

# Lecture 9: Welfare

October 22, 2024

# Overview

1. Administrative Notes
2. Ripped from headlines
3. Welfare

## Course Administration

1. One midterm is still in limbo – so no exam returns
2. Vanilla summaries graded next week
3. Case summaries remaining for Lectures 13 and 14
4. Please come to office hours
5. Problem Set 7 posted
6. Chapter 7 End-of-Chapter questions posted
7. Exec in residence, up next
8. Any other questions or outstanding issues?

# Executive in Residence Program



**Chad Davis, MPP '01**

Vice President for Government Affairs, Cato Institute

Government Relations and Communications Strategy

Personnel Management and Recruitment

Congressional and Agency Process

Banking and Housing Policy

[Meet & Greet Program \(16 minutes\)](#)



**Cathy Helm, MPA '80**

Former Inspector General, Smithsonian Institution

Government Oversight and Accountability

Mindful Leadership

Performance Auditing

[Meet & Greet Program \(19 minutes\)](#)



**Omar Woodard, MPA '07**

Executive Director, HRS Management; Founder, Woodard Impact; Philanthropy & Impact Investing Professional, 26North

Government Relations at the Local, State, and Federal levels

Philanthropy and Impact Investing

Nonprofit Management and Governance

Cross-sector collaboration

Role of strategic foresight in government

[Meet & Greet Program \(21 minutes\)](#)

# How What You're Learning is Policy-Relevant

Ripped from Headlines presentation(s)

As a reminder, next week  
Send the article by Wednesday midnight for approval

Afternoon, joint presentation

| Finder       | Presenter  |
|--------------|------------|
| Samantha C.  | Halle V.   |
| Motunrayo F. | Taryn G.   |
| Tia V.       | Michael J. |

Evening, individual presentation

| Finder     | Presenter                       |
|------------|---------------------------------|
| Heidi M.   | Tanya Q. (choose your article!) |
| Katelyn H. |                                 |

# Today: How Economists Think About Welfare

1. Components of Policy Evaluation
2. Measuring Welfare: Surplus
3. Market Efficiency
4. Market Failure and Deadweight Loss
5. What Efficiency Doesn't Cover

# 1. Components of Policy Evaluation

# Positive vs Normative Analysis

## Positive analysis

- Assessments or predictions based on measurable inputs and constraints
- For example
  - Policy A will increase economic growth by 10% and keep wages flat for lowest-earning workers
  - Policy B will increase economic growth by 5% and increase wages for lowest-earning workers by 6%



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## Normative analysis

- Value judgements about which outcomes are preferred
- For example
  - We care most about wages for lowest-earners
  - Therefore we prefer Policy B to Policy A

## Positive or Normative?

---

| Example | P or N? |
|---------|---------|
|---------|---------|

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Increase in blueberry price by 6% causes consumers to decrease blueberry consumption by 2%

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Many times economists talk about an equity-efficiency trade-off

## 2. Measuring Economic Surplus

# Economic Surplus

Economic surplus = Consumer surplus + Producer surplus

# Consumer Surplus

Consumer surplus  $\equiv$  “difference between the amount consumers would be willing to pay for a good and the amount they actually have to pay”

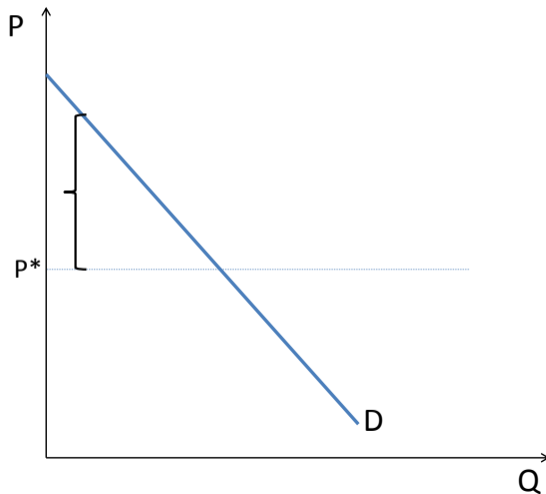
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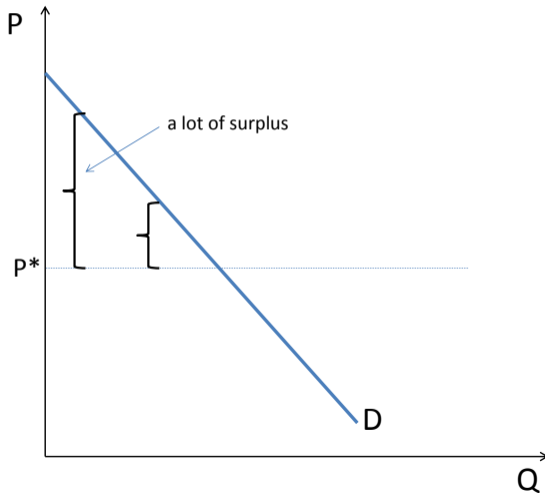
Consumer surplus  $\equiv$  marginal benefit consumer receives from purchase minus the price of purchase

## Getting to Consumer Surplus

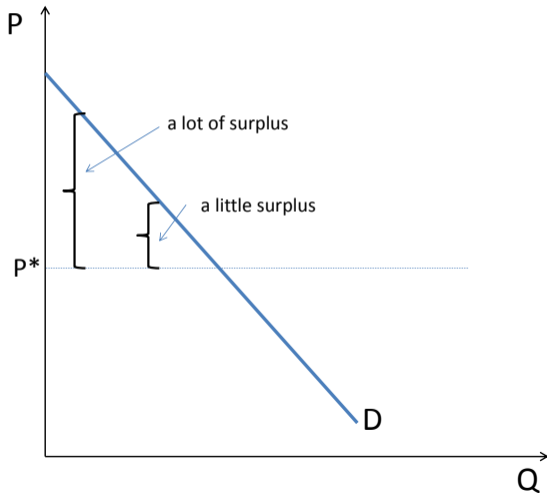
Do people consuming at this price have a little or a lot of surplus?



# And these people?

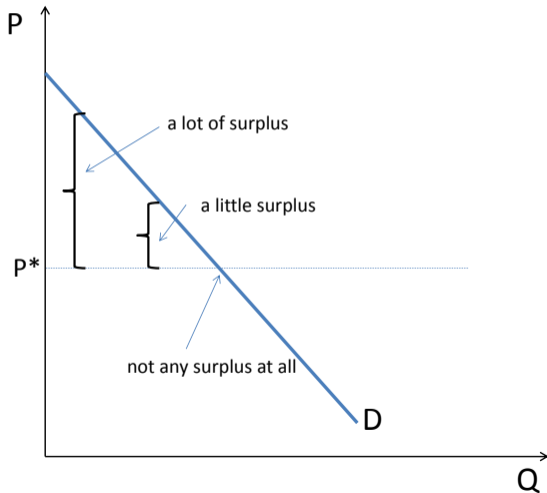


# Where is Someone Without Surplus?

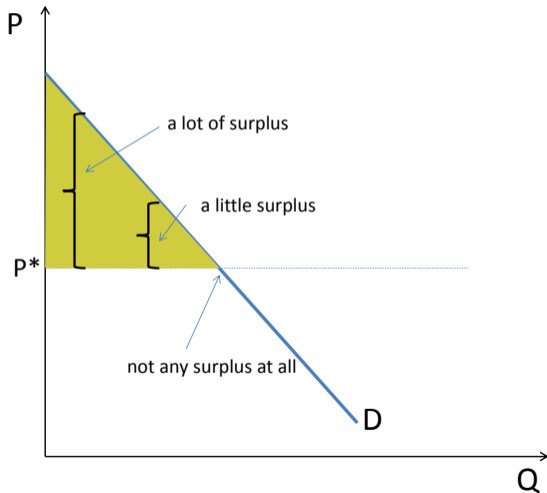




## And Total Consumer Surplus?



# The Whole Shebang of Consumer Surplus



# Identifying Consumer Surplus

- For which goods do you have a positive consumer surplus?

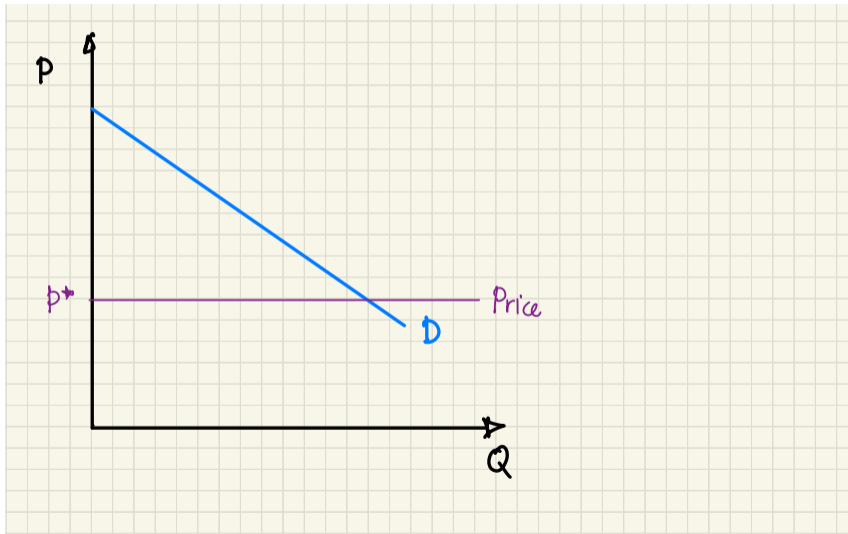
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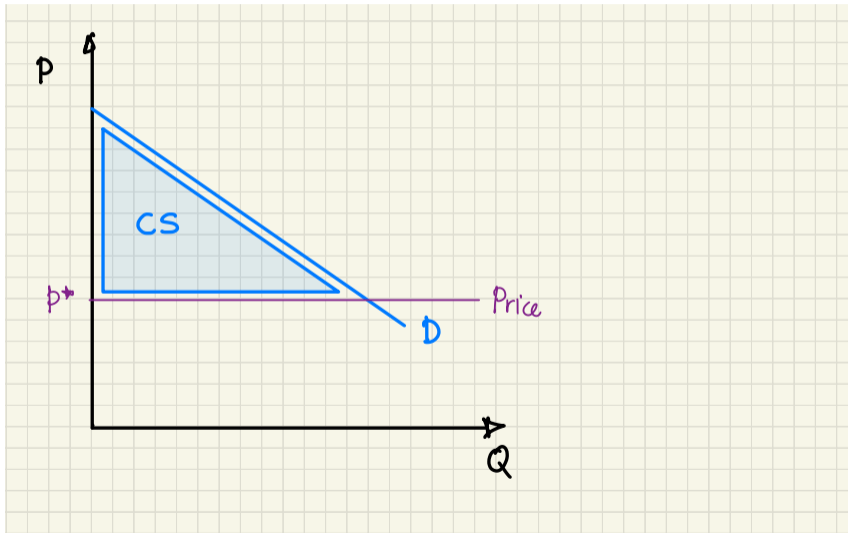
## Identifying Consumer Surplus

- For which goods do you have a positive consumer surplus?
- For which goods do you have a consumer surplus of zero?
- Give an example when your consumer surplus increased

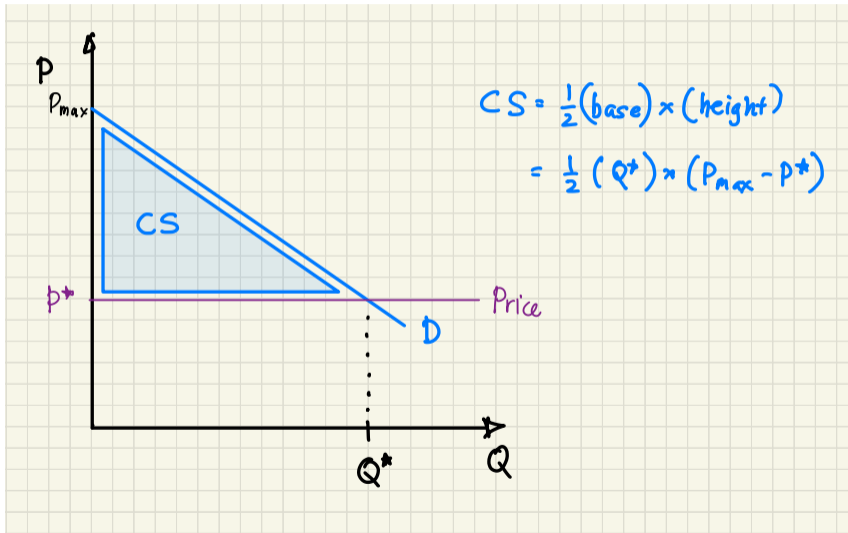
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## Calculating Consumer Surplus





## Producer Surplus

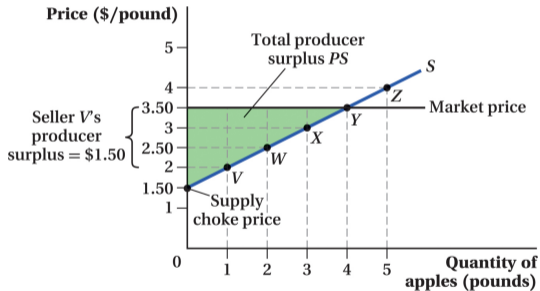
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## Producer Surplus

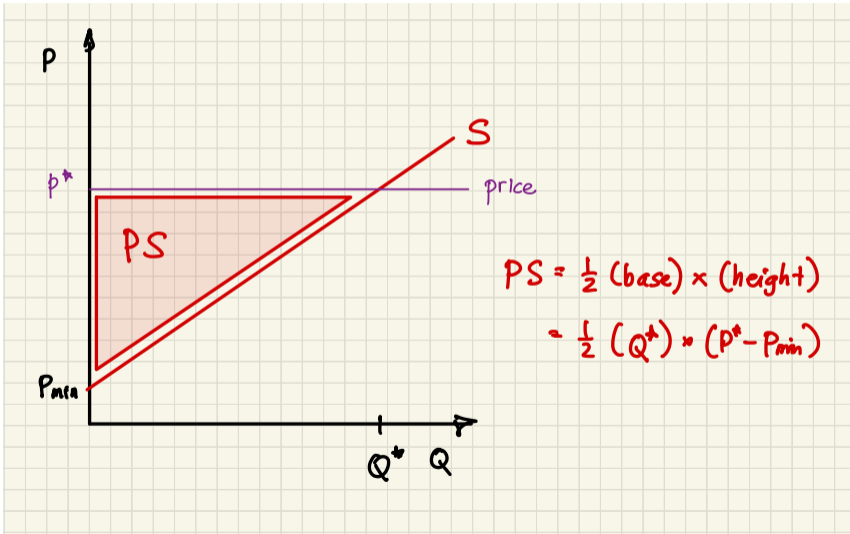
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- You are a producer of labor. Have you ever received surplus?
- Can you think of another example?



# Calculating Producer Surplus



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- → trade occurs only when it makes at least one party better off and the other no worse off
- → at least one party enjoys gains from trade
- Therefore, trade generates economic surplus



# 3. Market Efficiency

# Perfectly Competitive Markets Maximize Economic Efficiency

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Maximize economic efficiency = Create largest amount of economic surplus

1. How markets allocate how much each firm makes
2. How markets allocate how much each consumer gets
3. How markets determine total quantity

# 1. How Much Each Firm Makes

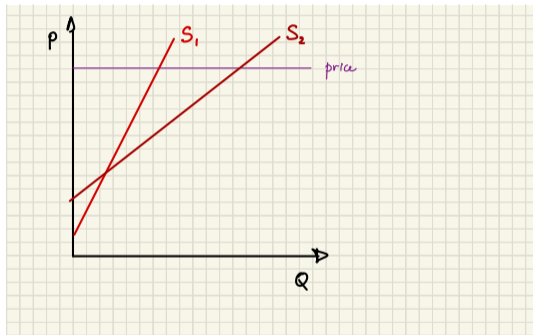
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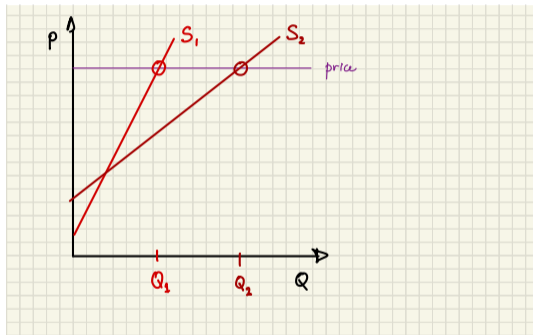
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→ Markets distribute production across firms to minimize cost

## Firm Closure During COVID

- What does this framework tell us to expect about firm closure during COVID?
- Which firms should have been the most likely to close?
- Is this consistent with your experience?



## 2. How Much Each Consumer Gets

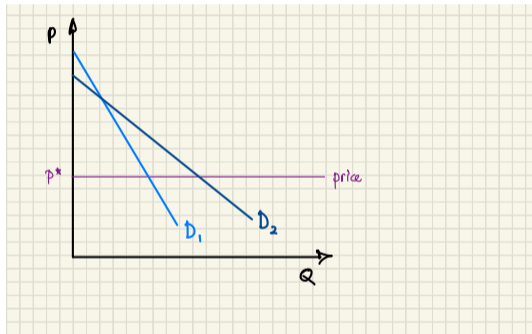
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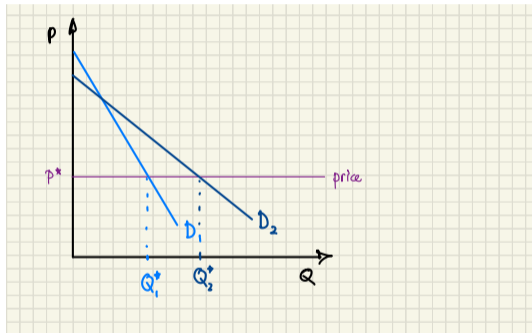
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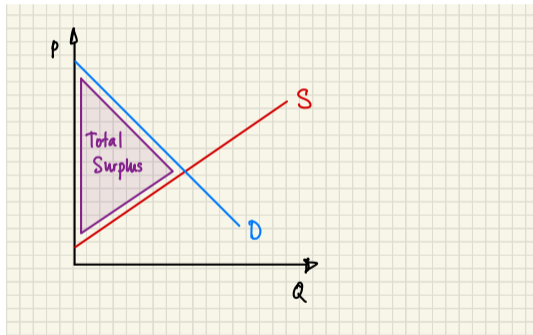
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→ Markets allocate production to those with highest marginal benefits

### 3. How Markets Determine Total Quantity

- Competitive market equilibrium quantity where  $S = D$
- Yields largest possible economic surplus
- Adam Smith's "invisible hand" gets us to this outcome (1776, *The Wealth of Nations*)
- No planners, no organizers, no MPPs



# 4. Market Failure and Deadweight Loss

# Limits of Competitive Market Framework

## Competitive markets

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But... this rests on assumptions

- Assumption of a perfectly competitive market
- Definition of marginal benefit as willingness to pay



## Market Failure

In short, market is not perfectly competitive because

1. At least one producer has market power (more Lec. 11, Ch. 14)
2. Production or consumption generates externalities (more Lec. 13, Ch. 10)
  - externality = impact of consumption or production in market of interest on another market
  - pollution can be a negative externality of production
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3. Information is not perfect
4. Consumers don't always behave rationally
5. Government intervenes

## Measuring Deviations from Efficiency: Deadweight Loss

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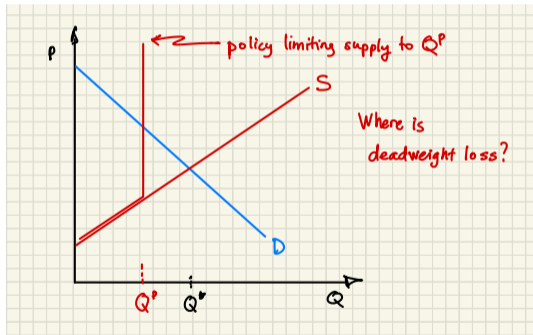
- deadweight loss = economic surplus at efficient quantity - actual economic surplus
- deadweight loss = surplus that is thrown away
- We usually measure economic surplus with supply and demand curves
- When market is not perfectly competitive, supply curve may not equal marginal cost and demand curve may not equal marginal benefit
- So focus here on marginal benefit and marginal cost

## Deadweight Loss From Underproduction

- What policies or market conditions could cause less production than the competitive equilibrium?

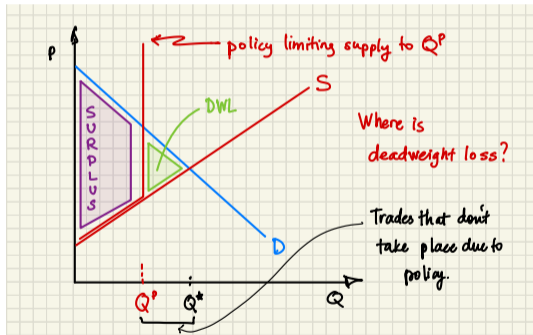
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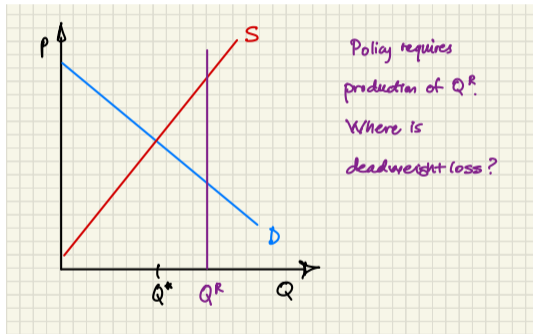
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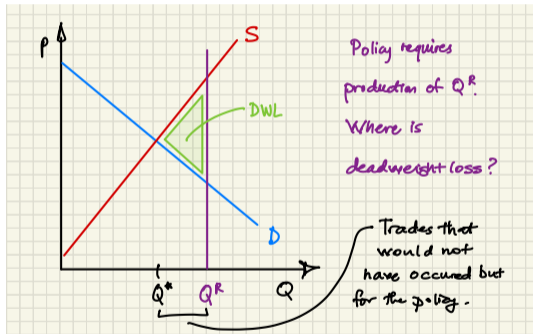
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Quantity determines the extent of deadweight loss

## What Can Correct Market Failure?

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- So look to government
- But...

## What Can Correct Market Failure?

Sometimes the cure is worse than the disease

- government can fail, too
  - can you give an example of government failure to provide or allocate goods?
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- But...
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  - Regulated airline industry, pre-1980s
    - until 1978 Civil Aeronautics Board regulated interstate routes and fares
    - in-state routes not regulated and much lower priced
    - Carter leads deregulation efforts
    - lots of expansion in late 1970s, then a crash in early 1980s
    - industry more volatile, some non-stops disappear, fares way lower

## 5. Criteria in Addition to Efficiency

# Critiques of Efficiency Analysis

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- ignores how the pie is split
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→ Efficiency is one goal among many

## Using This Framework to Evaluate Policy

1. What are the likely impacts of a given policy?
  - what are impacts on workers?
  - on producers?
  - on consumers?
  - on total surplus?
2. Are outcomes under this policy better than the status quo? (helps us think about opportunity cost)
3. Can alternative policies generate the same outcome in a better way?

## For Next Class

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- Read Chapter 8
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I will

- post these lecture notes on my webpage
- post link to lecture recording on Blackboard
- anything else?