Dilbertian Economics: Consumer Surplus

Joe DeMaio
Textbook Format

• Pros
  • Descriptive
  • Clear Charts

• Cons
  • Long Paragraphs
  • Formulas in Text
  • Poor Chart Locations
  • Tiny Captions
A Different Way

First Bank of Bankland, Inc
"Open Your Christmas Club Account Today"

I'd better get rid of these crappy mortgage loans. They are starting to stink up my office. Thankfully the really smart guys in New York will buy them and perform their financial magic. I'll call them right away!

NEW MORTGAGE FILE

DELETING MORTGAGE LOANS
Benefits

- Simple
- Humor
- Narrative
- 2 Sets of Visual Symbols
Consumer Surplus

We have seen that the compensating variation is a powerful tool for measuring changes in people's welfare. However, in practice, it is often difficult to measure the exact change in benefits when prices change. In this section, we develop a more practical method for approximating changes in consumer welfare.

The Demand Curve as a Marginal Valuation Schedule

To demonstrate this demand curve, we can use a marginal valuation schedule. This schedule is useful for identifying the units of a good that are purchased at each price level. It shows the value of the last unit of a good purchased at each price level. The schedule can also be used to calculate the consumer surplus for any given price.

Suppose that we want to know how much a consumer values his first three minutes of telephone use per day. The answer is found by adding the marginal values associated with the first, second, and third minutes. In Figure 4.8, the area of triangle ABE represents the total value of the first three minutes of telephone use, which is equal to the area of triangle ABE. The total value of the first three minutes of telephone use is 30 cent per minute. This is the amount of money that the consumer would be willing to pay for the first three minutes of telephone use.

Now consider the demand curve for figure 4.9, which is a straight line that shows the relationship between the price of a good and the quantity demanded. The demand curve in Figure 4.9 shows that the price of sugar is 50 cents per pound, and the quantity demanded is 20 pounds. The consumer surplus is the area under the demand curve and above the price line, which is the area of triangle CDE.

Effect of Price Changes on Consumer Surplus

We can now use this information to calculate the change in consumer surplus when the price of sugar changes. The change in consumer surplus is equal to the area of the triangle formed by the old price line and the new price line. The triangle has a base of 100 pounds and a height of 30 cents, so the area of the triangle is 1500 cents or $1.50. This is the change in consumer surplus when the price of sugar changes from 50 cents to 40 cents per pound.
The Beginning

I'm breaking up with you. You're not muscular enough for me!

I'll show you!

Bob
The Plan

I need to get buff. But I'll need some help. Time to call Victor Conte and Doctor Quack.
The (Illegal) Connection

Victor Conte: We're selling each can at 10 dollars.

Balco: I am going to spend 10 bucks. How much muscle milk can you give me?

Doctor Quack: How's 2 bucks a pop sound?
The Conundrum

WOW. I know I'm better off with the lower price, but how much?

I'm the God of Economics. I can help answer that. First we need your demand curve.

God of Economics?!? I need to cut back on my cardio. I'm seeing things!
The Intelligent Hallucination

Since you would be willing to give up all 10 dollars for your "Help" we can view your demand function as $\text{Milk} = \frac{10}{\text{Price}}$. Here is a graph.

Price

10

5

2

1

1 2 5 10 Quantity

Four Bottles of water and he still won't go away!?!
The Intelligent Halucination II

Now, since you would consume 1 can if the price was $10, we can say you are willing to pay $10 for 1 can. But since you only have to pay $2, you are $8 better off for the first can and slightly less for each subsequent can.

I see each line below. The curve is the money I save on that can.
The Intelligent Halucination III

All consumer surplus is is a dollar value of what you saved. This means adding up all those lines below the demand curve. In this case that means finding the area of the shaded triangle.

I'm not that good with integrals. I'll just approximate the area by assuming the edge is straight. So the area is \( \frac{1}{2} \cdot 8 \cdot 4 \), or 16.

So with 4 extra cans, I'm 16 better off!
The Result

Now, go get your girl back!

Muscles, money, and a girl. Who said economics isn't useful?

Oh Bob!
Works Cited