

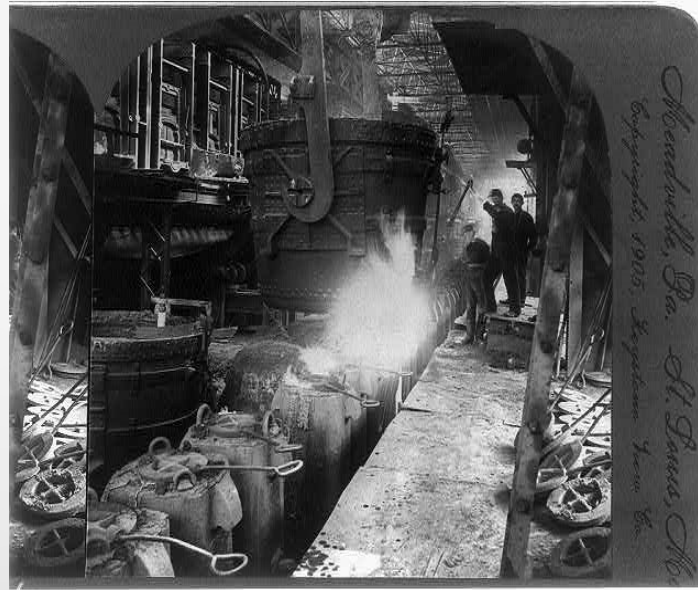


Participate in Poll #1.

Click on the names of the greedy capitalists:

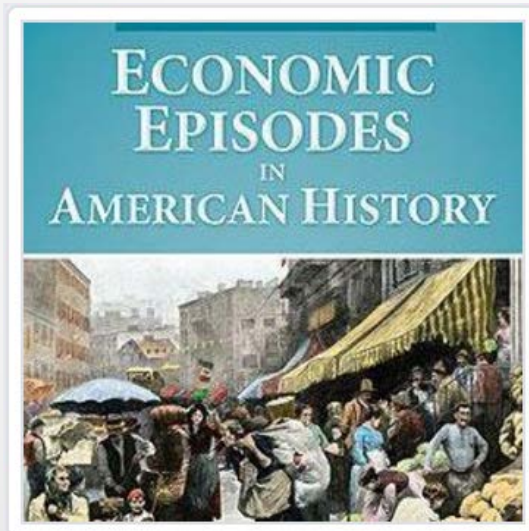
- Andrew Carnegie (steel and shipping)
- J.P. Morgan (financier and banking)
- Henry Ford (auto)
- John D. Rockefeller (oil)
- Bill Gates (Microsoft)

# Economic Episodes in American History: Robber Barons



[Tawni.org/presentations](http://Tawni.org/presentations)

Shout out to  
Mark Schug and Bill Wood!



Economic Episodes  
in American History  
[@EconEpisodes](#)



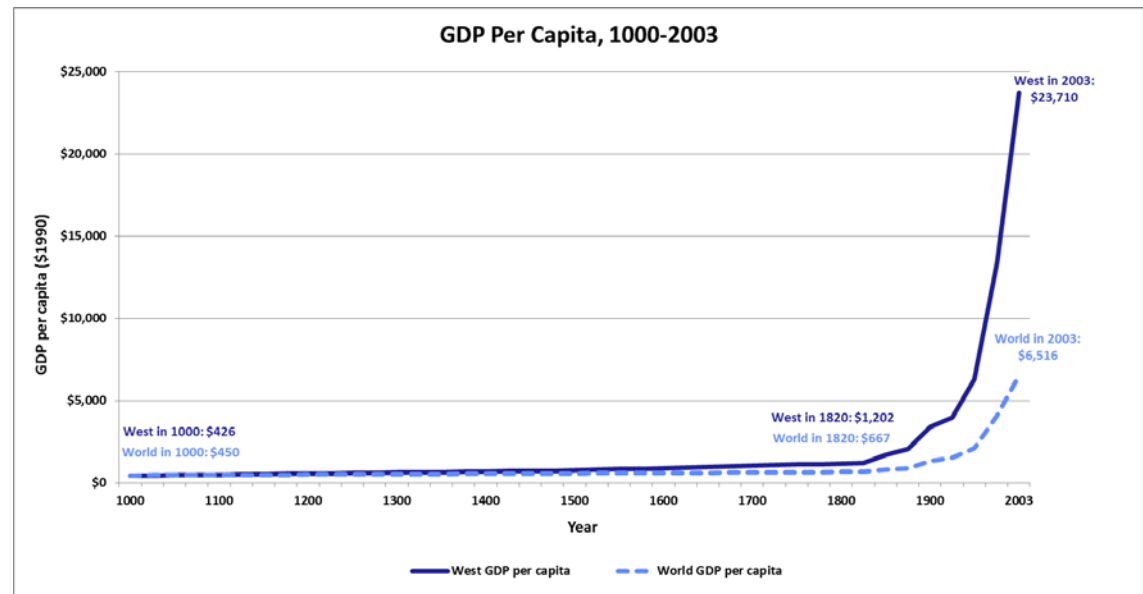
# Were the Robber Barons Greedy Capitalists or Entrepreneurs?

## Overview

- Beginning in the late 18<sup>th</sup> century and at throughout the early 19<sup>th</sup> century, the world witnessed the emergence of the industrial United States, England, and other Western countries.
- Eventually, the trusts that came to dominate much of industrial America fell. Where *did* all the trusts go? Why did they disappear?

**C**ornelius Vanderbilt was born into a poor family on Staten Island, New York, on May 27, 1794. He went to work at age 11 on his father's ferry boat. When he was 16, he bought a sailboat and began operating a passenger and freight service between Staten Island and New York City. Offering low fares, he competed successfully with other ferry services and was able to expand his fleet. In 1818 he sold all his sailing vessels and became a steamboat captain, operating a ferry service, with a partner, between New Brunswick, New Jersey, and New York City. Again, he charged low fares. He soon added new routes, and his ferry service became the dominant service between Philadelphia and





Per Capita Income  
The Last 1000 Years

## ≡ 2 Intro Hans Rosling- 200 countries 200 years

### Common Sense Economics for Life!

Part II:

Introduction

**Video:**

Hans Rosling- 200 countries  
200 years

**Concepts and Topics:**

Legal system, private  
property and incentives



Turn on the learning light!



00:00

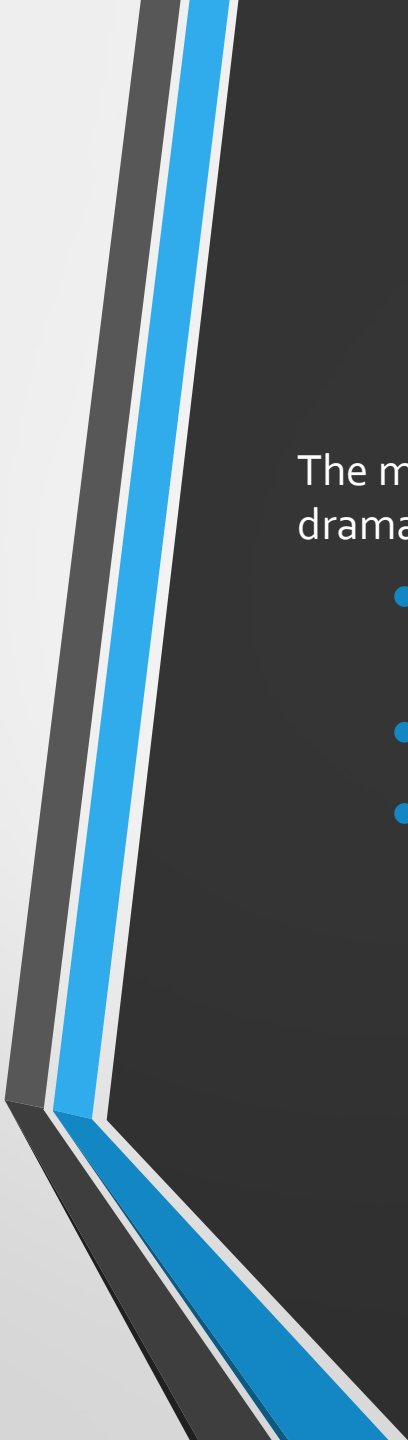
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# The Industrial Development of the United States







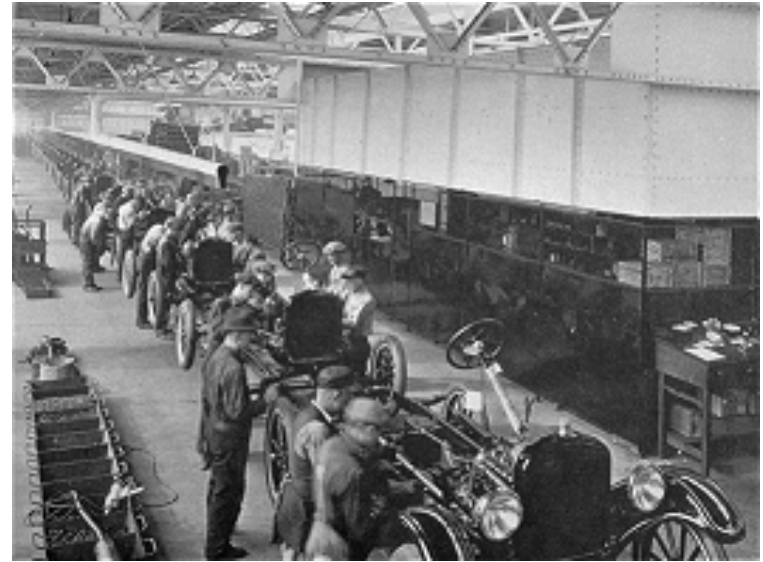
The United States economy grows in size while business gets big.

The macroeconomy of the United States changes dramatically in the period following the Civil War.

- The average standard of living more than doubled between 1870 and 1910.
- Business itself changed during this time.
- Various ways were tried to increase the size of businesses, including corporations and trusts.

# Why?

1. What fueled growth in the size and scope of business?  
The labor force?
2. What happened to the variety and types of goods and services that were now available to the masses as lower per-unit costs and prices?
3. What happened to small businesses both positively and negatively?





Profits

Losses

What guides businesses'  
decisions?

Poll #2:  
Why do  
businesses, firms,  
and corporations  
pursue methods  
to reduce per-unit  
costs? (Check all  
that apply.)



# Who determines profits and losses?

- Consumption is the sole end and purpose of all production; and the interest of the producer ought to be attended to only so far as it may be necessary for promoting that of the consumer.
- Adam Smith, *The Wealth of Nations* (1776), <http://www.econlib.org/library/Smith/smWN18.html>



# Entrepreneurial Talent

- Mass production
- Increasing productivity by organizing how resources are used
- Discovering new resources
- Establishing new markets

# Mass Production

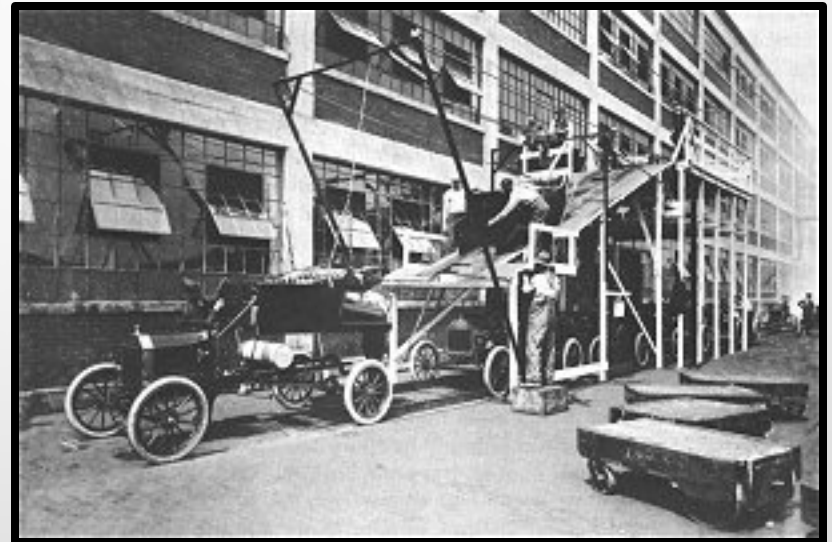
- Larger number of units produced
- Lower cost per unit
- Capital accumulates at an accelerated rate (plants and machines)
- Assembly line and coordinated work force emerges in many sectors of the economy
- Division of labor

# Henry Ford and the assembly line

- The specialization of the assembly line lowered the per-unit cost of producing a car, lower prices opened the automobile purchase to the masses
- Correct, Ford no longer had to use craftsmen and could instead hire low-skill workers and teach them a few simple steps.
- However, the monotonous work led to high employee turnover.
- Ford responded by voluntarily doubling his minimum wage in order to keep business flourishing.

# Economies of Scale

- In manufacturing or any industry, the ability to reduce the average cost for each unit of production can be achieved by spreading costs out over many units and over a long period of time.



# Drilling down to understand the advantages of mass production

- Total costs of production
  - Fixed costs
  - Variable costs
- Cost per unit produced



# Fixed Costs, Variable Costs, and the Relationship of each to Cost per Unit

## Fixed costs

- Costs that do not change when the number of units produced increases or decreases.
- For most business firms, fixed costs include the following: capital, utilities, and property taxes

## Variable costs

- Costs that vary when the number of units in production increases or decreases.
- For many business firms, variable costs include the following: labor and raw materials

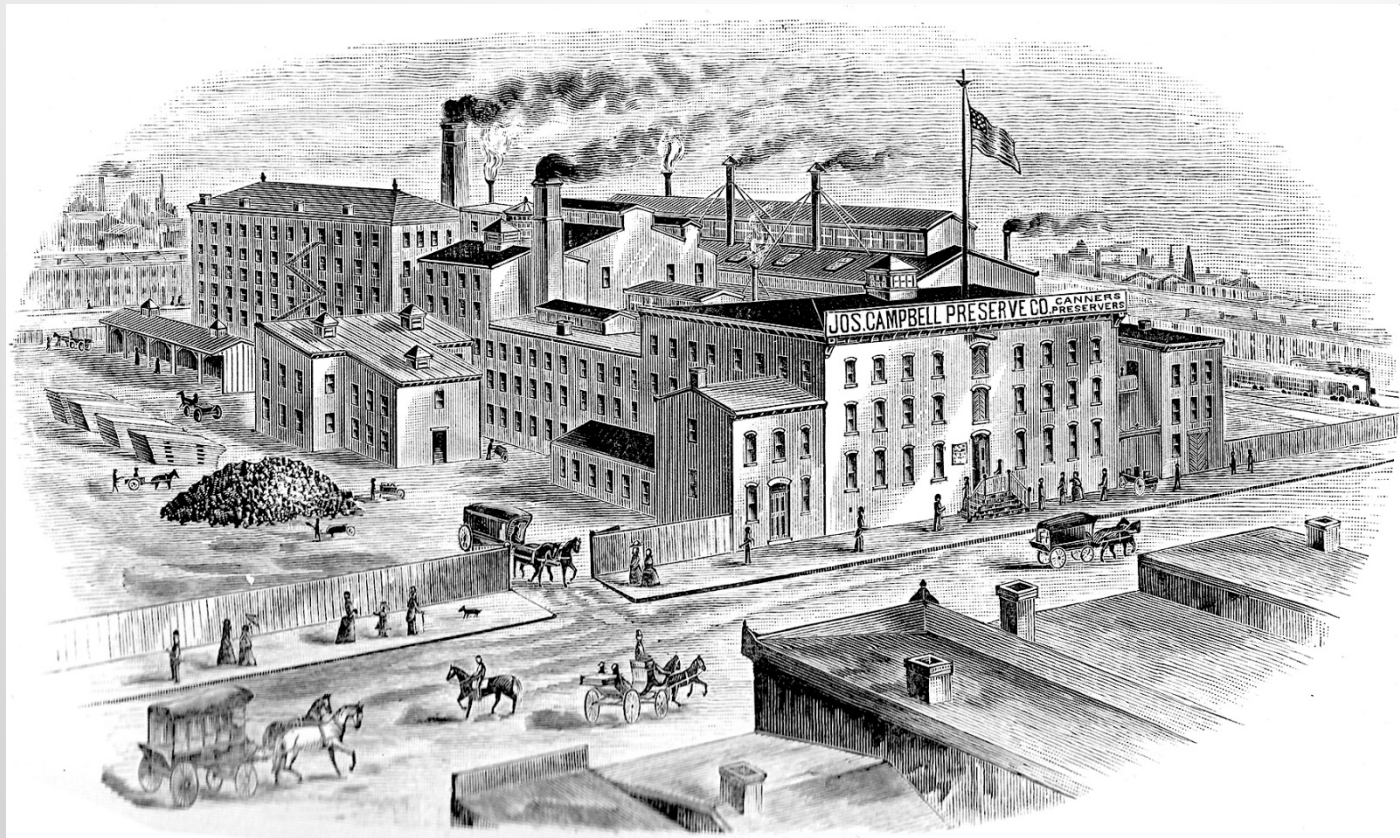
## Total cost

= fixed costs + total variable costs

## Cost per unit

= Total cost divided by the number of units produced

# A Tomato Factory: Campbell Soup



# Calculating the costs for our local tomato soup producer

	Tomato Soup Business	
Weekly production level	100 cans of tomato soup	Assume: Quantity (Q) is 100 cans.
Total fixed cost (TFC)	\$10,000	Assume: \$10,000 a week is the fixed cost of production for the tomato factory
Total variable cost (TVC)	\$ 25 (+0.25*100 cans)	Assume the wage rate is \$0.25 per can. This is the variable cost per can of soup produced.
Total cost (TC)	\$10,025	TC = TFC + TVC
Cost per unit	\$100.25	Cost per unit = TC/Q = \$10,025/10,000
How likely will this business penetrate this market when households buy if marginal value is greater than the per-unit price?	Analysis: Very unlikely, only a few number of consumers across households will purchase.	
	Business advice: Find a way to lower price per unit in order to reach more consumers.	

1. What price to charge to earn a profit per can?
2. Will consumers value one can of soup more than \$100.20?
3. How can costs per unit be lowered?



# Tomato Soup Business on Steroids!

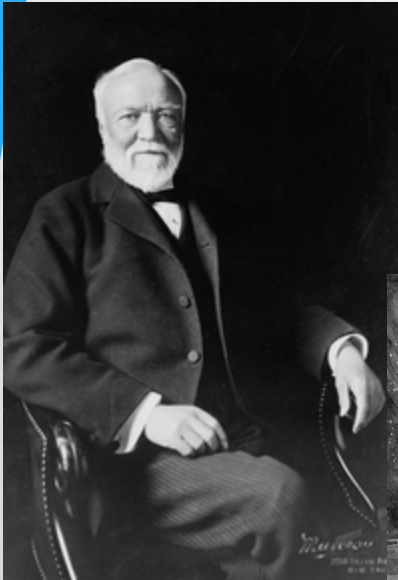
	Tomato Soup Business on Steroids!	
Weekly production level	30,000 cans of tomato soup	Assume: Increase production to producing 30,000 cans of tomato soup. Up from 100 cans.
Total fixed cost (TFC)	\$10,000	Total fixed cost is fixed. That is, the lease must be paid. The machines must be funded. This producer must pay out \$10,000 each period whether output is 0, 100, or 30,000 cans.
Total variable cost (TVC)	\$ 7,500 (+0.25*30,000 cans)	Assume the wage rate is \$0.25 per can. This is the variable cost per can of soup produced.
Total cost (TC)	\$17,500	TC = TFC + TVC
Cost per unit	\$0.58 per can	Cost per unit = TC/Q = \$17,500/30,000
How likely will this business penetrate this market when households buy if marginal value is greater than the per-unit price?	Analysis: It is likely that many consumers across households will purchase.	
	Business advice: Go to market with your product. Discover new ways to lower costs per unit to the benefit of households.	

1. What price to charge to earn a profit per can?
2. Will consumers value one can of soup more than \$0.58 per can?
3. Who benefits from this increased production?





# Andrew Carnegie and the American Steel Industry

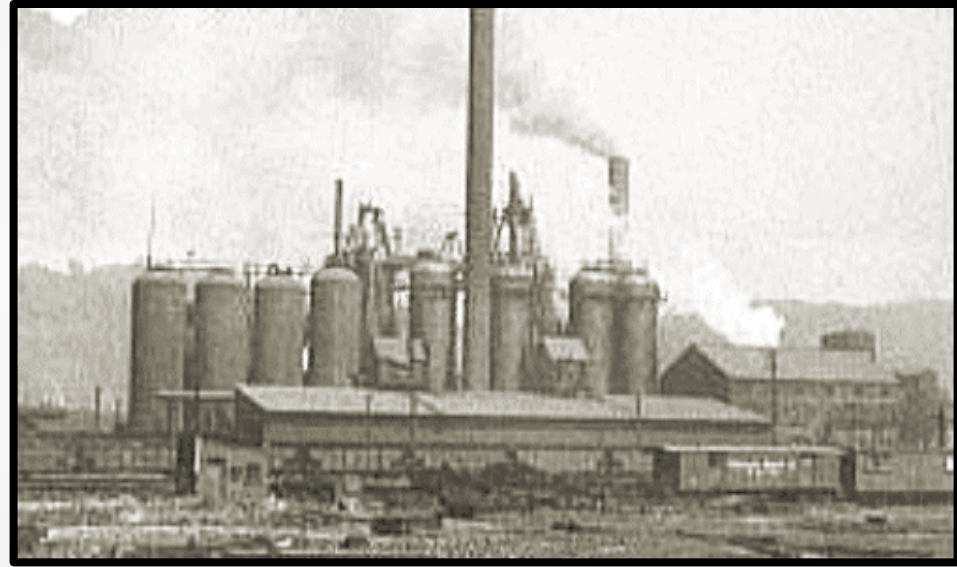


- Andrew Carnegie took advantage of this sort of mass production.
- His motto: "Watch costs, and the profits take care of themselves."
  - Large number of units produced
  - Low cost per unit
  - Large amount of capital
  - Coordinated work force
  - Division of labor



# Lucy Furnaces

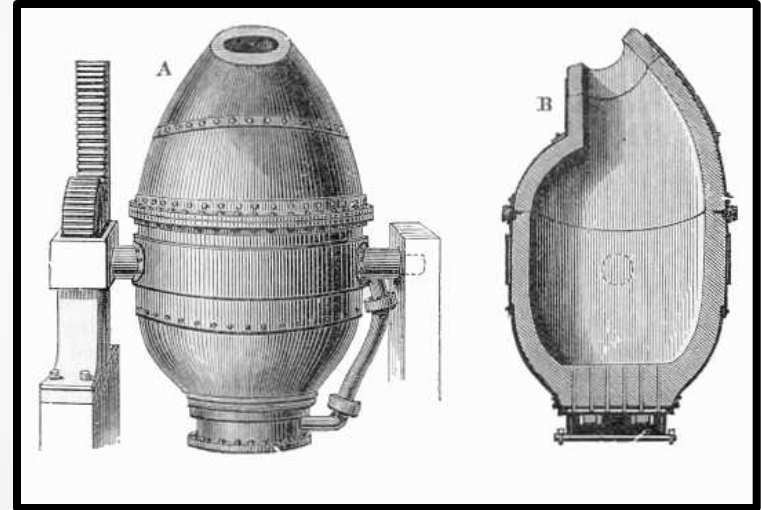
- Carnegie developed the Lucy Furnace which would become the supplier of pig iron for his Union Mills.
- The Lucy furnace set world records for producing 642 tons of pig iron per week.
- The average had been 350 tons per week.
- This provided Carnegie with a springboard to become the nation's leading steel maker.



- Lucy Furnaces
- Pittsburgh, PA, 1872

# Andrew Carnegie and the American Steel Industry

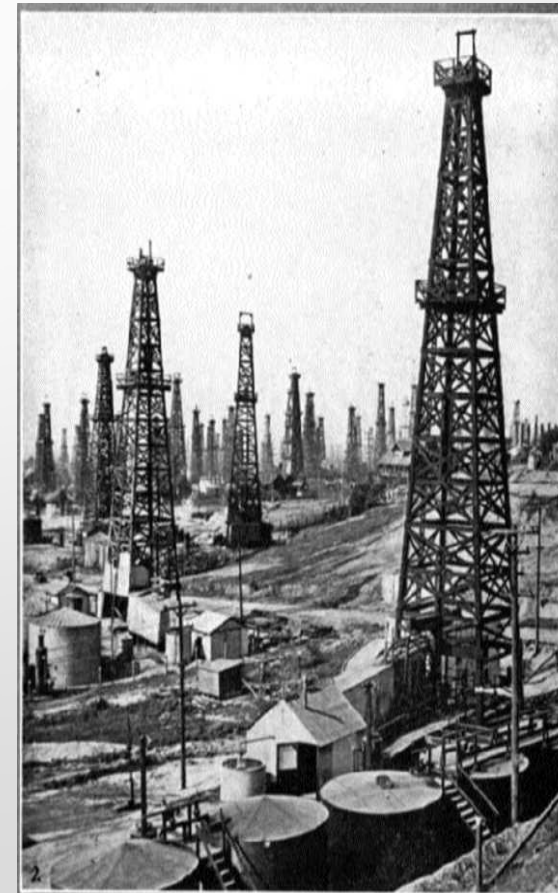
- Carnegie eagerly embraced new technologies.
- His mills surged ahead of Great Britain in steel production.
- When his mills became obsolete, he engaged in “creative destruction.”
- He leveled them to build new state-of-the art mills.
- This drove his competitors crazy.



- The Bessemer furnace burned away the high carbon content of pig iron.

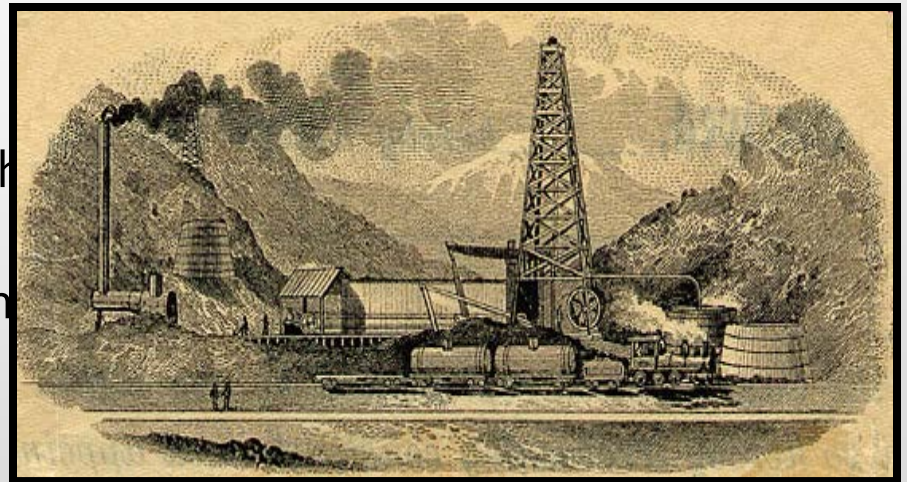
# John D. Rockefeller and the Oil Industry

- When oil first oozed out of the ground in western Pennsylvania, it was regarded as a nuisance.
- But by the 1880s, kerosene was used for lighting.
- It replaced whale and coal oil as consumers' indoor lighting fuel of choice.
- Rockefeller, his competitors, and consumers helped save the whales from extinction!



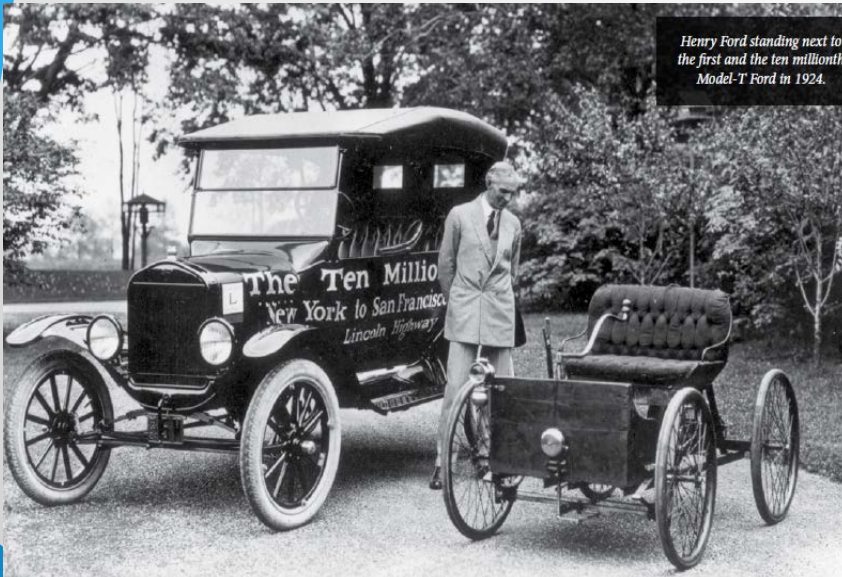
# John D. Rockefeller and the Oil Industry

- John D. Rockefeller consolidated the oil industry.
- He substituted tanker cars for barrels and later added pipelines.
- He cut transportation costs with “**sweetheart deals**” with railroads.
- He made Standard Oil into the dominant oil producer in the world.





# Henry Ford and the Automobile Industry



- He combined using interchangeable parts and mass production to develop an assembly line for making cars.
- This allowed more cars to be produced in less time and at lower costs.
- Ford's "break-out" year was 1908–1909 with the launch of the Model T.
- Detroit became the "Motor City" because of Henry Ford.



# The Production of Ford's Model T

TABLE 1 Production of Ford's Model T		
YEARS	Model T Fords Produced	Average Price
1908–1909	14,161	\$837.50
1910	20,173	\$925.00
1911	53,998	\$730.00
1912	94,662	\$640.00
1913	224,783	\$562.50
1914	247,715	\$465.00
1915	372,249	\$415.00
1916	586,202	\$352.50
1917	834,662	\$352.50
1918	382,246	\$512.50
1919	828,544	\$512.50
1920	1,038,447	\$485.00
1921	869,651	\$340.00
1922	1,384,999	\$333.50

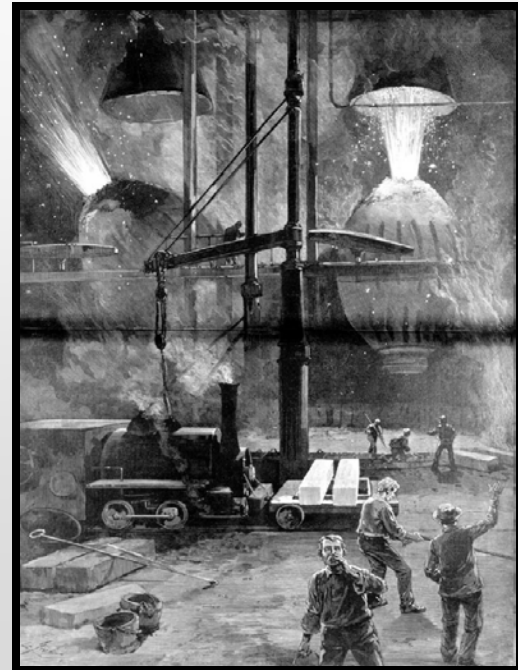


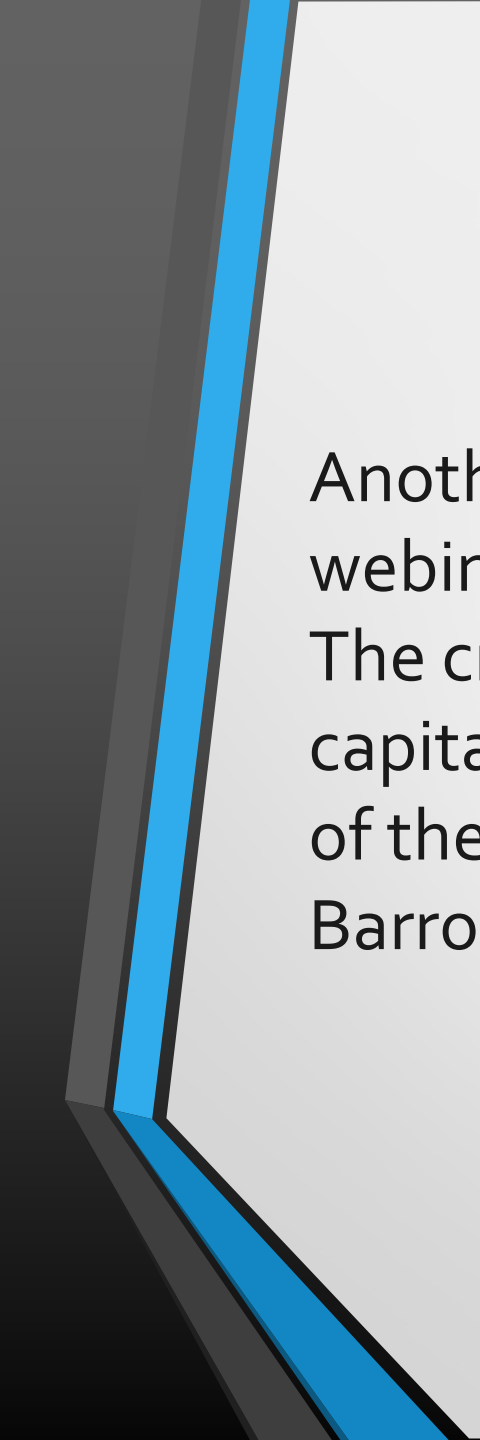
Source: David L. Lewis, *The Public image of Henry Ford: An American Folk Hero and His Company* (Detroit: Wayne State University Press, 1976), p. 44.

# Poll 3: Which of the following entrepreneurs took steps that made themselves, their employees, and consumers better off?

- Andrew Carnegie (steel and shipping)
- J.P. Morgan (financier and banking)
- Henry Ford (auto)
- John D. Rockefeller (oil)
- Bill Gates (Microsoft)

# Were the Robber Barons Robbers or Barons? The Jury Is Out





Another  
webinar:  
The crony  
capitalist side  
of the Robber  
Barrons

Attempts to investigate the  
answer to this question, using  
economic reasoning and  
historical data.



# Stay in touch!

- Onsite workshop “[PayPal: Making the World a Better Place One Transaction at a Time](#),” October 03 from 4:30 to 7:30 pm, New York, NY
- [56th Annual Financial Literacy & Economic Education Conference](#), October 06-07, Brooklyn, NY
- Webinar “[Demand and Supply Interactives: Active learning technology brings demand and supply to life](#),” December 06
- [Tawni.org](#) and Facebook



# Robber Barons: Greedy Capitalists or Entrepreneurs

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