

There are three types of seat in the room:

Blue Labor

Red Labor

Firm

Sit one person to each seat.

If you are comfortable doing a lot of rudimentary math, sit at a Firm seat.

Resist the temptation to open the bag.

Minimum Wage

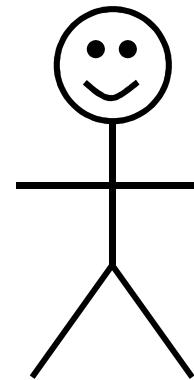
November 11-13, 2011

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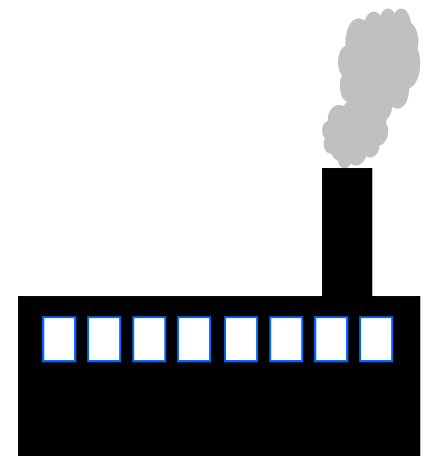
The Players and the Goals

In this experiment, there are WORKERS and FIRMS.

WORKERS sell labor to the FIRMS.



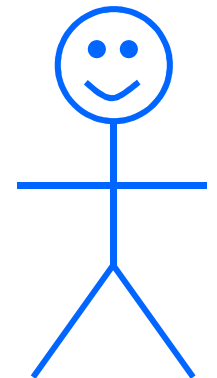
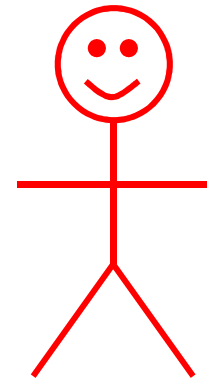
FIRMS make and sell stuff.



The Players and the Goals

Two types of worker

- Red workers
- Blue workers



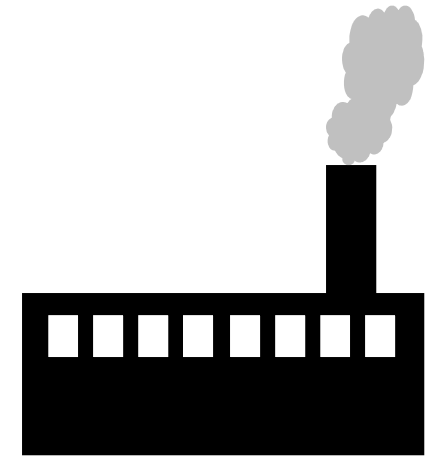
Each worker's goal: Maximize happiness

One thing makes you happy: Money

The Players and the Goals

One type of firm

- Firms hire **Red Labor** and **Blue Labor** to produce their products.
- Firms automatically sell everything they produce for \$2 per unit.



Each firm's goal: Maximize profit

$$\text{Profit} = \text{Ending \$} - \text{Starting \$}$$

The Objects



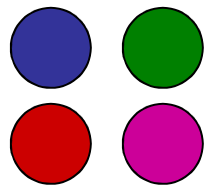
= 1 hour of **Blue labor**



= 1 hour of **Red labor**



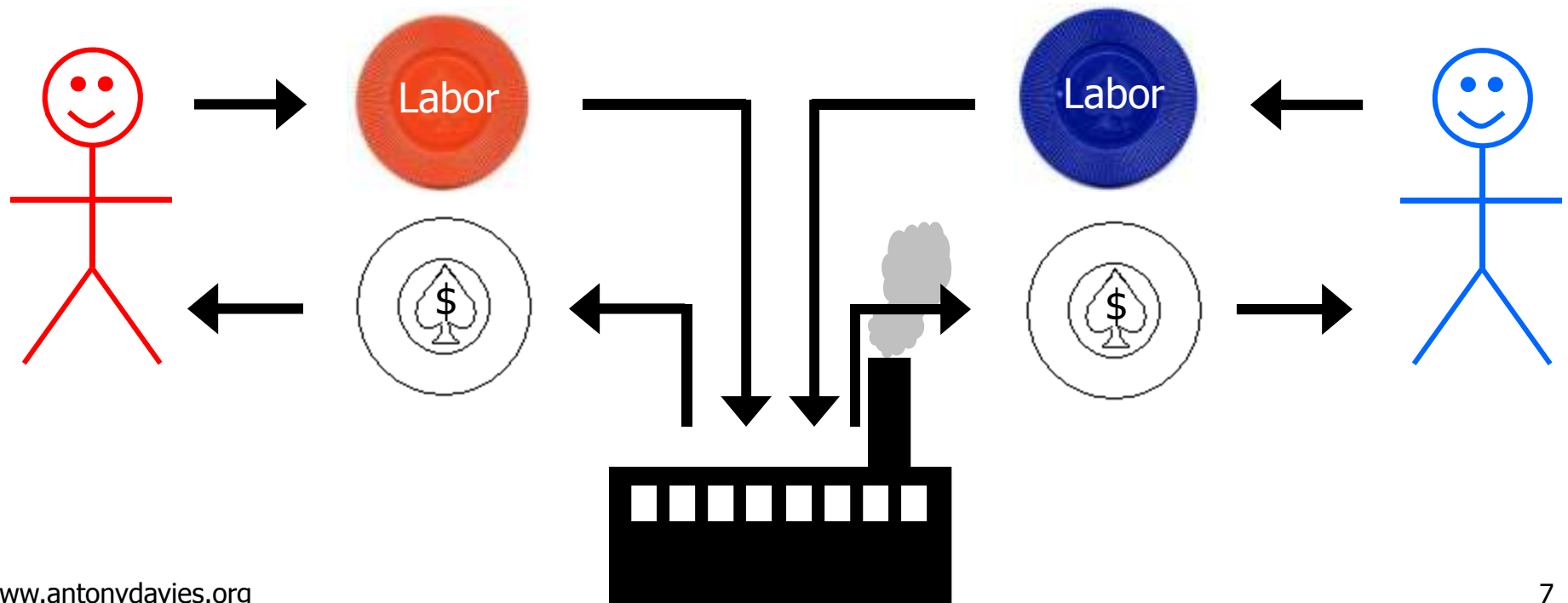
= 1 dollar



= \$5 dollars (each)

Labor Market

Red workers and Blue workers sell as much labor as they can to firms for \$.



Production and Goods Market

Hired labor produces product. Product is automatically sold for \$2 each.

Red labor hired →

	0	1	2	3	4	5	6	7	8	9	10	
Blue labor hired	0	0	35	43	49	53	57	60	63	65	68	70
1	0	39	48	54	59	63	66	70	72	75	77	
2	0	41	51	57	63	67	71	74	77	80	82	
3	0	43	53	60	65	70	74	77	80	83	86	
4	0	45	55	62	68	72	76	80	83	86	89	
5	0	46	56	64	69	74	78	82	85	89	91	
6	0	47	58	65	71	76	80	84	87	91	94	
7	0	48	59	66	72	77	82	86	89	92	95	
8	0	49	60	68	74	79	83	87	91	94	97	
9	0	49	61	69	75	80	85	89	92	96	99	
10	0	50	62	70	76	81	86	90	94	97	100	

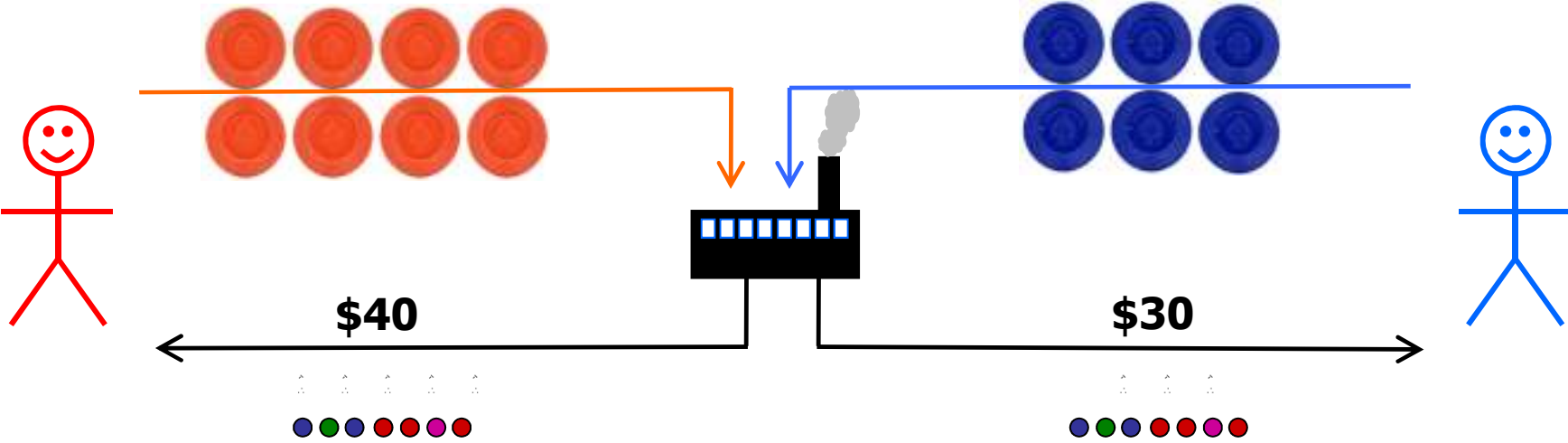
Blue labor hired
↓

} Units of output produced

Example: Labor Market

Blue worker Sells 6  to the Firm for \$5 each.

Red worker Sells 8  to the Firm for \$5 each.



How much product does the Firm produce?

Example: Labor Market

The Firm manufactures 87 units of product.
The product will be automatically sold for \$2 per unit.



	0	1	2	3	4	5	6	7	8	9	10
0	0	35	43	49	53	57	60	63	65	68	70
1	0	39	48	54	59	63	66	70	72	75	77
2	0	41	51	57	63	67	71	74	77	80	82
3	0	43	53	60	65	70	74	77	80	83	86
4	0	45	55	62	68	72	76	80	83	86	89
5	0	46	56	64	69	74	78	82	85	89	91
6	0	47	58	65	71	76	80	84	87	91	94
7	0	48	59	66	72	77	82	86	89	92	95
8	0	49	60	68	74	79	83	87	91	94	97
9	0	49	61	69	75	80	85	89	92	96	99
10	0	50	62	70	76	81	86	90	94	97	100

Example: Labor Market and Goods Market

Blue Worker

Ends the experiment with (6)(\$5) = \$30. Money = **\$30**.

Red Worker

Ends the experiment with (8)(\$5) = \$40. Money = **\$40**.

Firm

- Spent \$70 on labor, and
 - Produced and sold 87 output at a price of \$2 each.
- Firm's profit is $\$174 - \$70 = \mathbf{\$104}$.

Example: Cost/Benefit of Hiring More Labor

Suppose you can hire 1 Red for \$6 or 1 Blue for \$7.

So far, you have hired 1 Red and 3 Blue.

1. How much am I producing right now?

1 Red and 3 Blue → 43 output

2. What happens to my output if I hire 1 more Red worker?

Output increases from 43 to 53 → + 10 output

3. What does that do to my revenue?

(10 output)(\$2) = + \$20 revenue

4. What does it do to my costs?

Cost of 1 Red worker = \$6 → + \$6 cost

5. What does it do to my profit?

+ \$20 revenue & + \$6 cost → + \$14 profit

Example: Cost/Benefit of Hiring More Labor

Suppose you can hire 1 Red for \$6 or 1 Blue for \$7.

So far, you have hired 1 Red and 3 Blue.

6. What happens to my output if I hire 1 more Blue worker?

Output increases from 43 to 45 → + 2 output

7. What does that do to my revenue?

(2 output)(\$2) = + \$4 revenue

8. What does it do to my costs?

Cost of 1 Blue worker = \$7 → + \$7 cost

9. What does it do to my profit?

+ \$4 revenue & + \$7 cost → - \$3 profit

Example: Cost/Benefit of Hiring More Labor

Suppose you can hire 1 Red for \$6 or 1 Blue for \$7.

So far, you have hired 1 Red and 3 Blue.

Conclusion

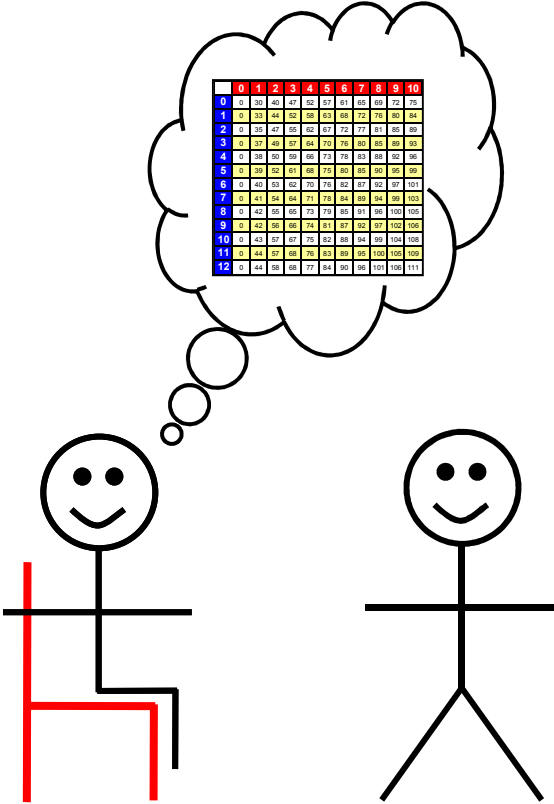
Hiring 1 more red hour increases profit by \$14.

Hiring 1 more blue hour decreases profit by \$3

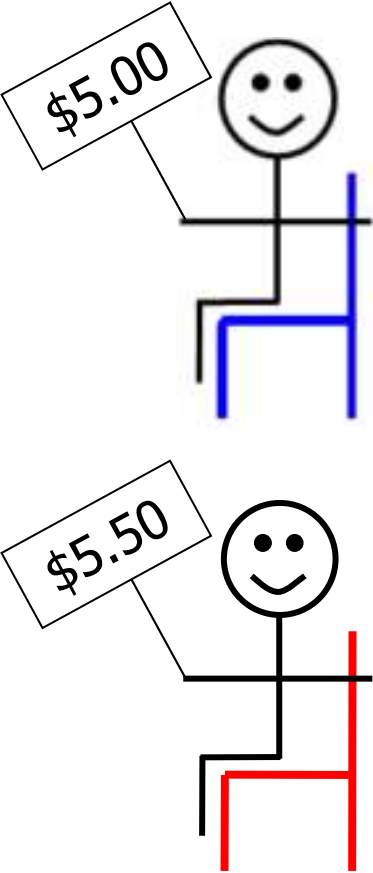
→ Hire 1 more red hour.

The Mechanics

Firms

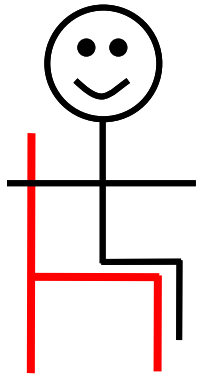


Workers

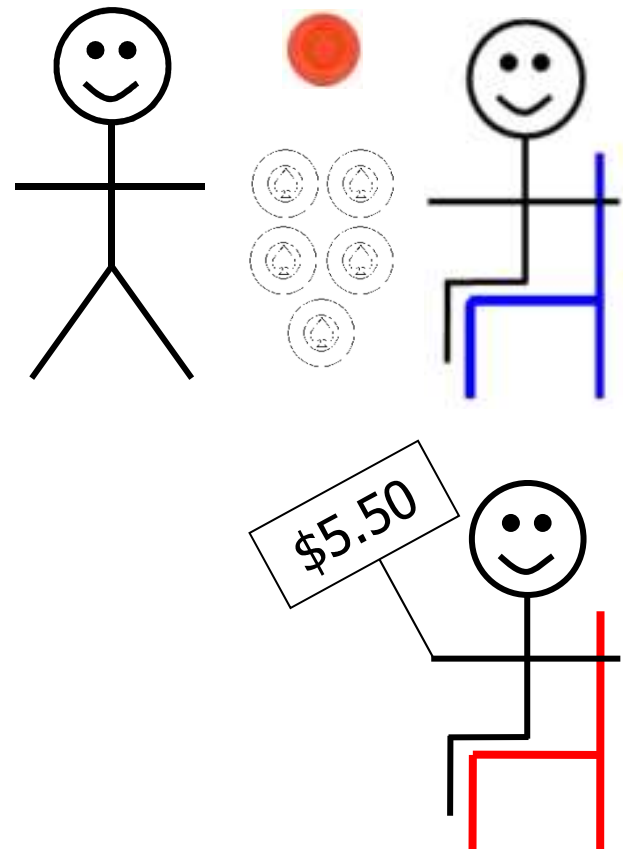


The Mechanics

Firms

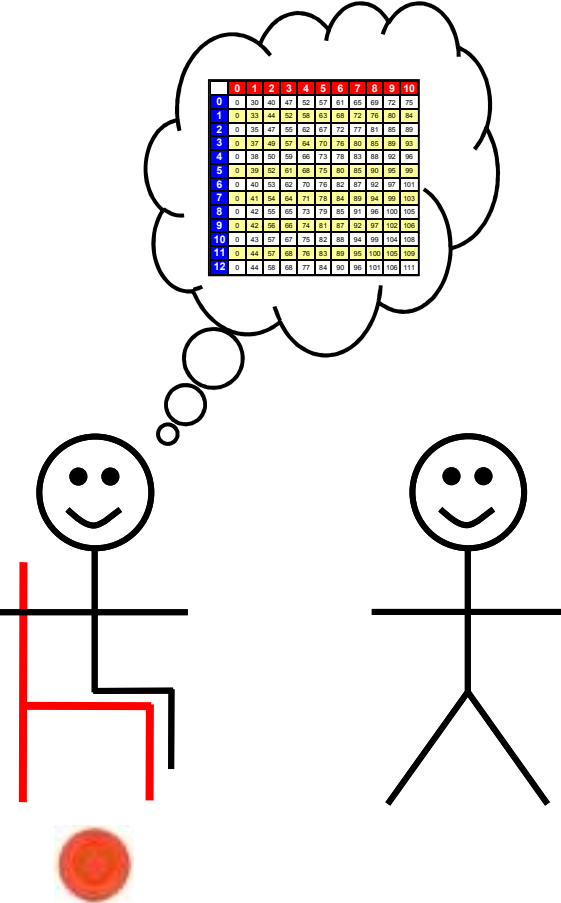


Workers

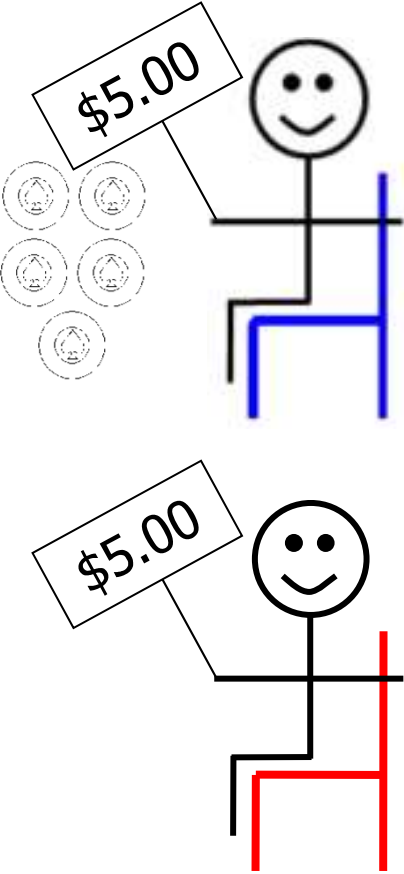


The Mechanics

Firms



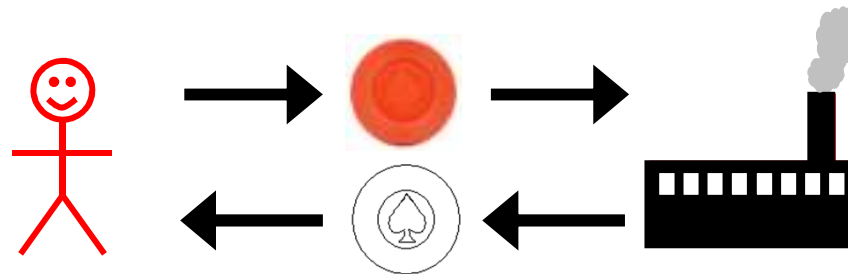
Workers



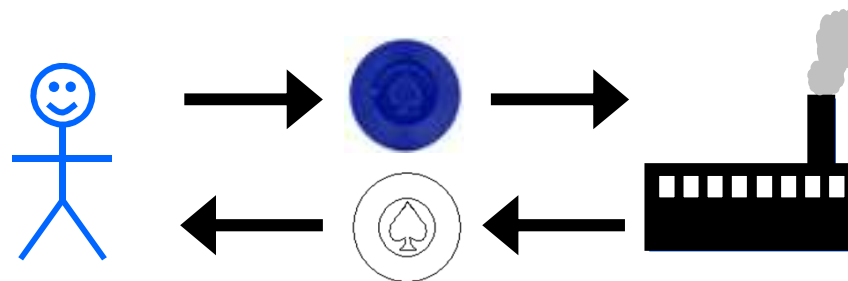
Ready to begin...

Labor Market

Red workers sell your labor to firms for \$.



Blue workers sell your labor to firms for \$.



Firms: Every unit of output you produce is automatically sold for \$2.

Report

1. **Red workers** report unsold labor and ending money.
2. **Blue workers** report unsold labor and ending money.
3. Firms report labor hired and ending money.

New Rules

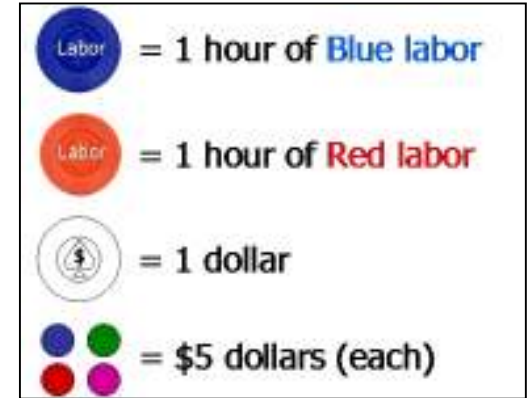
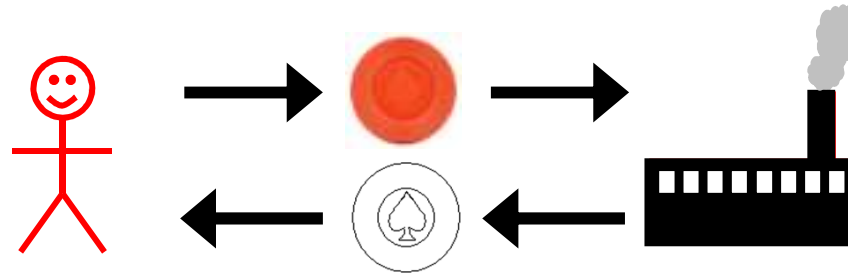
The wage rate that some workers receive is too low. In the interest of assuring a minimum standard of living, we now impose a minimum wage.

LAW: Henceforth, no firm may pay less than \$5 per hour.

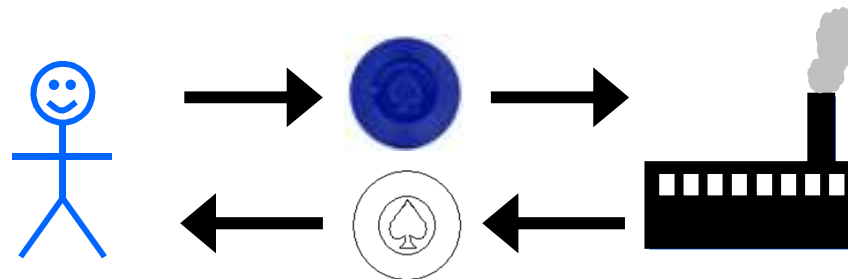
Ready to begin...

Labor Market

Red workers sell your labor to firms for \$.



Blue workers sell your labor to firms for \$.



FIRMS MUST
PAY NO LESS
THAN \$5 PER
HOUR.

Firms: Every unit of output you produce is automatically sold for \$2.

Report

1. **Red workers** report unsold labor and ending money.
2. **Blue workers** report unsold labor and ending money.
3. Firms report labor hired and ending money.

Results...

What effect do you believe the minimum wage has on average wage rates?

Wage Rate



Blue Labor Red Labor

What effect do you believe the minimum wage has on workers' incomes?

Total Income



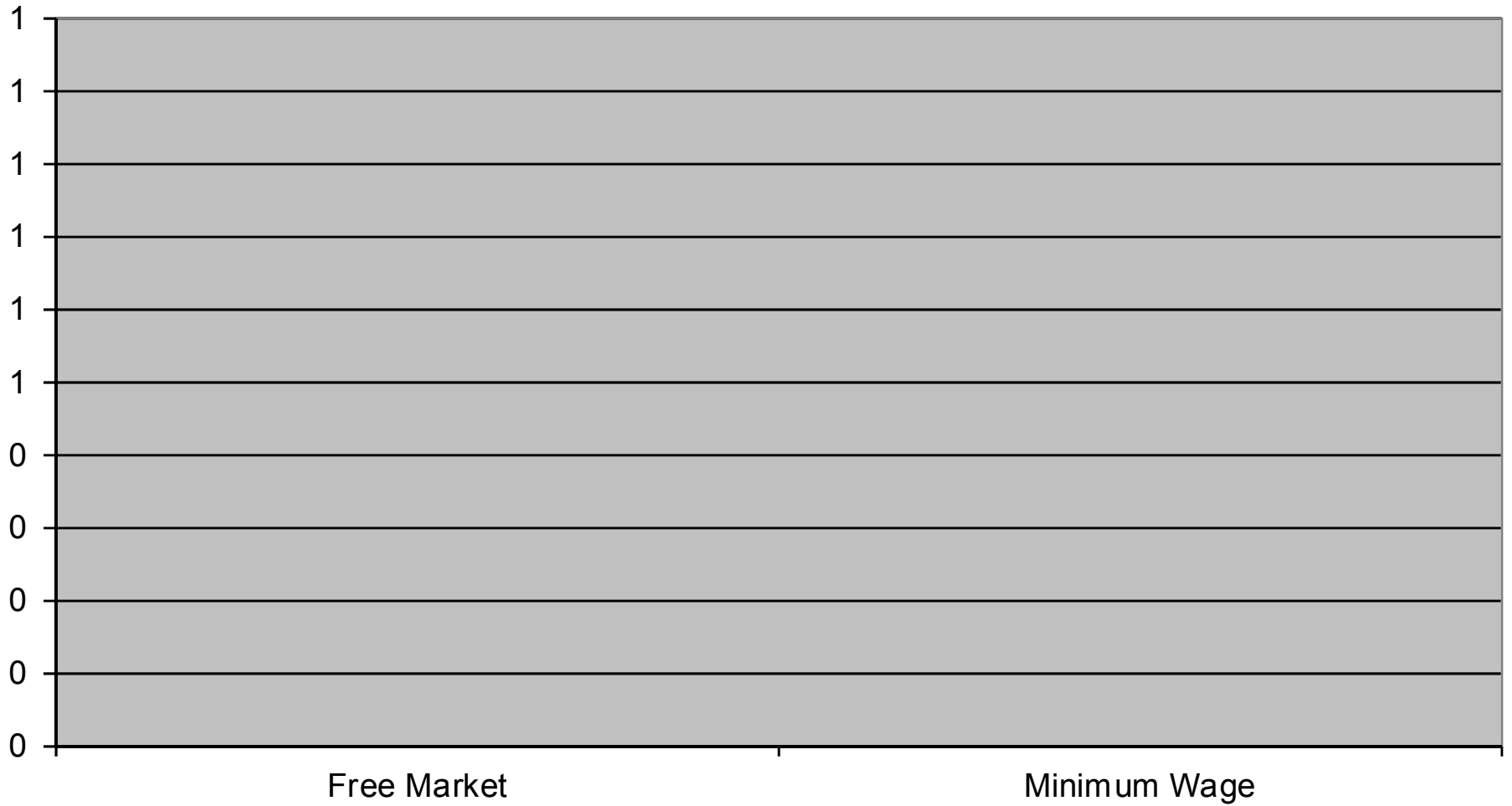
What effect do you believe the minimum wage has on unemployment rates?

Unemployment Rate



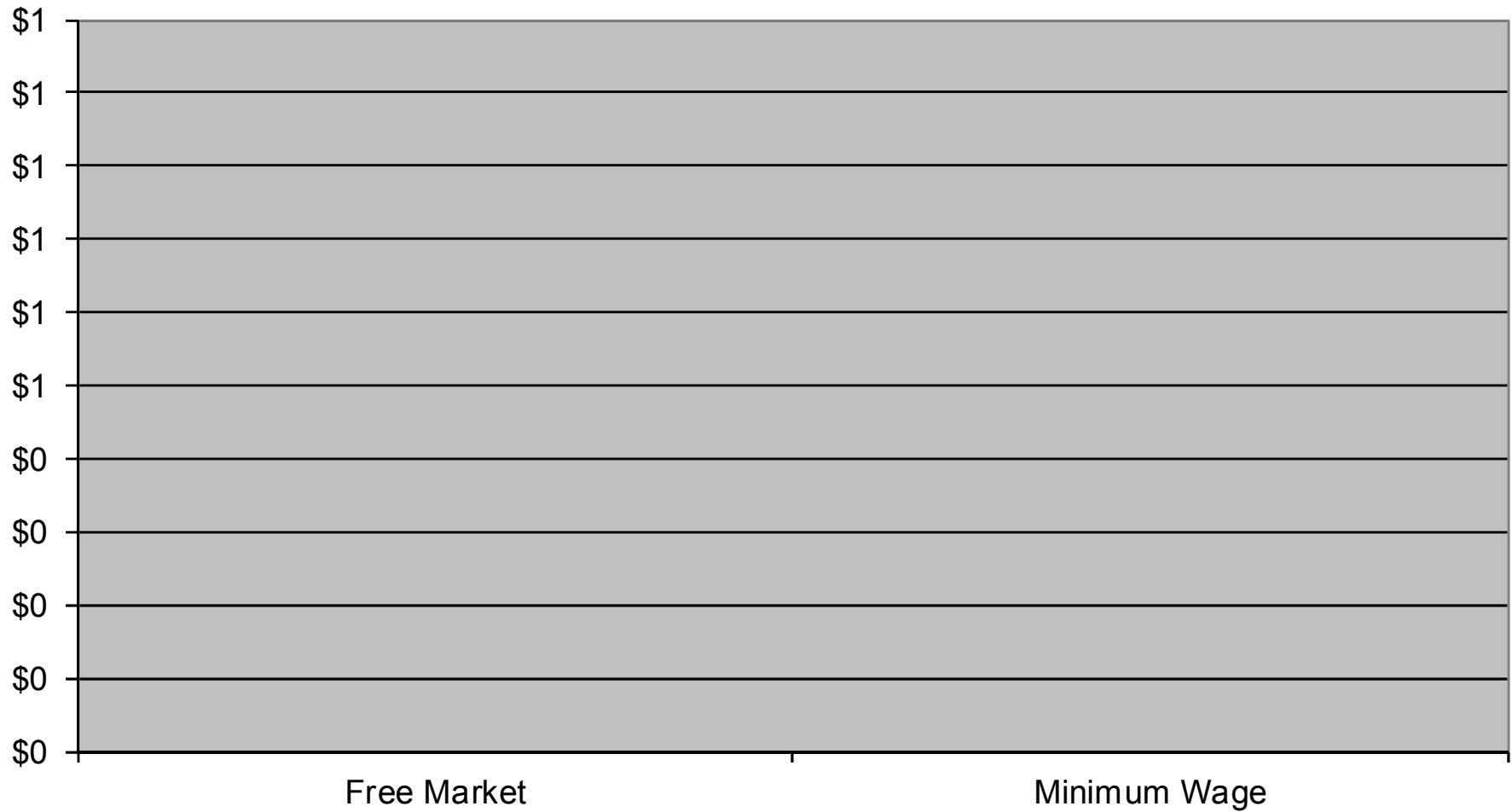
What effect do you believe the minimum wage has on production (GDP)?

Units of Output Produced (all firms combined)



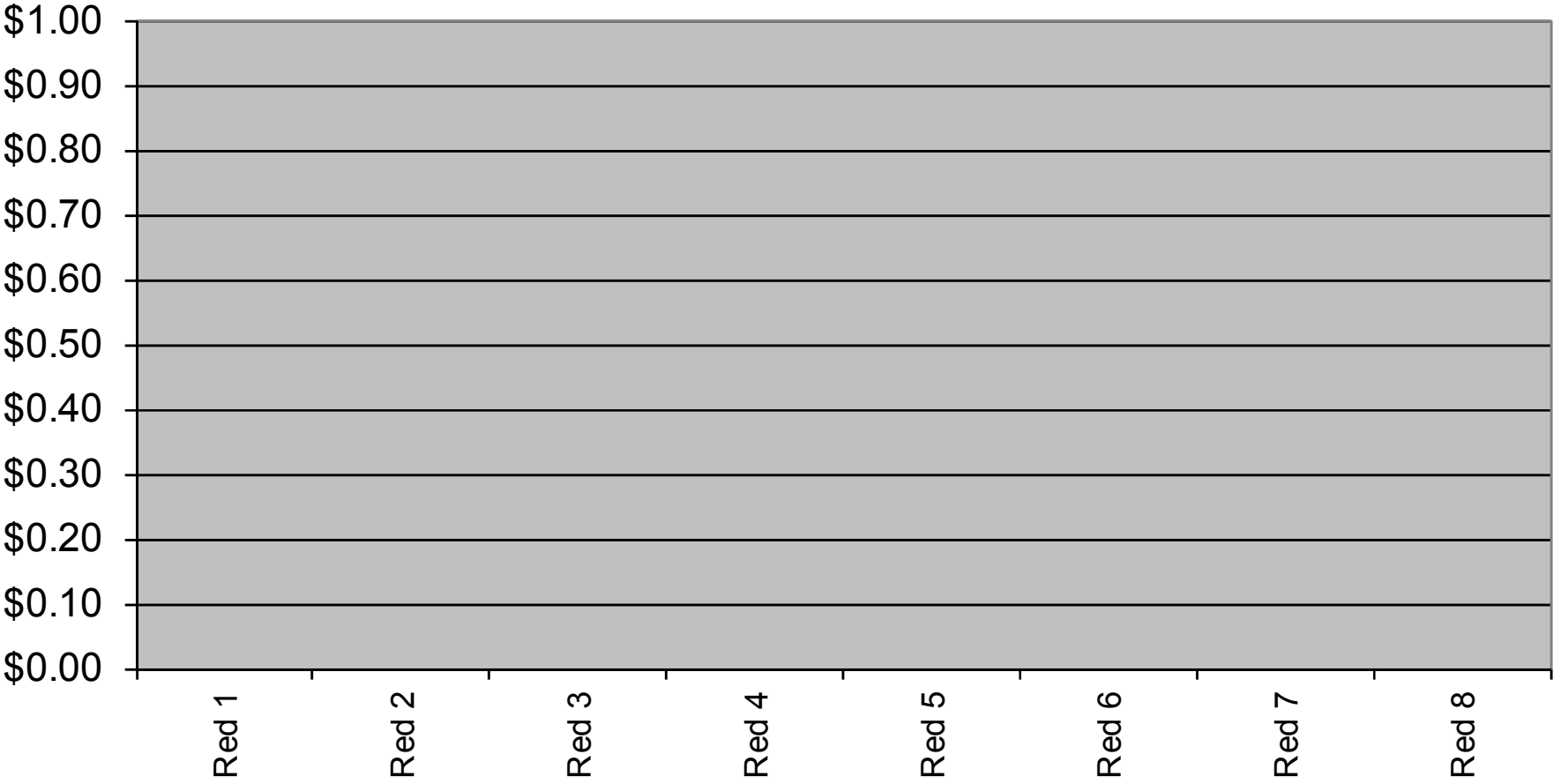
What effect do you believe the minimum wage has on firms' profits?

Total Profits (all firms combined)

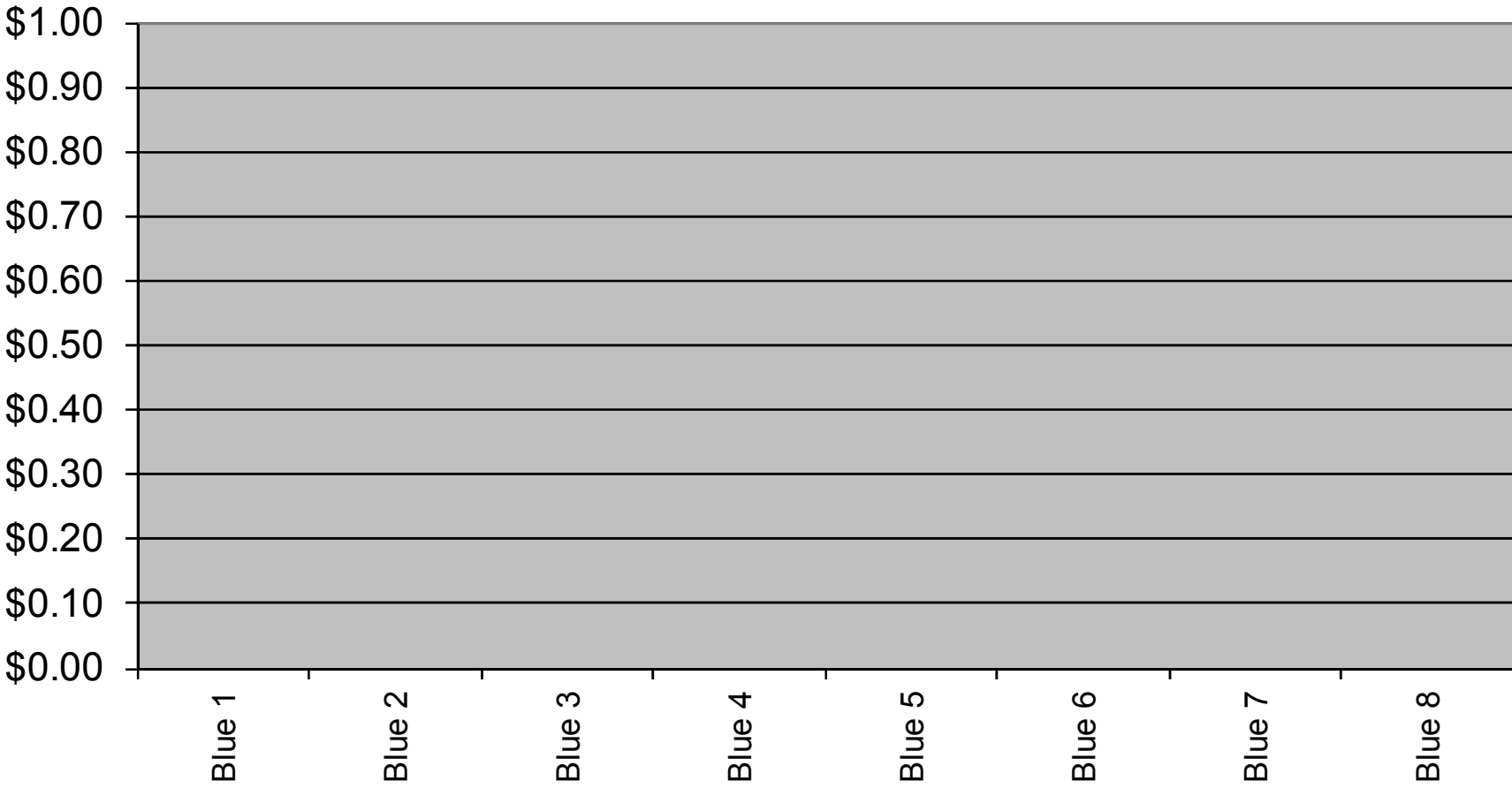


Did the minimum wage make anyone better off?

Red Worker Wage Income



Blue Worker Wage Income



First Principles

First Principles are truths that are not derived from other truths.

- assumed to be true, or
- so self-evident as to be beyond dispute.

When thinking about economic and policy issues, we should begin at first principles, not outcomes.

First Principles

Debate:

We must help the poor by imposing a minimum wage.

We must help employers by removing the minimum wage.



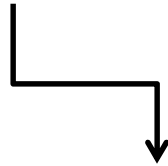
Debate:

The rights to life and property are natural rights.

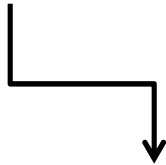
The rights to life and property are not natural rights.

First Principles

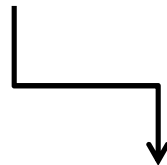
The rights to life and property are natural rights.



Others have the duty not to take your life. Others have the duty not to prevent you from using your property.



Others may not prevent you from selling your labor.
Others may not prevent you from paying for labor.



We should not have a minimum wage.

Unintended Consequences

If it is true that

the rights to life and property are natural rights,

then government policies that are inconsistent with this truth will yield unintended consequences.

→ Bad things will happen that we didn't intend to happen.

Unintended Consequences of Price Controls

How do you cure a fever?

Prices are not levers that set value, they are metrics that respond to value.

Price controls fail on two counts:

- legislating price does not legislate value,
- legislating price prevents price from signaling value.

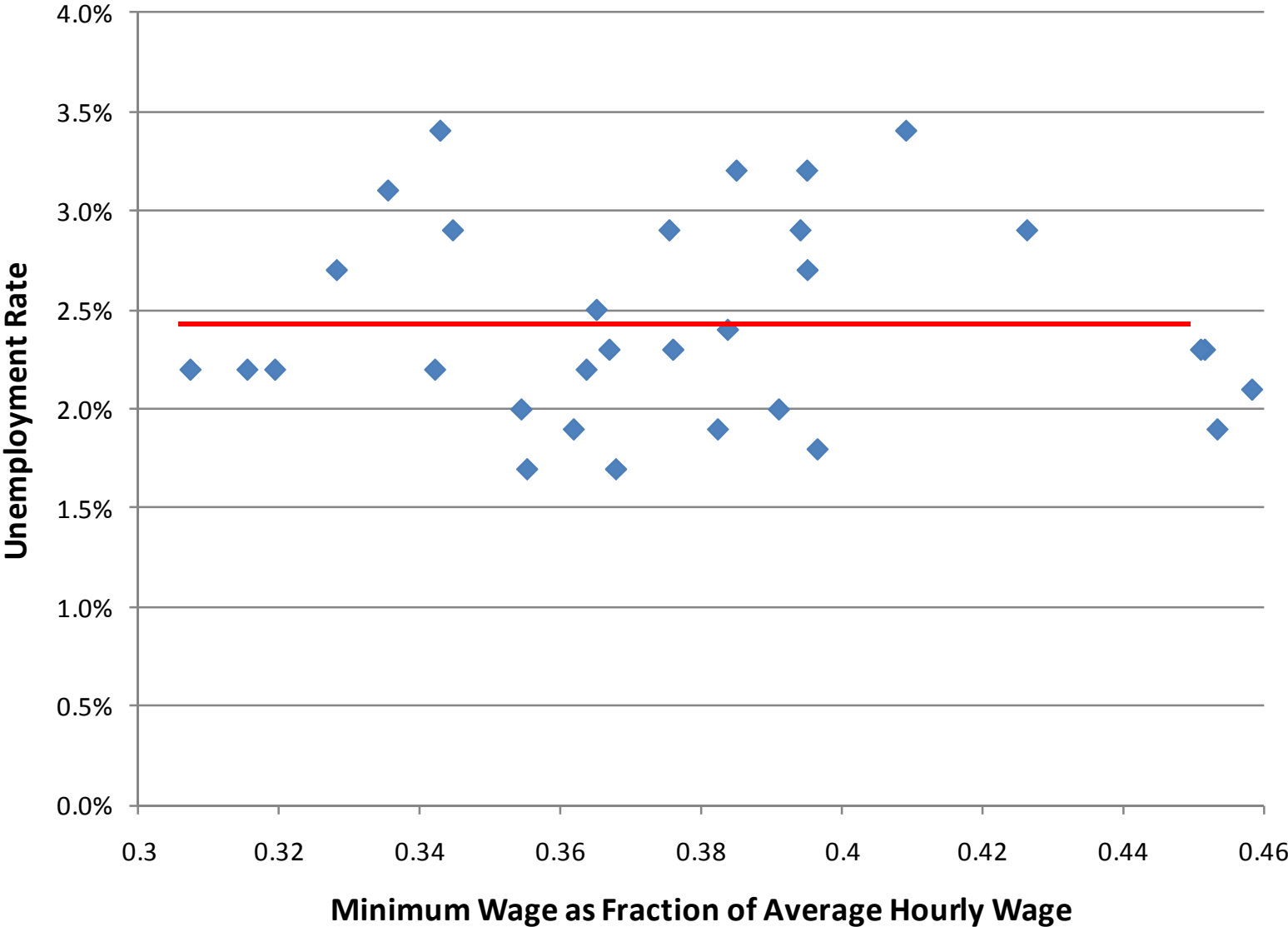
How to Pay for a Minimum Wage

Three ways to pay for an increased minimum wage.

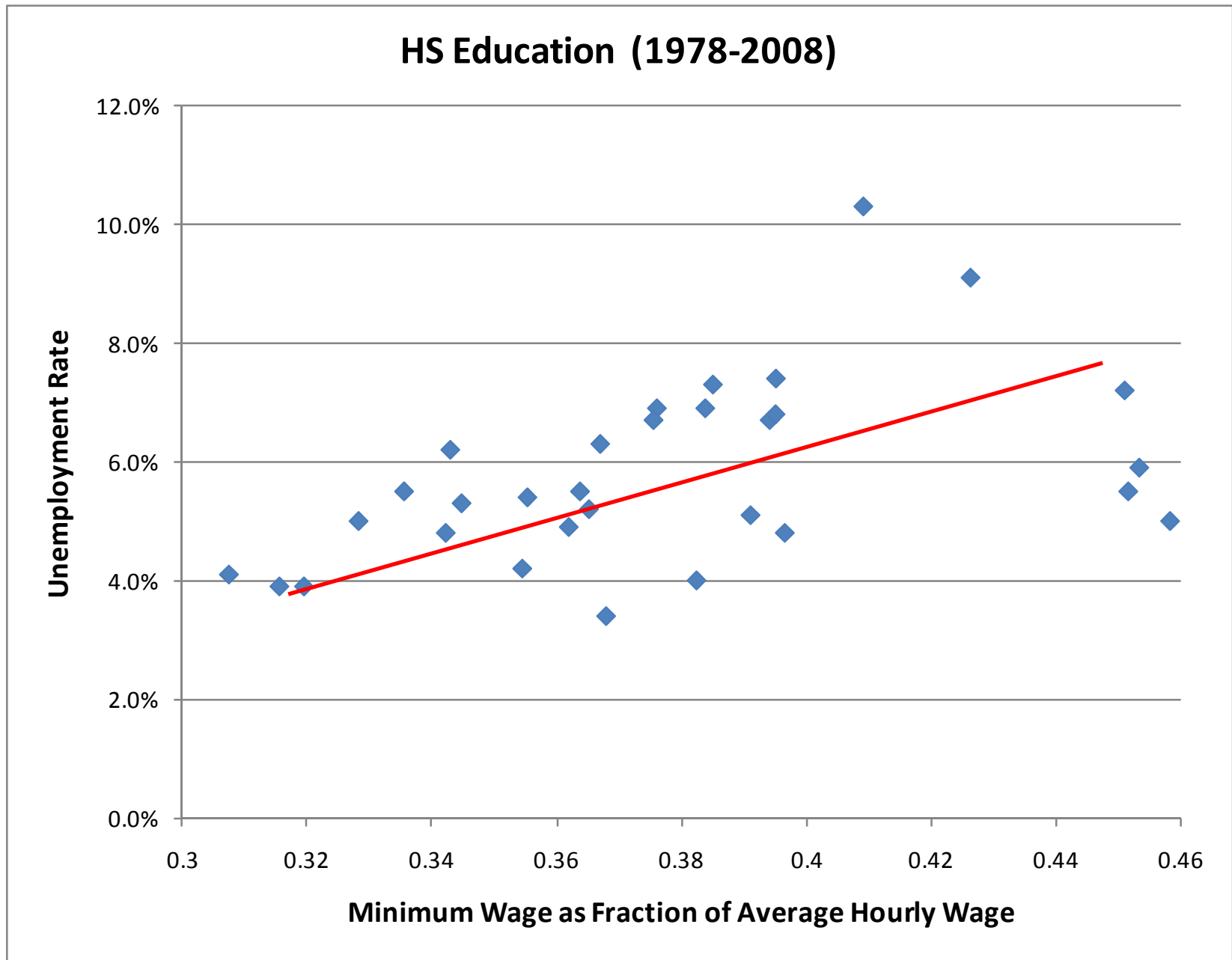
1. Raise prices.
2. Reduce profits.
3. Layoff workers.

Is this true?

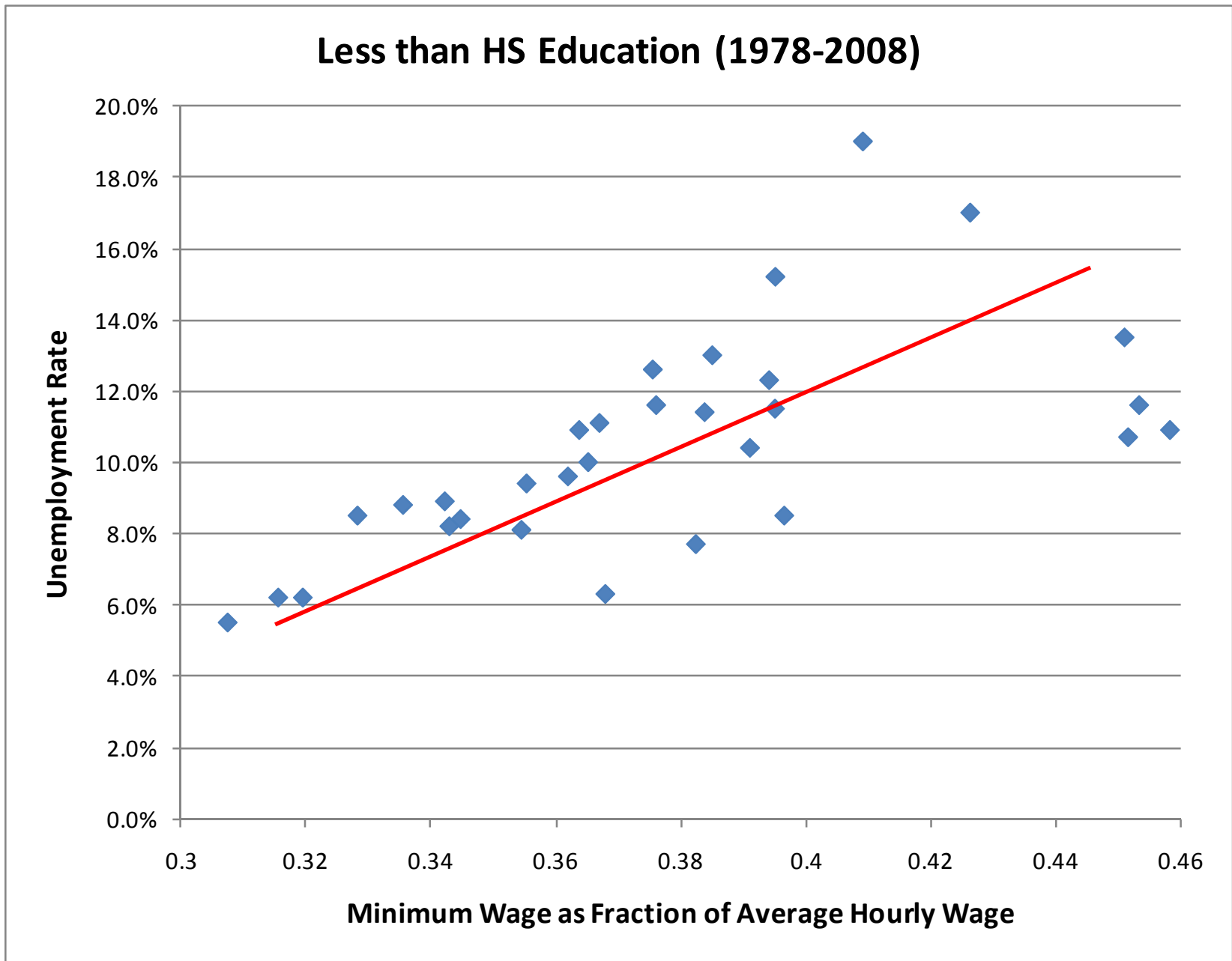
College Education (1978-2008)



Data sources: Statistical Abstract of the United States, and Bureau of Labor Statistics



Data sources: Statistical Abstract of the United States, and Bureau of Labor Statistics



Data sources: Statistical Abstract of the United States, and Bureau of Labor Statistics

But, we have to do something!

Look at how many people earn the minimum!

What percentage of US workers earn the minimum wage?

a. 50%

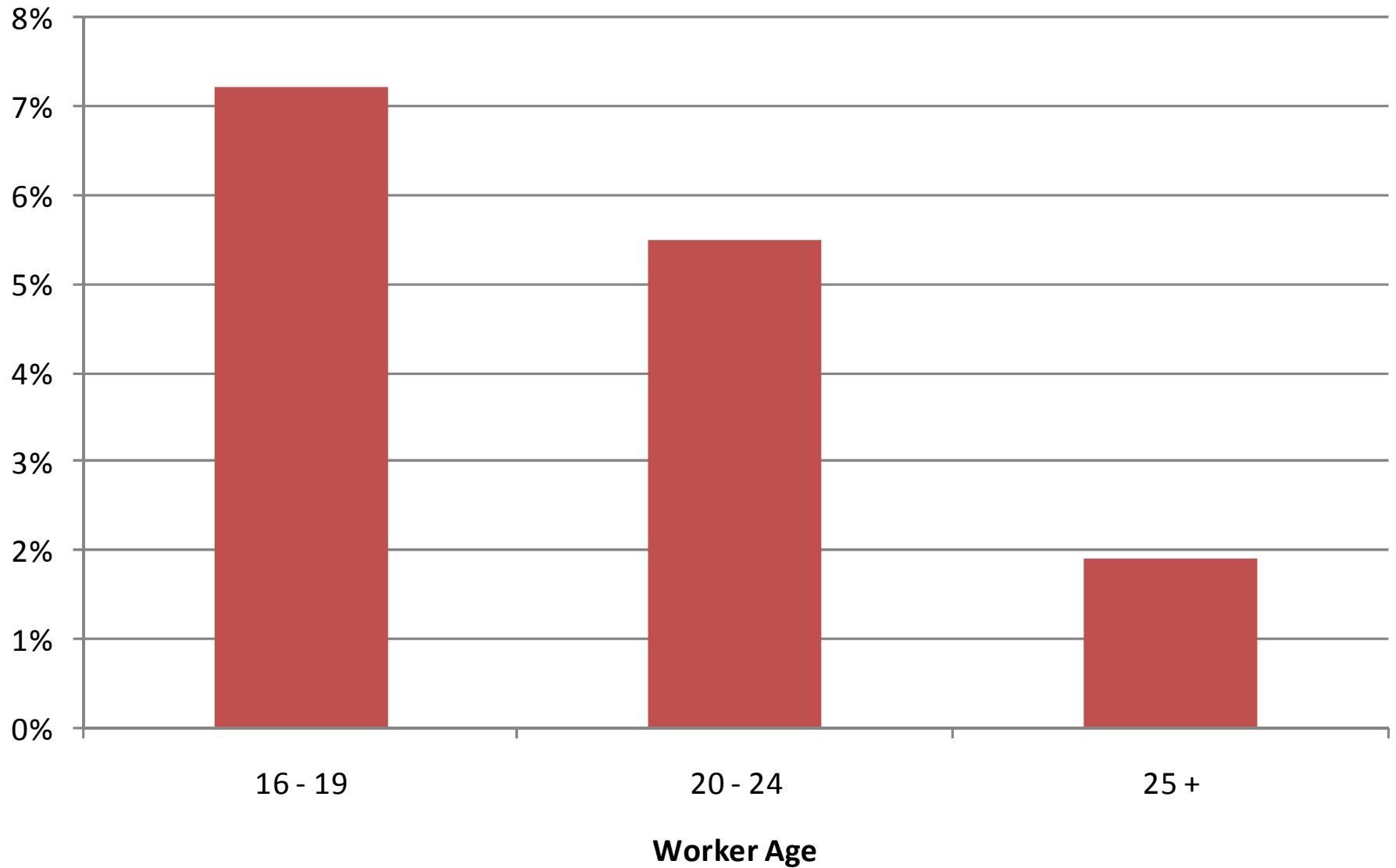
b. 25%

c. 10%

d. 5%

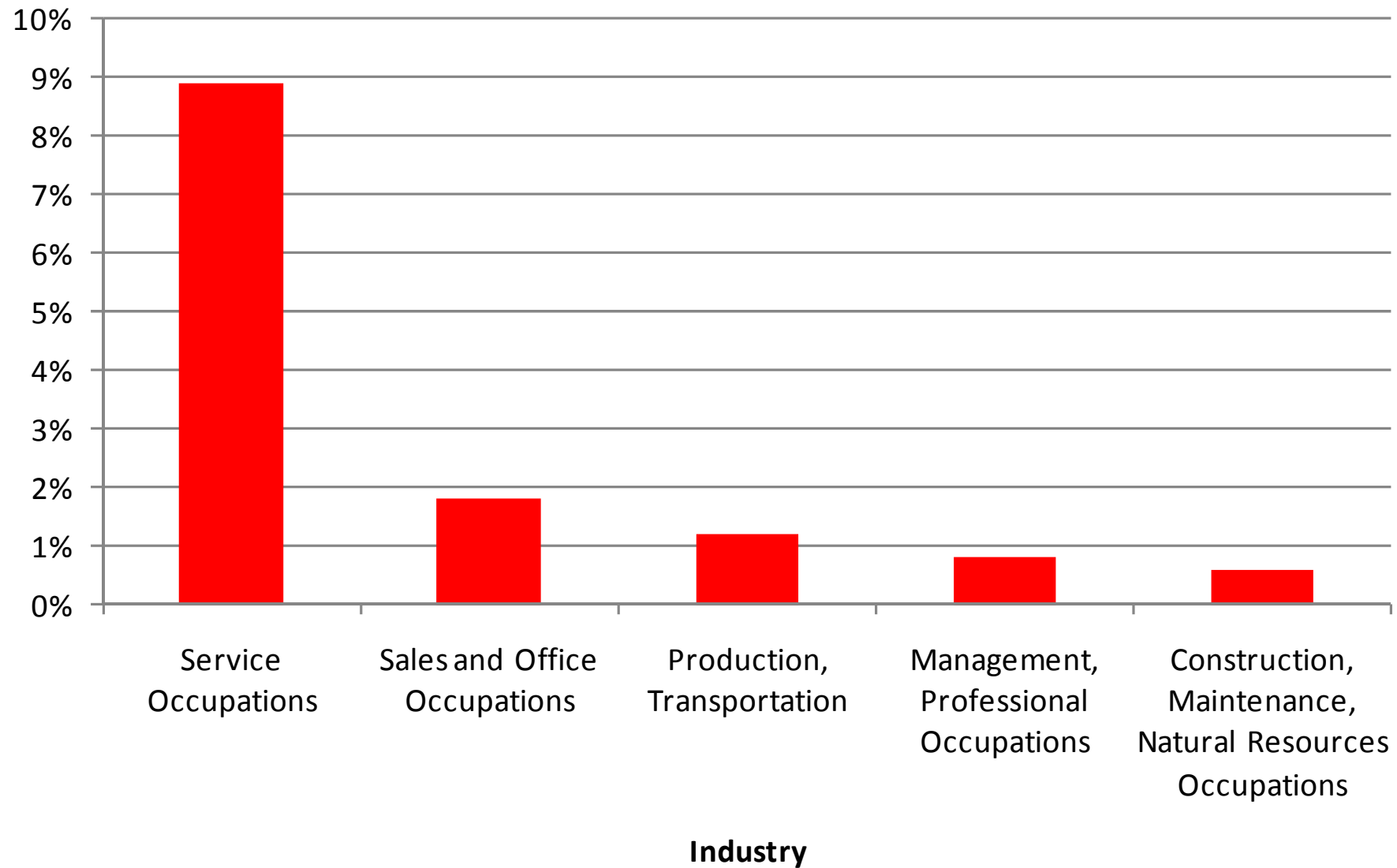
e. 2%

% of Hourly Workers Earning Minimum Wage or Less



Data source: Bureau of Labor Statistics, 2008

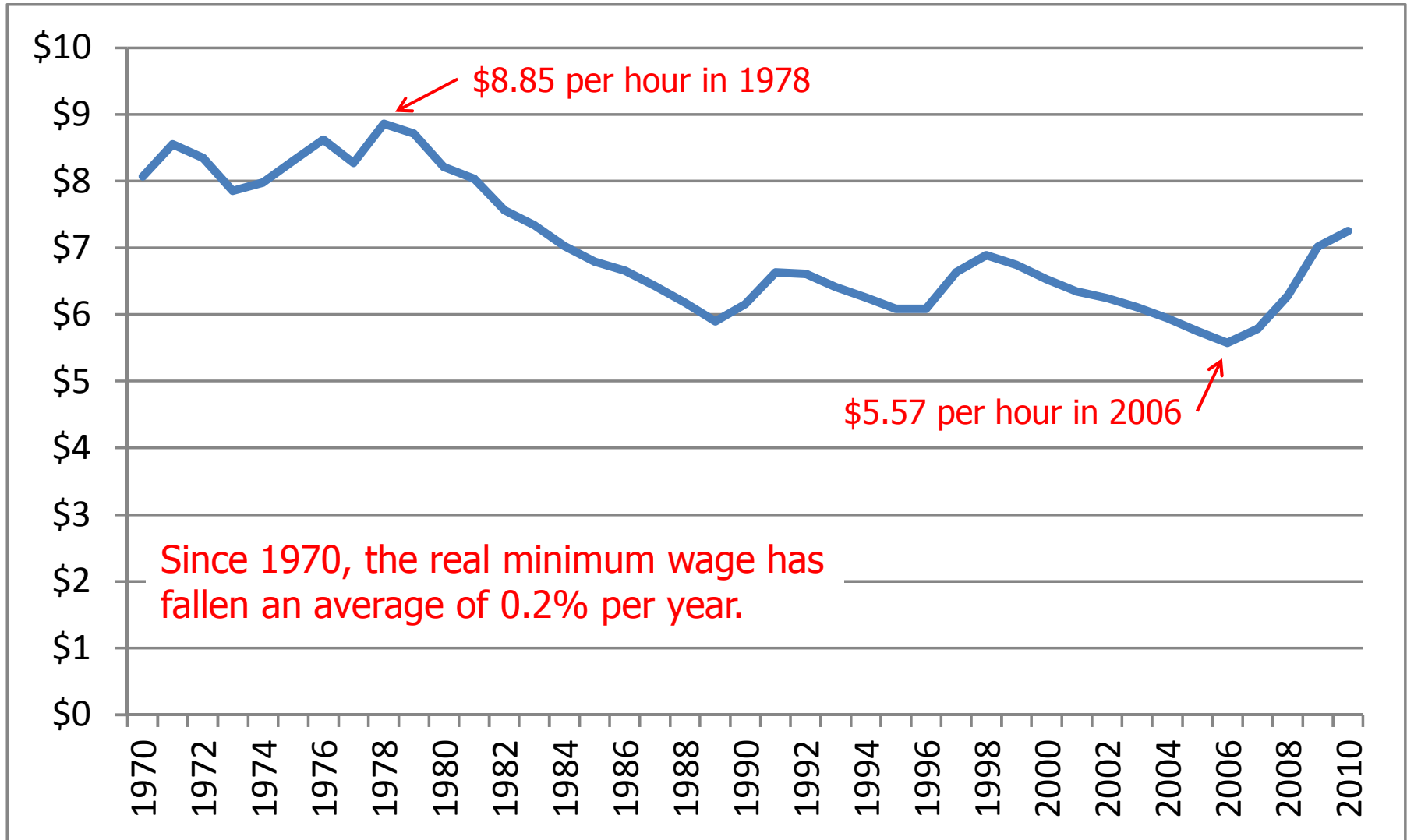
% of Hourly Workers Earning Minimum Wage or Less



Data source: Bureau of Labor Statistics, 2008

What has the minimum wage been over time?

Minimum Wage (2010\$)

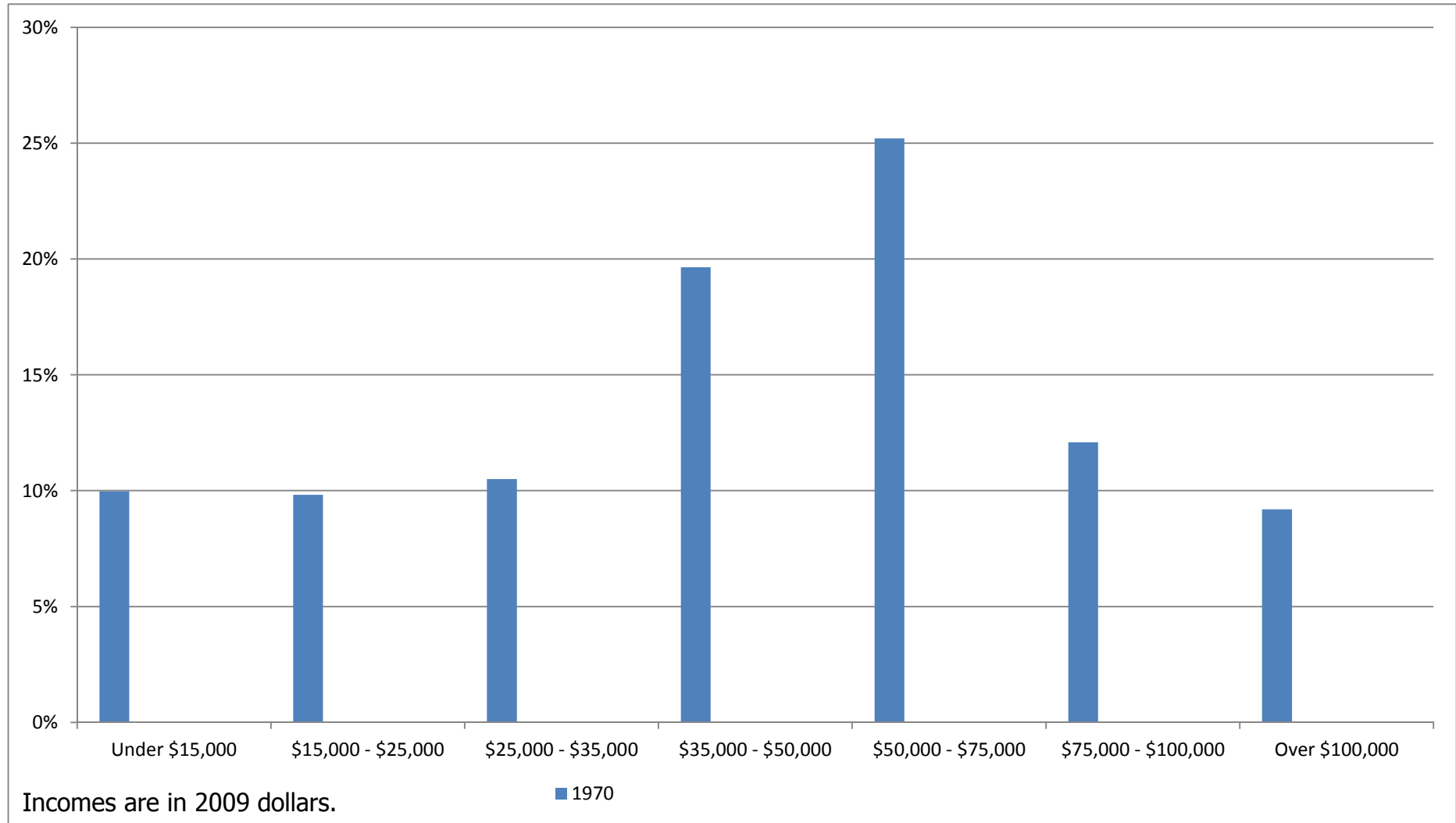


Data source: Bureau of Labor Statistics, 2011

We have to do something!

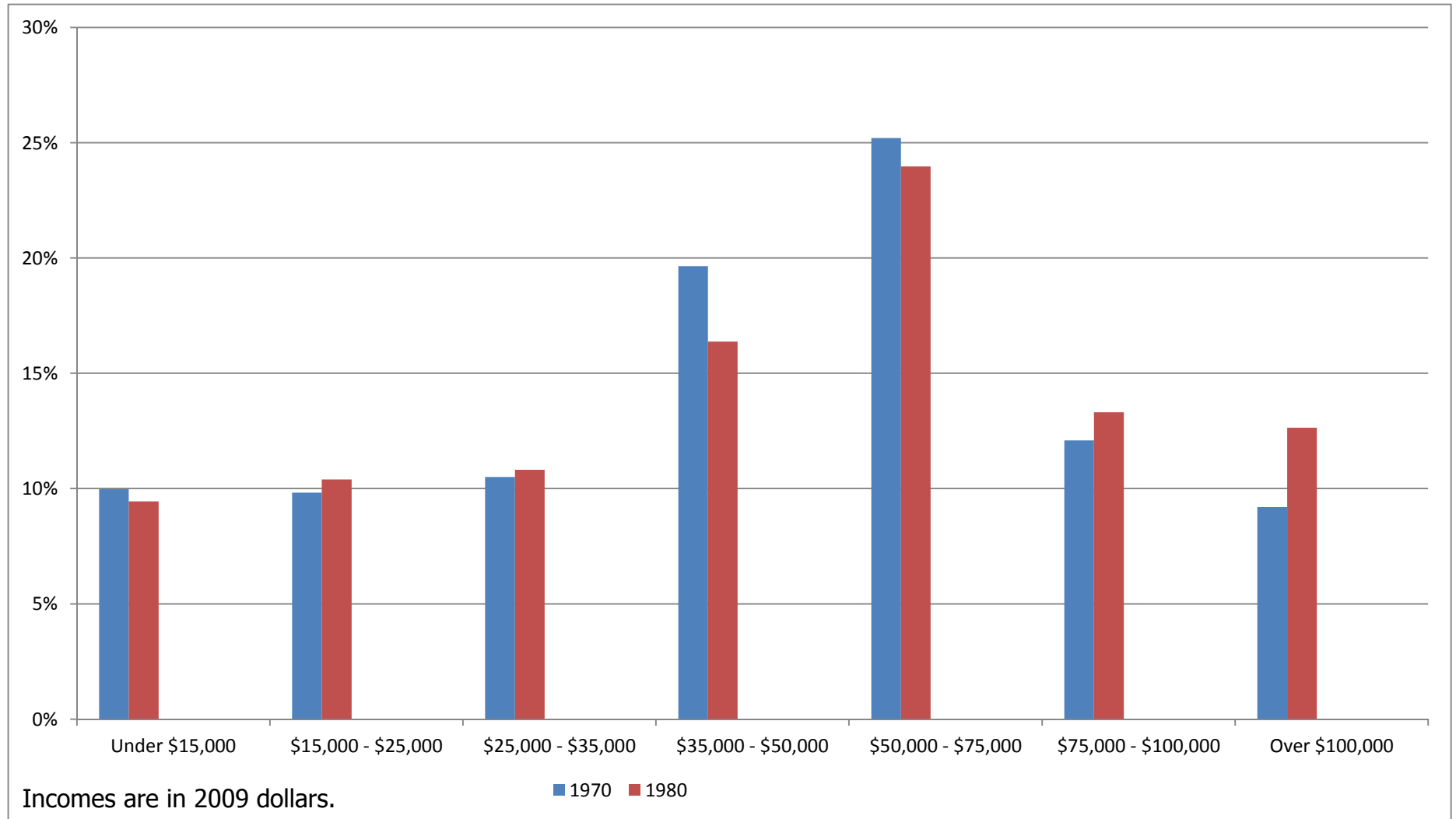
The rich are getting richer while the poor get poorer!

U.S. Households According to Income



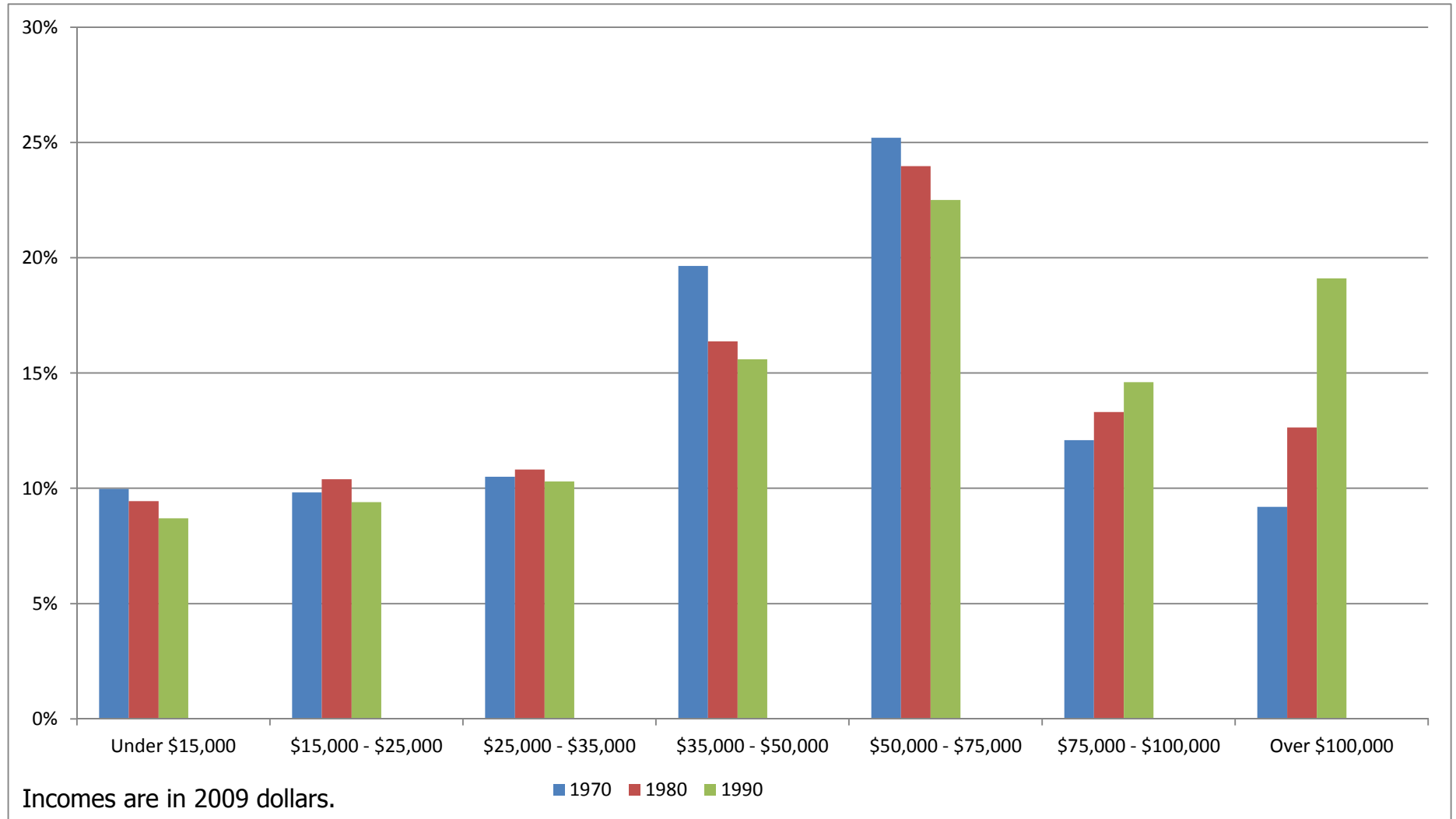
Data source: Statistical Abstract of the United States, U.S. Bureau of the Census, 1995-2012.

U.S. Households According to Income



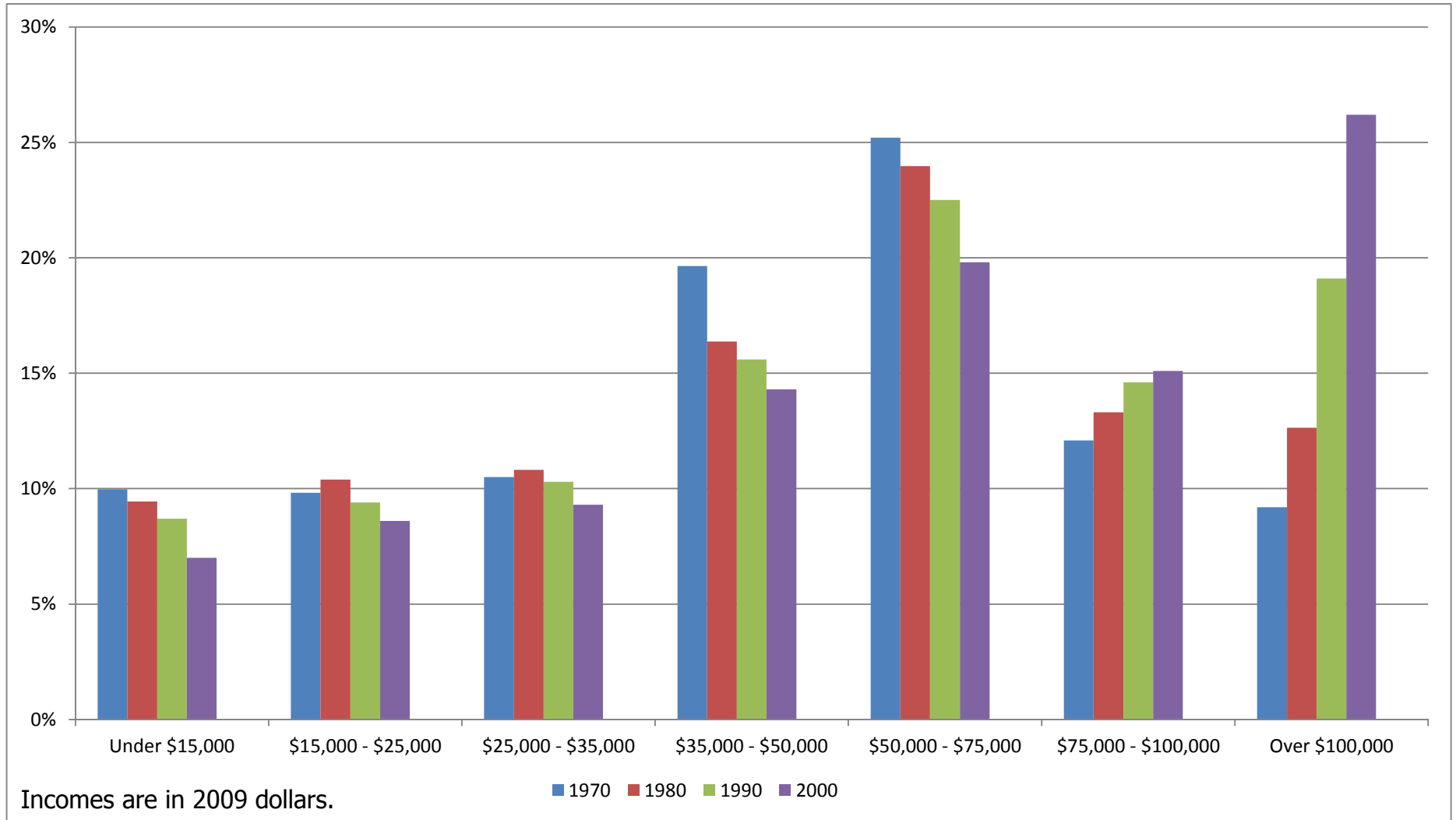
Data source: Statistical Abstract of the United States, U.S. Bureau of the Census, 1995-2012.

U.S. Households According to Income



Data source: Statistical Abstract of the United States, U.S. Bureau of the Census, 1995-2012.

U.S. Households According to Income



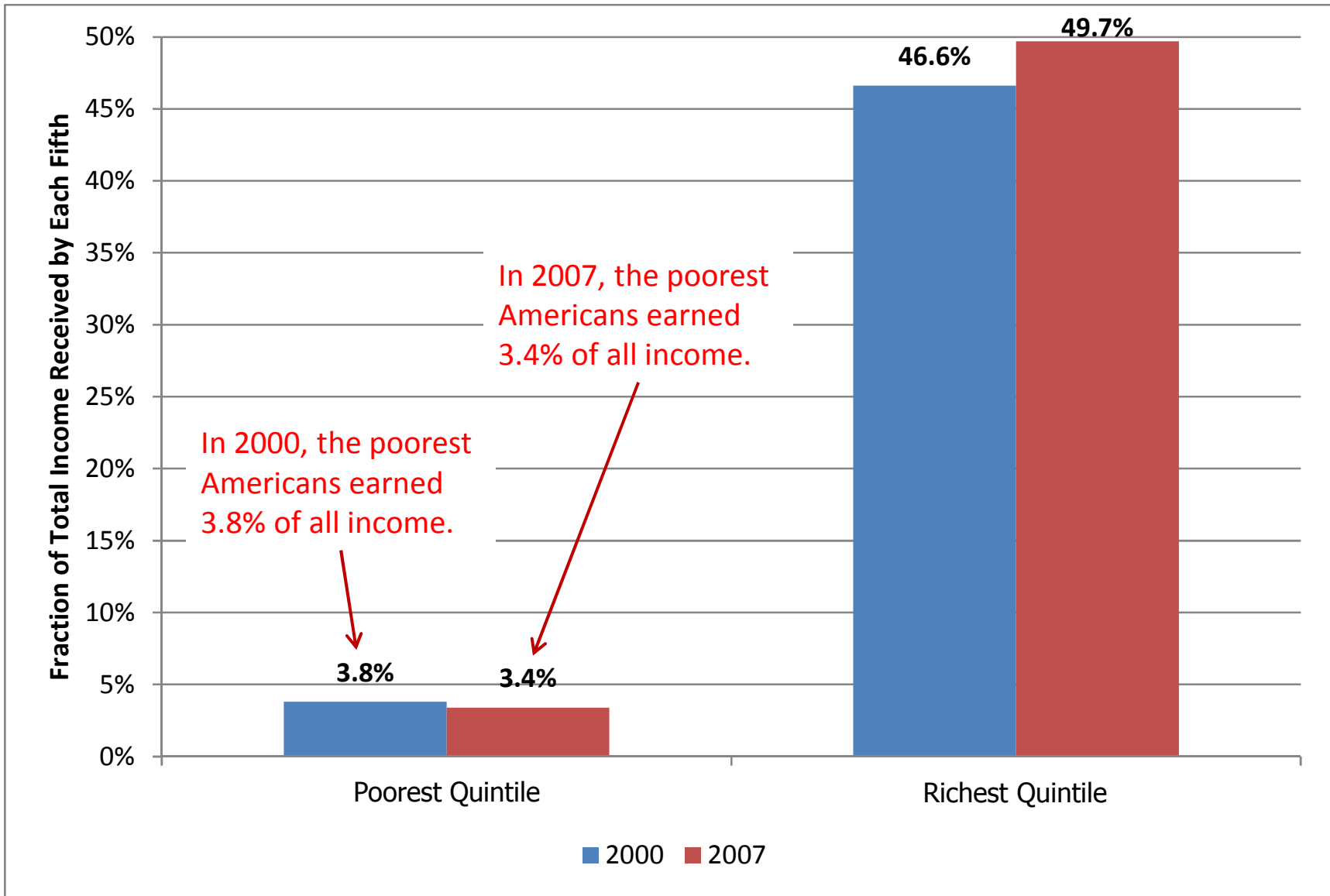
Data source: Statistical Abstract of the United States, U.S. Bureau of the Census, 1995-2012.

U.S. Households According to Income

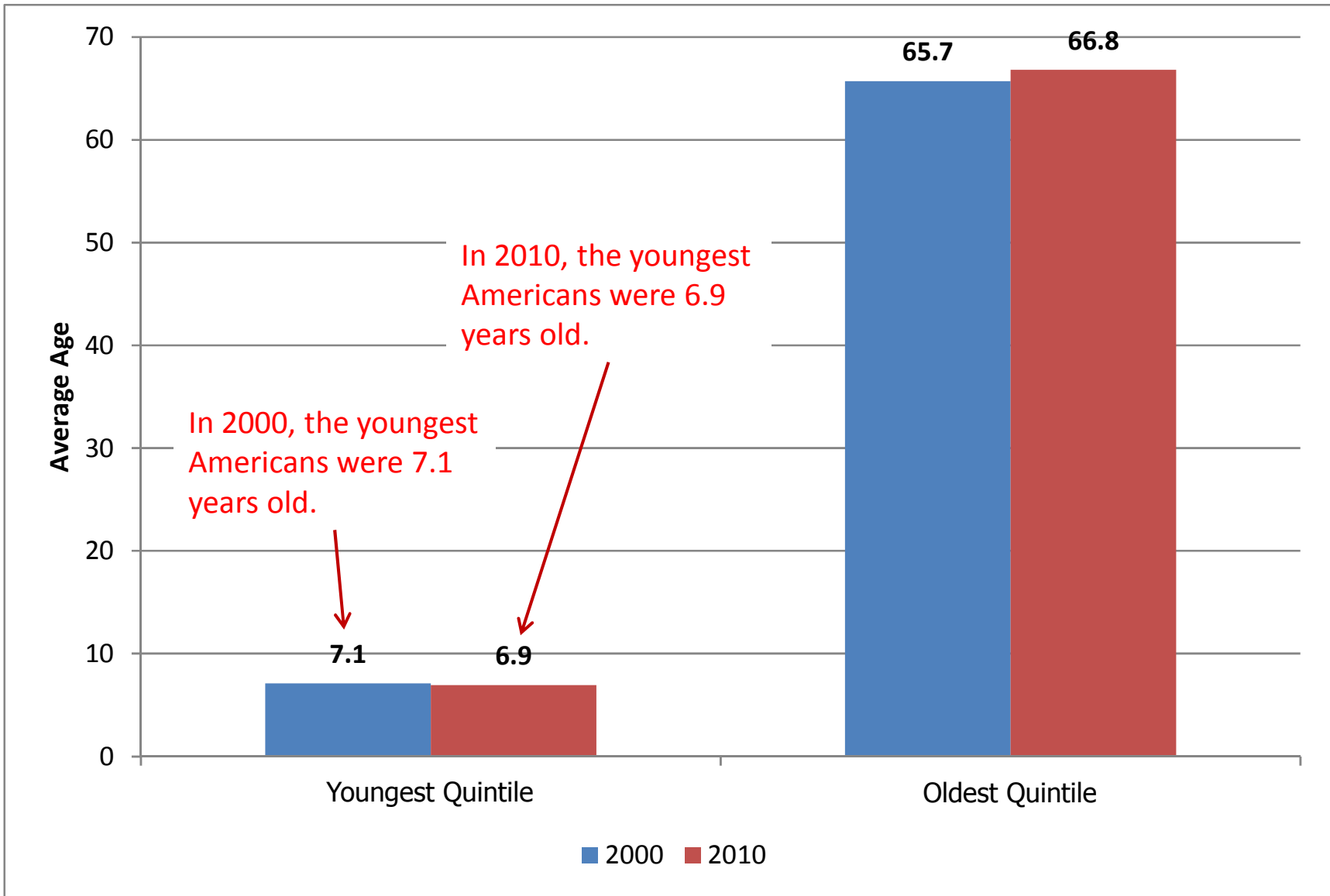


Data source: Statistical Abstract of the United States, U.S. Bureau of the Census, 1995-2012.

wtf?

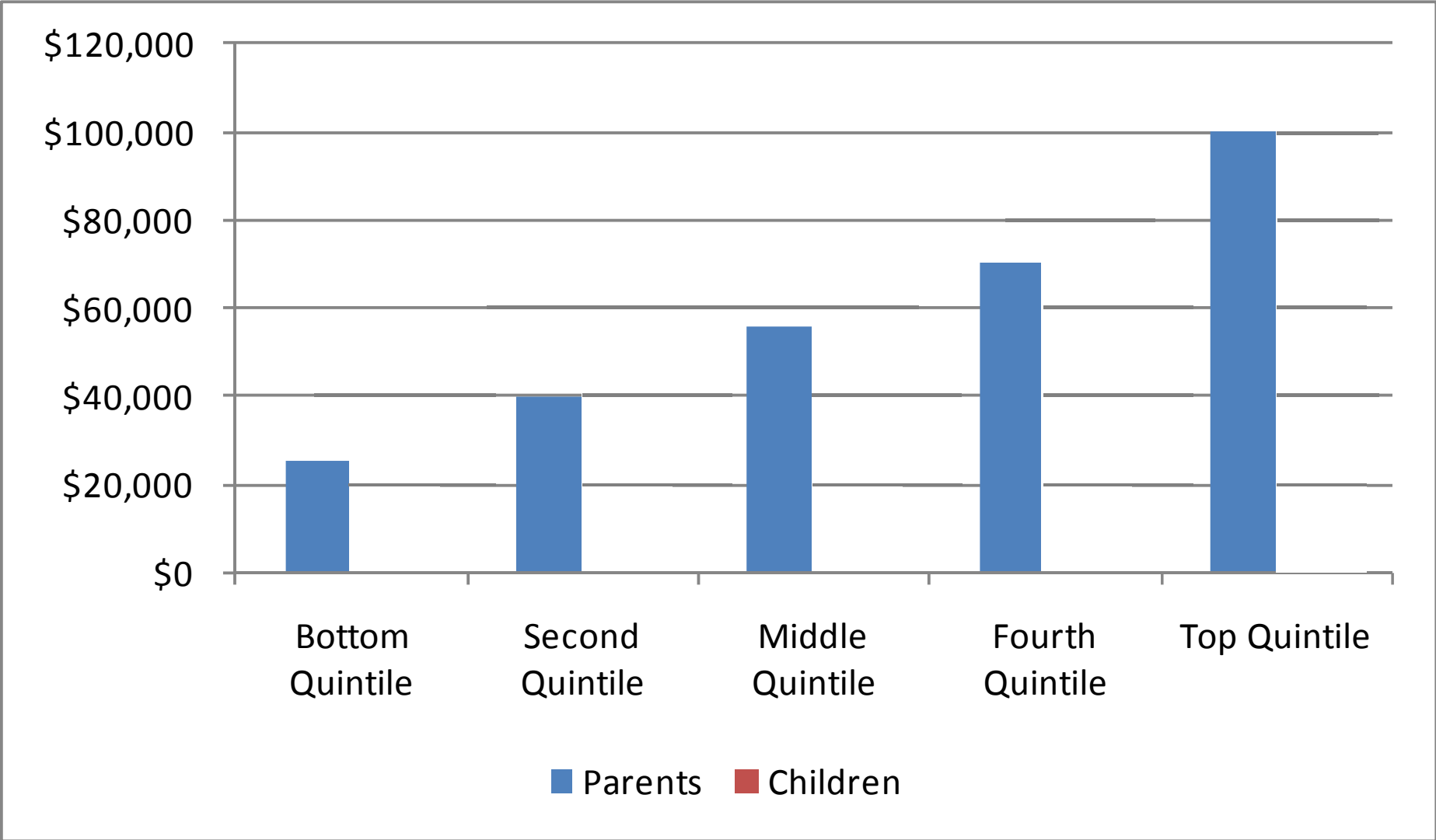


Data source: Statistical Abstract of the United States, U.S. Bureau of the Census, 2010, Table 678.



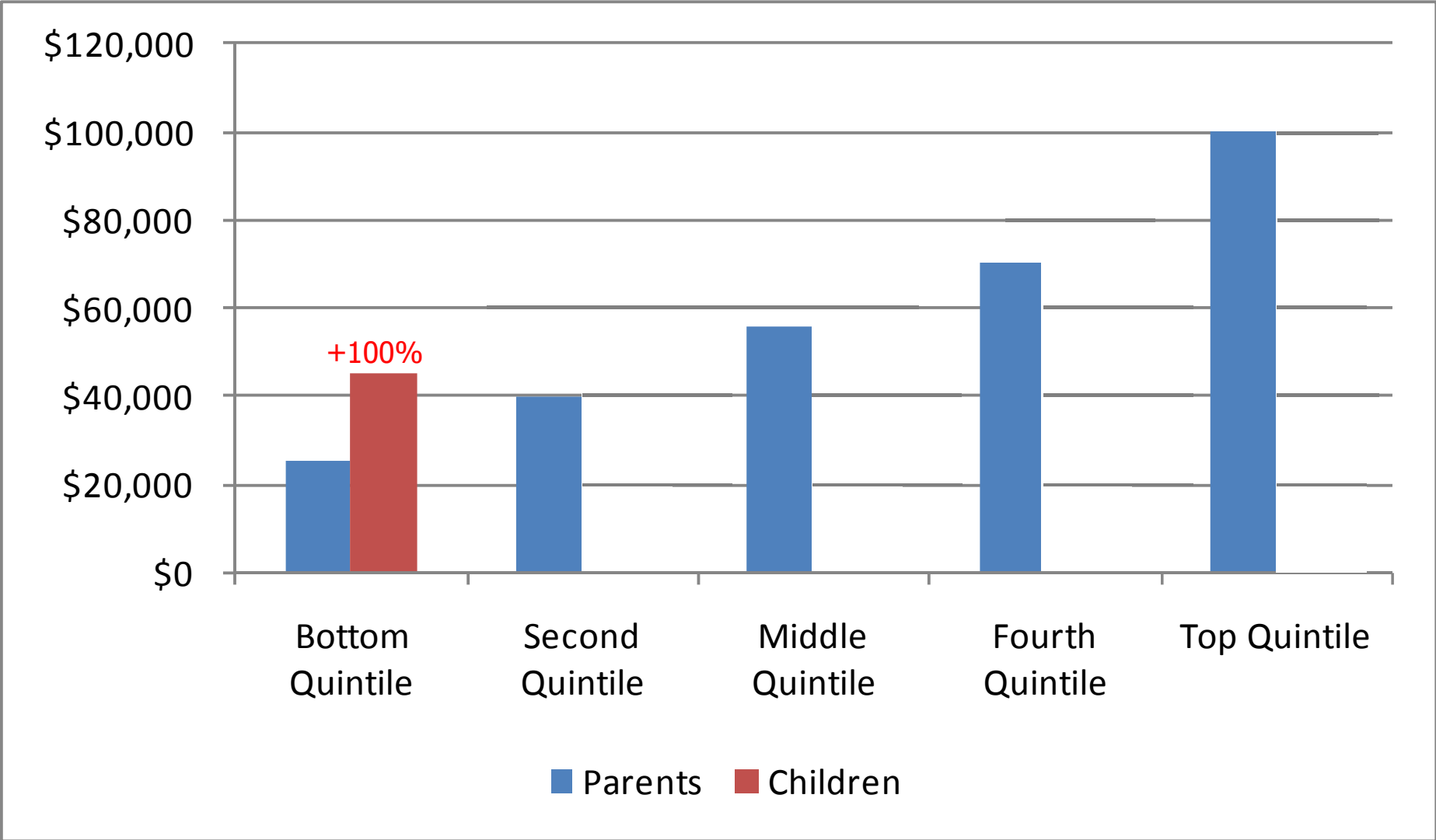
Data source: Statistical Abstract of the United States, U.S. Bureau of the Census, 2010, Tables 8, 9.

Median Income Within Each Quintile (2006\$)



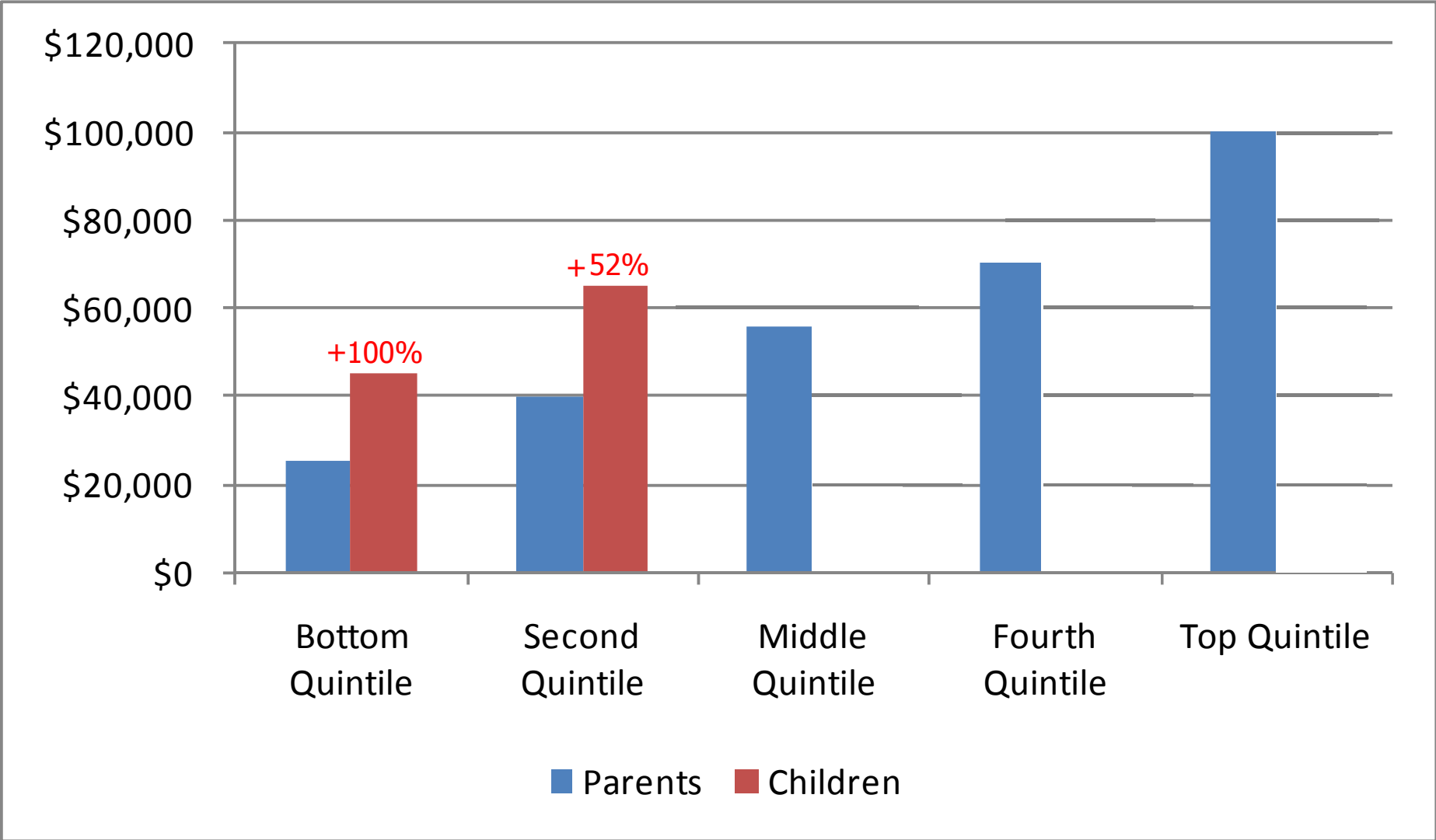
Source: Pew Economic Mobility Project

Median Income Within Each Quintile (2006\$)



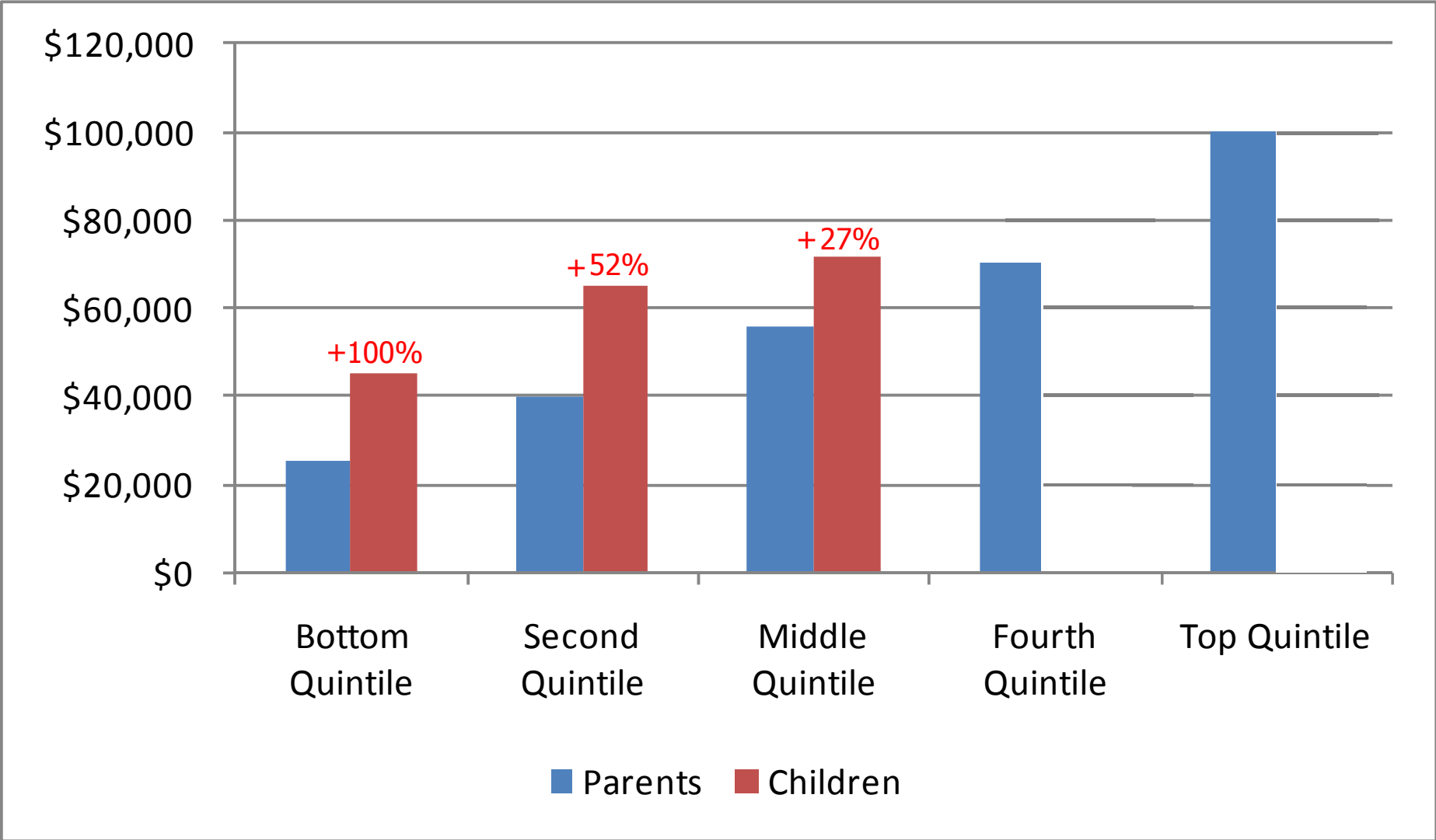
Source: Pew Economic Mobility Project

Median Income Within Each Quintile (2006\$)



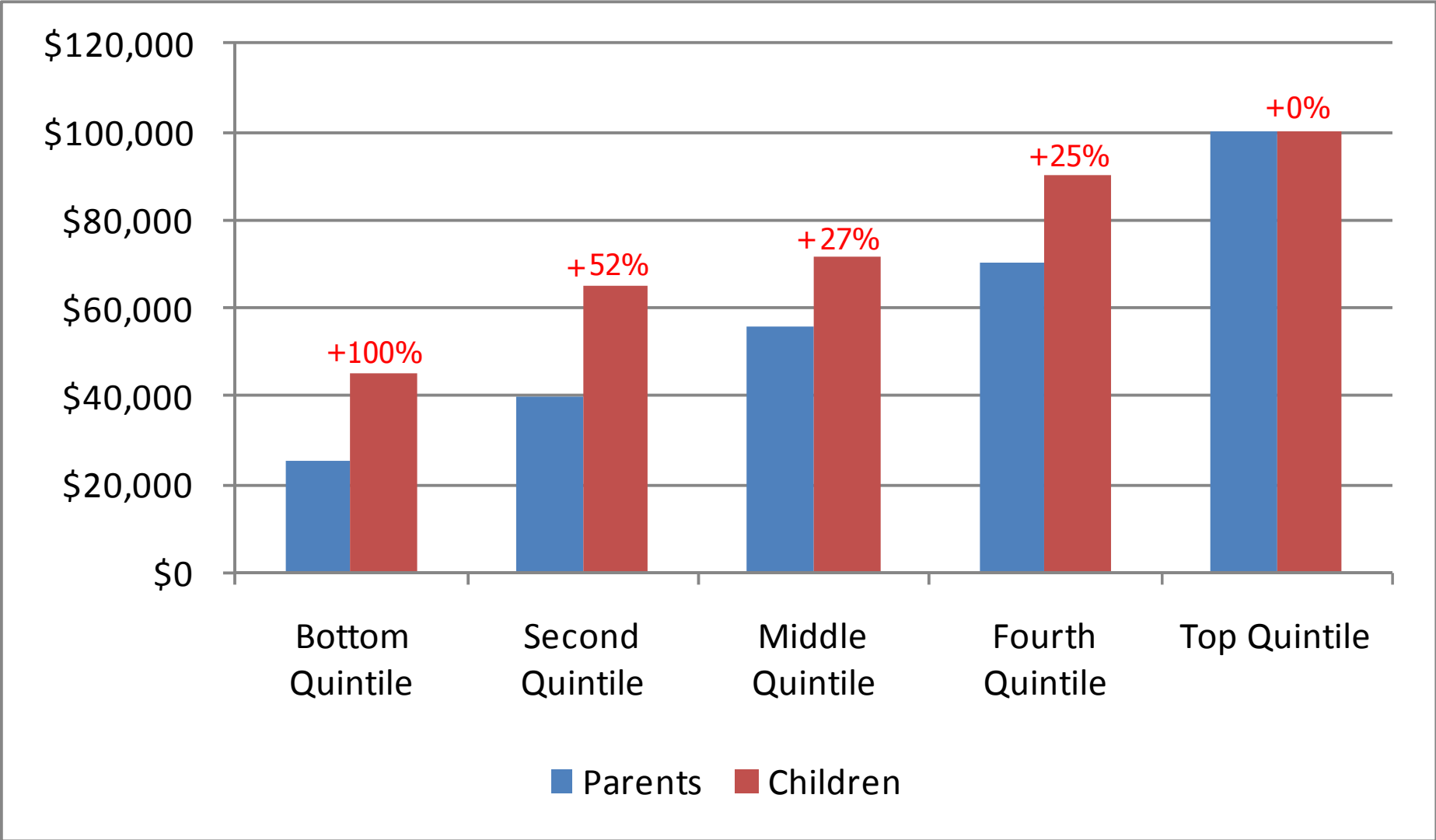
Source: Pew Economic Mobility Project

Median Income Within Each Quintile (2006\$)



Source: Pew Economic Mobility Project

Median Income Within Each Quintile (2006\$)



Source: Pew Economic Mobility Project

People argue for the minimum wage saying that the poor are getting poorer.

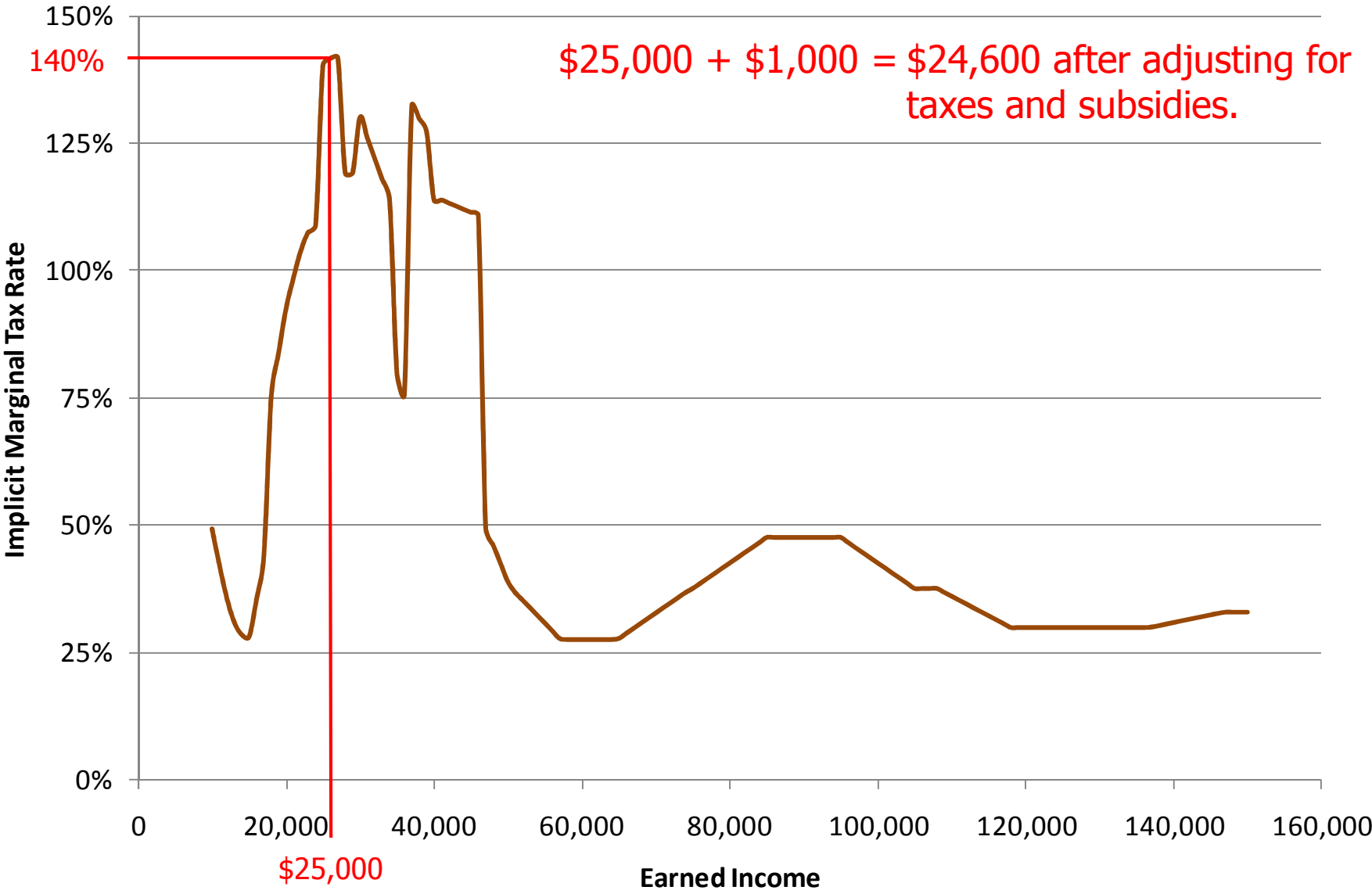
Not only are the poor getting richer, but the minimum wage prevents them from getting richer faster.

It's not just the minimum wage that hurts the
poor.

Our welfare system as a whole encourages
poverty.

Implicit Marginal Tax Rates

$$1 - (\text{change in after-tax and after-subsidy income}) / (\text{change in earned income})$$



Source: Clifford Thies, Shenandoah University

Closing thoughts

In 2007, Congress applied minimum wage law to American Samoa. The average wage was \$3.26 before the minimum wage of \$7.25.

In response, Chicken of the Sea moved its labor-intensive canning operations from Samoa to an automated plant in Georgia.

This created 200 jobs in Georgia but destroyed 2,000 jobs (more than 10% of all jobs) in Samoa.

Closing thoughts

In apartheid South Africa, White unions were major supporters of minimum wages for black workers.

“The method would be to fix a minimum rate for an occupation or craft so high that no Native would likely be employed.”

– South Africa Wage Board

Closing thoughts

In the US, following a strike by railroad workers, an arbitration board decreed that blacks and whites were to be paid equal wages.

"If this course of action is followed by the company and the incentive for employing the Negro thus removed, the strike will not have been in vain."

– Brotherhood of Locomotive Firemen

Conclusions

1. The poor are getting richer.
2. The minimum wage prevents disadvantaged workers from competing for jobs.
3. The welfare system encourages people to remain poor.

Political freedom makes economic freedom possible.

Economic freedom makes political freedom meaningful.

Minimum Wage

November 11-13, 2011

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www.antonydavies.org**