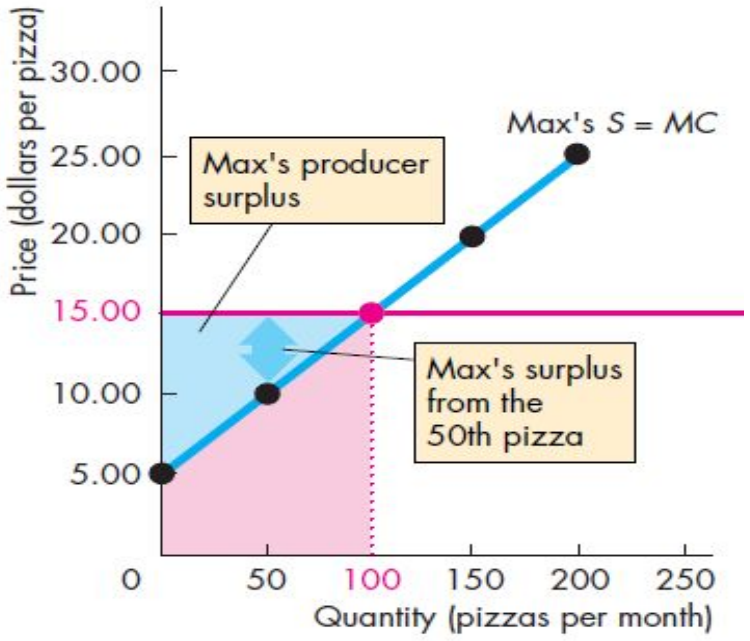
(a) Max's supply **(b) Mario's supply** **(c) Market supply**

At a price of $15 a pizza, the quantity supplied by Max is 100 pizzas and the quantity supplied by Mario is 50 pizzas, so the quantity supplied by the market is 150 pizzas. Max's supply curve in part (a) and Mario's supply curve in part (b) sum horizontally to the market supply curve in part (c). The market supply curve is the marginal social cost (*MSC*) curve.

- The market supply curve is the horizontal sum of the individual supply curves and is formed by adding the quantities supplied by all the producers at each price.
- For Max and Mario, their supply curves are their marginal cost curves. For society, the market supply curve is the marginal cost curve.
- We call the society's marginal cost *marginal social cost*. So the market supply curve is also the *marginal social cost (MSC) curve*

Producer Surplus

- When price exceeds marginal cost, the firm receives a producer surplus.
- **Producer surplus** is the excess of the amount received from the sale of a good or service over the cost of producing it.
- It is calculated as the price received minus the marginal cost (or minimum supply-price), summed over the quantity sold.
- Max's producer surplus is the sum of the surpluses on the pizzas he sells. This sum is the area of the blue triangle—the area below the market price and above the supply curve.



(a) Max's producer surplus