

Economics for your Classroom from
Ed Dolan's Econ Blog

**Consumer and Producer Surplus:
A Tutorial**

Updated Jan. 19, 2015

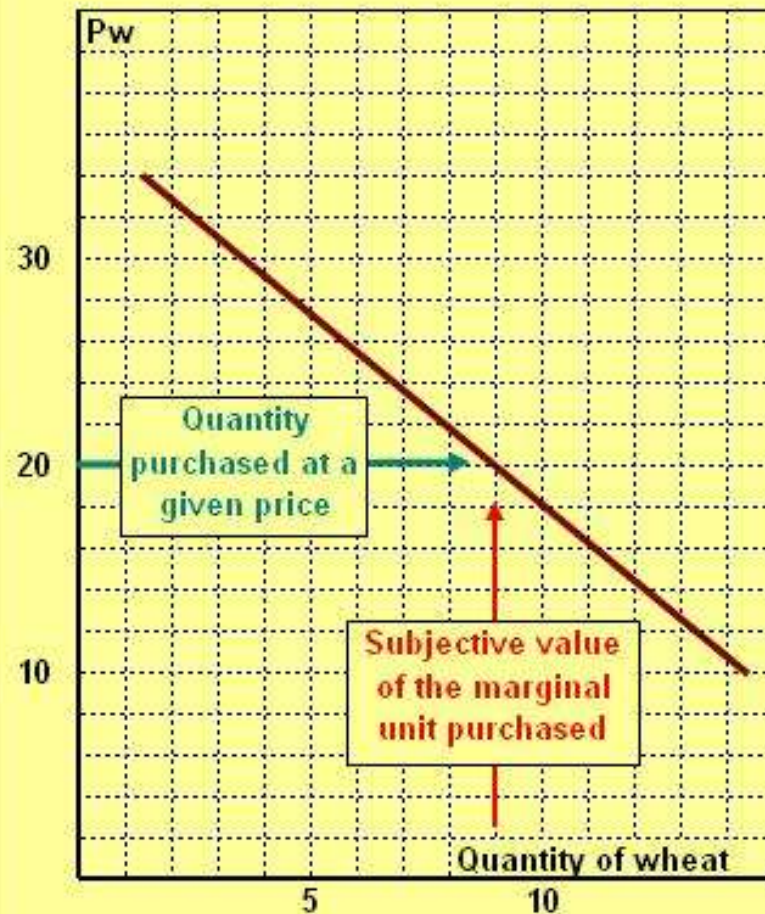


Terms of Use: These slides are provided under Creative Commons License [Attribution—Share Alike 3.0](https://creativecommons.org/licenses/by-sa/4.0/). You are free to use these slides as a resource for your economics classes together with whatever textbook you are using. If you like the slides, you may also want to take a look at my textbook, [Introduction to Economics](https://www.bvtpublishing.com/), from BVT Publishing.

Interpreting the demand curve

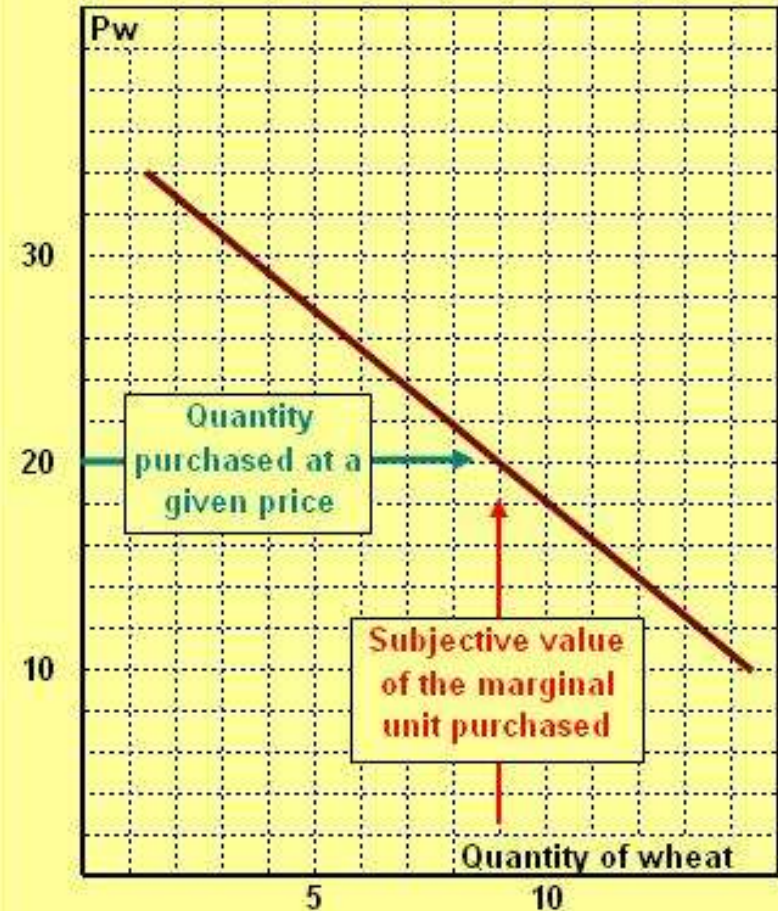
A demand curve for any good, say wheat, can be interpreted in either of two ways

- ✧ How much will buyers plan to purchase at any given price?
- ✧ What is the subjective value to the buyer of the marginal unit purchased, that is, what is the most the buyer would pay for that unit?



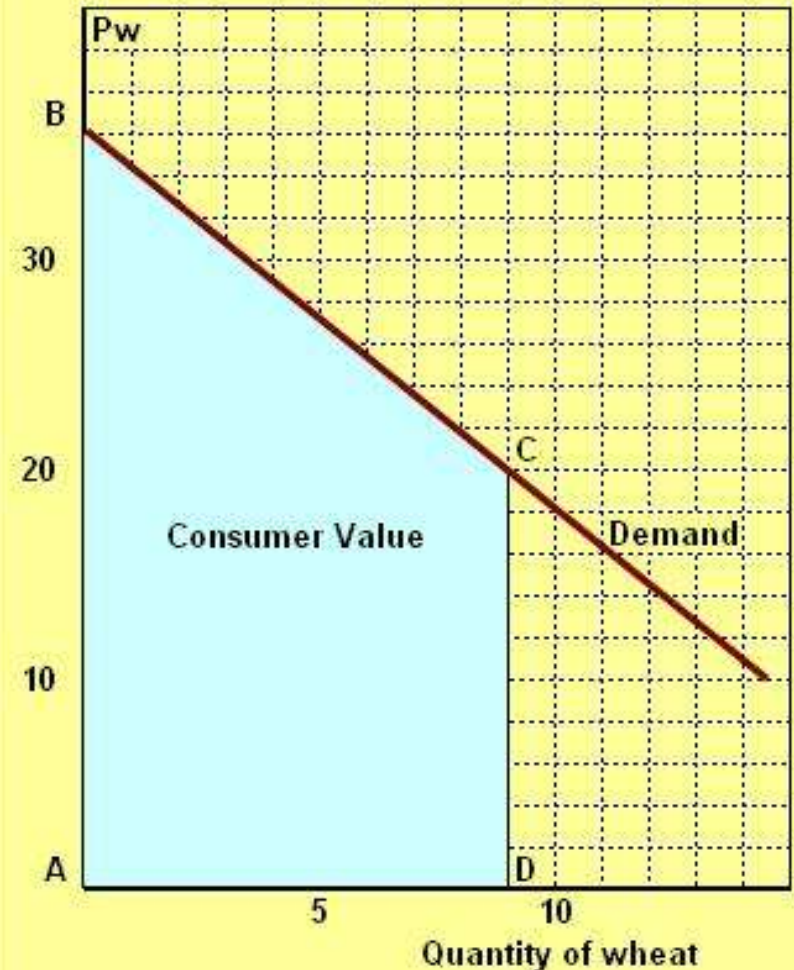
Subjective value of the marginal unit decreases

- ✧ Notice that the subjective value of the marginal unit purchased decreases as the quantity increases
- ✧ For example, this consumer would be willing to pay up to 30 cents per kilo for the third kilo, but not more than 20 cents per kilo for the ninth kilo



Consumer Value

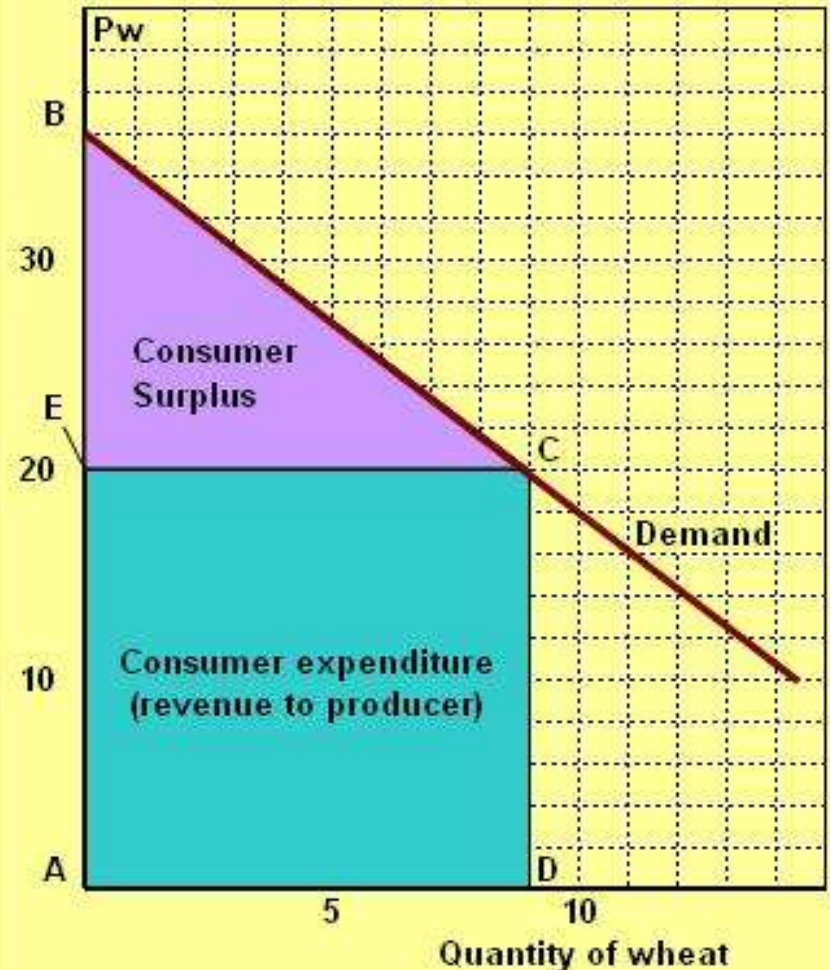
- ✧ Suppose a consumer buys 9 kilos of wheat
- ✧ The total value to the consumer of this much wheat is measured by the area ABCD lying below the demand curve
- ✧ This area represents the sum of the subjective values of each marginal unit purchased



Consumer Surplus and Expenditure

Suppose the consumer buys the 9 kilos at a uniform market price of 20 cents per kilo

- ✧ Total consumer value may then be divided into two parts:
 - ✧ The rectangle AECD (9 kilos times 20 cents per kilo) represents **consumer expenditure** (also **revenue to the producer**)
 - ✧ The triangle BCE, which is the difference between total consumer value and expenditure, is called **consumer surplus**
- ✧ Consumer surplus is the difference between what consumers actually pay and the maximum they would have been willing to pay



Interpreting the supply curve

The supply curve also can be interpreted in either of two ways:

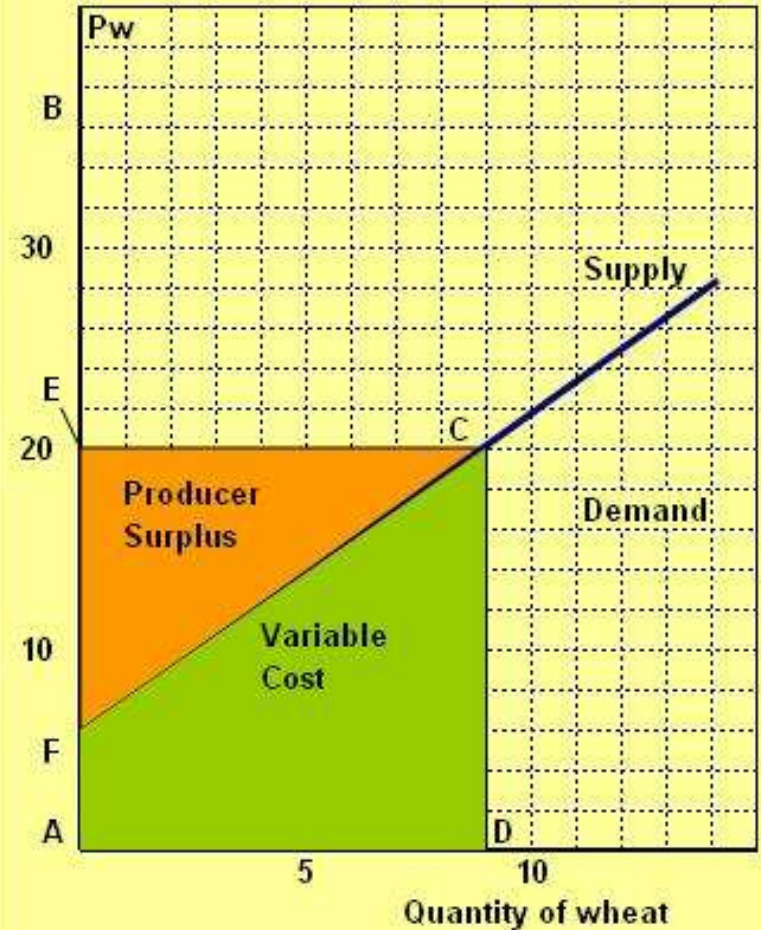
- ✧ How much will producers plan to supply at a given price?
- ✧ What is the minimum producers would accept to supply the marginal unit, based on the opportunity cost of supplying it? We can call this the **marginal cost**, or **variable cost of the marginal unit**?
- ✧ Notice that the marginal cost of each additional unit increases as more is produced



Producer surplus and variable cost

Total revenue $AECD$, can be divided into two parts:

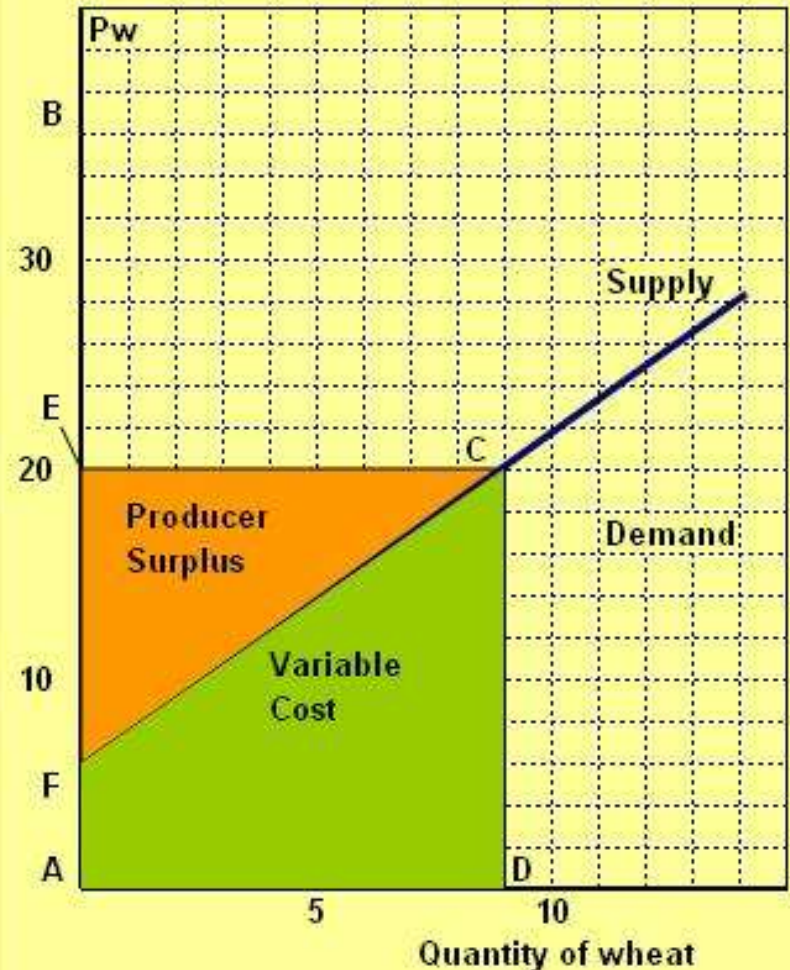
- ✧ The height of the supply curve represents the variable cost of each added unit, so the trapezoid $AFCD$ represents total variable cost
- ✧ The difference between revenue and total variable cost (triangle FCE) is called **producer surplus**



The meaning of producer surplus

Producer surplus can be thought of in two ways

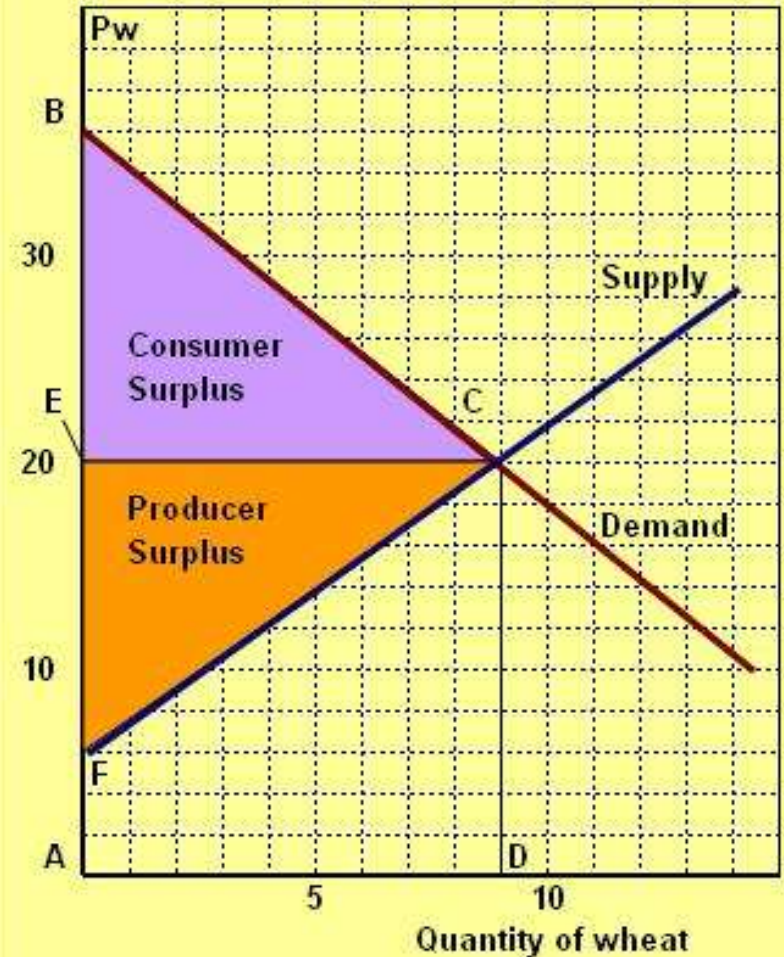
- ✧ It is the difference between the revenue producers receive and the minimum they would have been willing to accept, at the margin, to supply each additional unit
- ✧ It is also the part of revenue that producers have available to cover **fixed costs** and **profit** (or **rent**)



Value added (gains from trade)

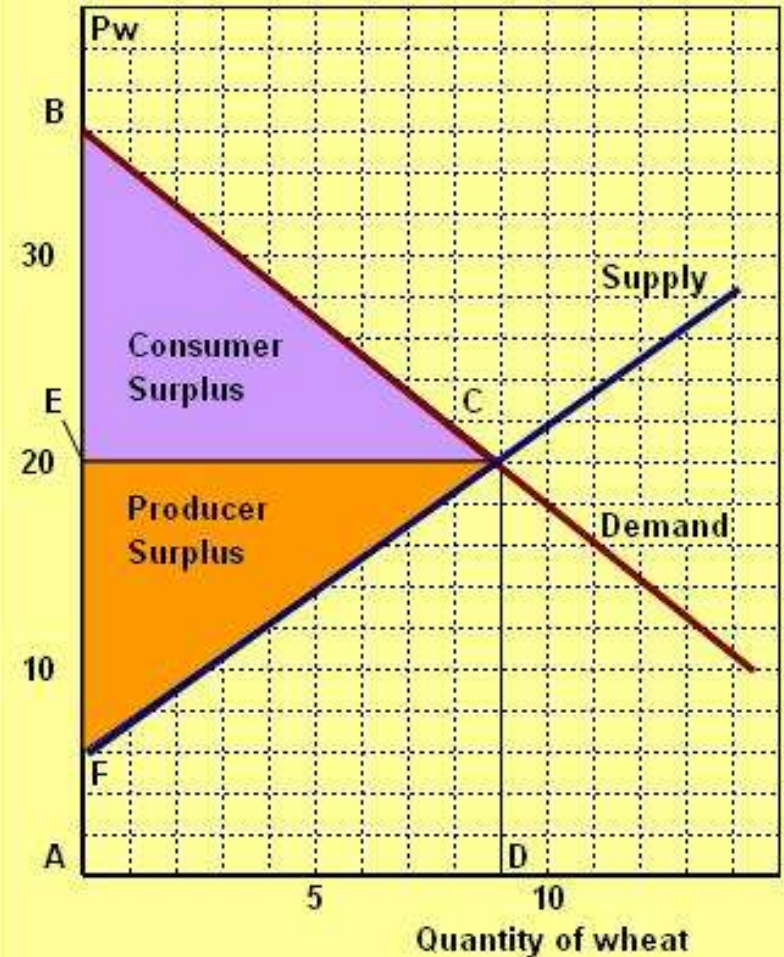
*The combined surplus (adjusted for fixed costs) represents the total **value added** or **gains from trade***

- ✧ Producer surplus is the value that producers gain compared with using the same variable resources to produce other goods
- ✧ consumer surplus is the value that consumers gain compared with using the same money to buy other goods



Value added must be shared

- ✧ Total value added must be shared between producers and consumers—otherwise both would not have an incentive to engage in voluntary trade
- ✧ When both sides gain from trade, market exchange is a **positive-sum game**—a game in which all players are made better off as a result of their participation



ED DOLAN'S ECON BLOG

RESOURCE CENTER FOR TEACHING ECONOMICS

For more slideshows and commentary, follow [Ed Dolan's Econ Blog](#)



Like this slideshow?

Follow [@DolanEcon](#) on Twitter

[Click here](#) to learn more about [Ed Dolan's Econ texts](#)