Price Taking Behavior and Efficiency

News Item
Review Elasticity
What Economists Mean by Efficiency
Market Allocations and Efficiency
Efficiency and Marginal Cost Pricing
Comments on Midterm

Review Elasticity
Price Elasticity of Demand measures the responsiveness of the quantity demanded to price.

Price Elasticity of Supply measures the responsiveness of the quantity supplied to price.

DTH: BBall Ticket Distribution

Ticket distribution policy unveiled
By: Katy Dell, Assistant University Editor
Posted: 9/24/07
The new student ticket distribution policy was rolled out Friday, with changes including general admission for students andoblusion of entry times for men’s basketball games.
The online policy has one round of lottery, wherein which winners receive two tickets. Tickets are distributed with a phone that details how early before tip-off students can enter.

DTH: Music Events Ticket Distribution

New ticketing policy in works
May involve a “simplex”

University officials are putting together a new policy for event ticket distribution that maintains a cohesive atmosphere while addressing security concerns.
The policy, still in development, will allow students to line up in the Great Hall of the Union all night and buy tickets the following morning.
The policy is also being studied for use at other events at Memorial Hall, such as the homecoming appearances of the Avett Brothers and Gym Class Heroes.
Demand and Revenue

Demand is more elastic if ...

Good substitutes for the product exist.
The product accounts for a larger share of the budget of a typical consumer.
If a longer period of time is allowed for consumers to adjust to the price change.

Use Your Clicker to Answer the Following Graded Question

Reducing the supply of drugs is not likely to lower property crime because demand for drugs is _____ and lowering the supply of drugs will ______ the amount of money that drug users spend on drugs.

A. Elastic, Raise
B. Elastic, Lower
C. Inelastic, Lower
D. Inelastic, Raise
Economic Efficiency

Economies allocate goods and services to individuals. An allocation is efficient if it is not possible to reallocate goods in a way that makes someone better off without making someone else worse off. If it is possible to make someone better off without making anyone else worse off, an allocation is inefficient.

Mrs. Doubtfire is a care giver for Jan and Ari. She has allocated one Snickers and one Package of Oreos to each child. The children’s reservation prices for each snack are given in the table.

Is the allocation efficient?

<table>
<thead>
<tr>
<th>Snickers</th>
<th>Oreos</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jan $1.00</td>
<td>Jan $0.75</td>
</tr>
<tr>
<td>Ari $0.50</td>
<td>Ari $1.00</td>
</tr>
</tbody>
</table>

Use Your Clickers to Answer the Following Graded Question.
Is the Allocation Efficient?

A. No, Ari should get an Oreo from Jan and give a Snickers to her.

B. No, Ari should get a Snickers from Jan and give an Oreo to her.

C. Yes, Both Ari and Jan have the same reservation price for their favorite snack.

D. Yes, Because Ari and Jan have different reservation prices for Oreos.

<table>
<thead>
<tr>
<th></th>
<th>Jan</th>
<th>Ari</th>
</tr>
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<td>Snickers</td>
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</tr>
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<td>Oreos</td>
<td>$0.75</td>
<td>$1.00</td>
</tr>
</tbody>
</table>

Is there an allocation that would make either Ari or Jan better off without making either worse off?

Ari trades a Snickers to Jan for an Oreo.

Ari’s surplus increases by $1.00-$0.50 = $0.50

Jan’s surplus increases by $1.00 - $0.75 = $0.25

Market Allocations and Efficiency

Provided that...

Buyers and sellers are well informed.

Buyers and sellers are price takers.

Demand and Supply schedules reflect all the benefits and costs associated with consumption and production of the good.

Then...

The Allocation Achieved by the Equilibrium Price Is Efficient.
Consider Equilibrium in the Gasoline Market after Hurricane Ike

At the Equilibrium Price for Gas...

There is no opportunity for a "side trade" that makes someone better off without hurting someone else.

At a Ceiling Price for Gas of $3.75...

There are Trades that Could Make Some Better Off Without Making Anyone Worse Off.
At the Ceiling Price of $3.75...

There are demanders whose reservation price for an additional gallon of gas is $4.50.
There are suppliers who will willingly supply additional gallons at $3.85.
The price system has failed to bring these two potential traders together.

A Binding Price Floor is Also Inefficient. Consider the Market for Milk.

At a Floor Price of $3.00 per gallon...

There are suppliers who would willingly supply a gallon of milk for any price above $2.60.
There are demanders who would willingly buy additional gallons at a price less than $3.00.
The price system has failed to bring these two potential traders together.

Economic Efficiency of Airline Bumping Policies

Airlines routinely sell more seats on a flight than the capacity of the aircraft.
Airlines expect some who booked seats to be “no shows”.
Occasionally, more ticket holders show up than the aircraft can carry.
How should the airline handle this situation?
Is there an efficient way to “bump” passengers?

Price

$700

$250

Demand

Seats

Capacity

Ticketed Passengers

Is There an Efficient Way to “Bump” Passengers?

Bumping the last ticket passengers to arrive at the gate is likely to take seats away from those with high reservation values.

Offering a side payment to those who volunteer will take seats away from those with low reservation values.

Efficiency and Marginal Cost Pricing

Markets are efficient when the value paid by the last buyer of a good or service just equals the marginal cost of producing the good or service.

Marginal Cost Pricing

When suppliers are price takers and when all costs of production are reflected in the supply schedule, then ...

The supply schedule records the marginal cost of providing the good or service to society.
Marginal Cost Pricing
When price is determined by demand and supply, the market price equals the marginal cost of producing the last unit of the good or service sold. Thus the market reveals to everyone the marginal cost of production. Those who buy the good are those, and only those, who are willing to pay the marginal cost.

Use Your Clickers to Answer The Following Non-Graded Question.

Durham gets water from three sources. The following table shows the cost and capacity of each source.

<table>
<thead>
<tr>
<th>Source</th>
<th>Capacity (millions gals. per day)</th>
<th>Cost per gallon</th>
</tr>
</thead>
<tbody>
<tr>
<td>Spring</td>
<td>2</td>
<td>$.01</td>
</tr>
<tr>
<td>Lake Michie</td>
<td>2</td>
<td>$.015</td>
</tr>
<tr>
<td>Kerr Lake</td>
<td>2</td>
<td>$.03</td>
</tr>
</tbody>
</table>
If Durham residents normally use 5 million gallons of water per day, Durham should charge______ per gallon for water.

A. $.01  
B. $.015  
C. $.016  
D. $.03  

(average cost)

Why should Durham charge $.03 per gallon when its average cost is only $0.16?

The marginal cost to Durham of a gallon of water is $.03.
Households have substitutes available.
Households should make the decision to use water or a substitute based on the true marginal cost of a gallon of water.

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The Midterm Exam Curve

<table>
<thead>
<tr>
<th>Source</th>
<th>Capacity millions of gals. per day</th>
<th>Cost per gallon</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>2</td>
<td>$.01</td>
</tr>
<tr>
<td>B</td>
<td>2</td>
<td>$.015</td>
</tr>
<tr>
<td>C</td>
<td>2</td>
<td>$.03</td>
</tr>
</tbody>
</table>

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Midterm Exam Statistics

<table>
<thead>
<tr>
<th>Statistics</th>
<th>Tentative Grade Thresholds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>Median</td>
</tr>
<tr>
<td>A-</td>
<td>B-</td>
</tr>
<tr>
<td>23.5</td>
<td>24</td>
</tr>
</tbody>
</table>
Midterm Exam Appeals

There is an appeal process explained on the web page.

Consult it before you consider talking about your grade with your TA.

Price Taking Behavior and Efficiency

For economists, efficiency means not being able to make someone better off without making someone else worse off.

When buyers and sellers take price as given, the market produces an efficient allocation.

It is efficient to face every buyer with the true marginal cost of producing a good.