

ECON 442: Quantitative Trade Models

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Winners and Losers from Trade

Quote from President of Carroll County Chamber of Commerce

I cannot tell you if [NAFTA] is good for the country,
but I can tell you it's not good for Carroll County

[Source: The Atlantic](#)

Largest employer in Carroll Country prior to NAFTA was [Henry I. Siegel \(H.I.S.\) Jeans](#).

- Third largest manufacturer in America of Woman's jeans in 1980's.
- NAFTA implemented in 1994
- Company shut down all production and sales in United States by 2000.

H.I.S. Jeans Factory, Post-NAFTA



Opinions on Free Trade

NAFTA was good for the United States

- Economists: 95% Agree, 5% Uncertain, 0% Disagree
- General Public: 46% Agree, 15% Uncertain, 39% Disagree

The “Buy American“ Local Content Requirements in Stimulus Package, Good for Employment

- Economists: 11% Agree, 31% Uncertain, 58% Disagree
- General Public: 75% Agree, 10% Uncertain, 15% Disagree

Differing Opinions in Other Fields

Safe to Eat Genetically Modified Foods

- AAAS Scientists: 88% Agree
- General Public: 37% Agree

Climate Change Mostly Due to Human Activity

- AAAS Scientists: 87% Agree
- General Public: 50% Agree

Why the Disagreement on Free Trade

Losers from Free Trade are highly visible

- Factories close, people lose jobs, local communities are devastated
- Losses happen suddenly, concentrated in short period of time

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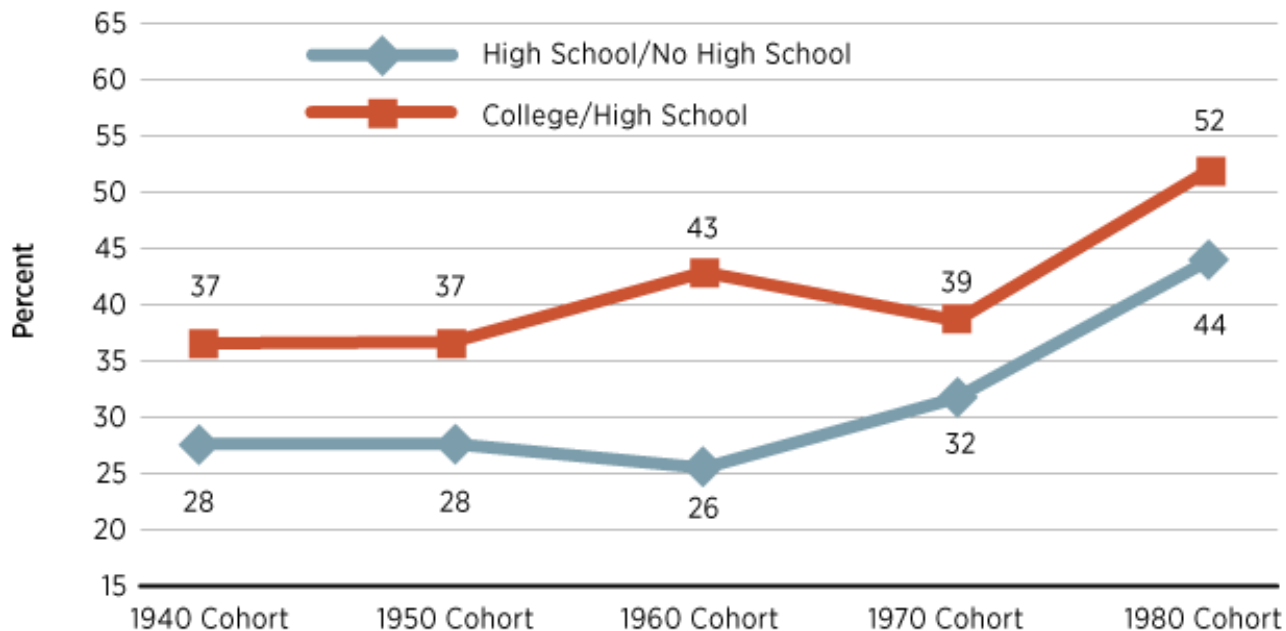
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Winners from Free Trade are less visible

- Gains spread out over more people (Powerball winner more visible than losers)
- Gains and sectoral reallocation are often spread out over time
- Free trade partially responsible for historic benefits of a college education, since U.S. has comparative advantage in high tech industries (although skill biased technological change likely more important than trade).

Benefits of College Historically High

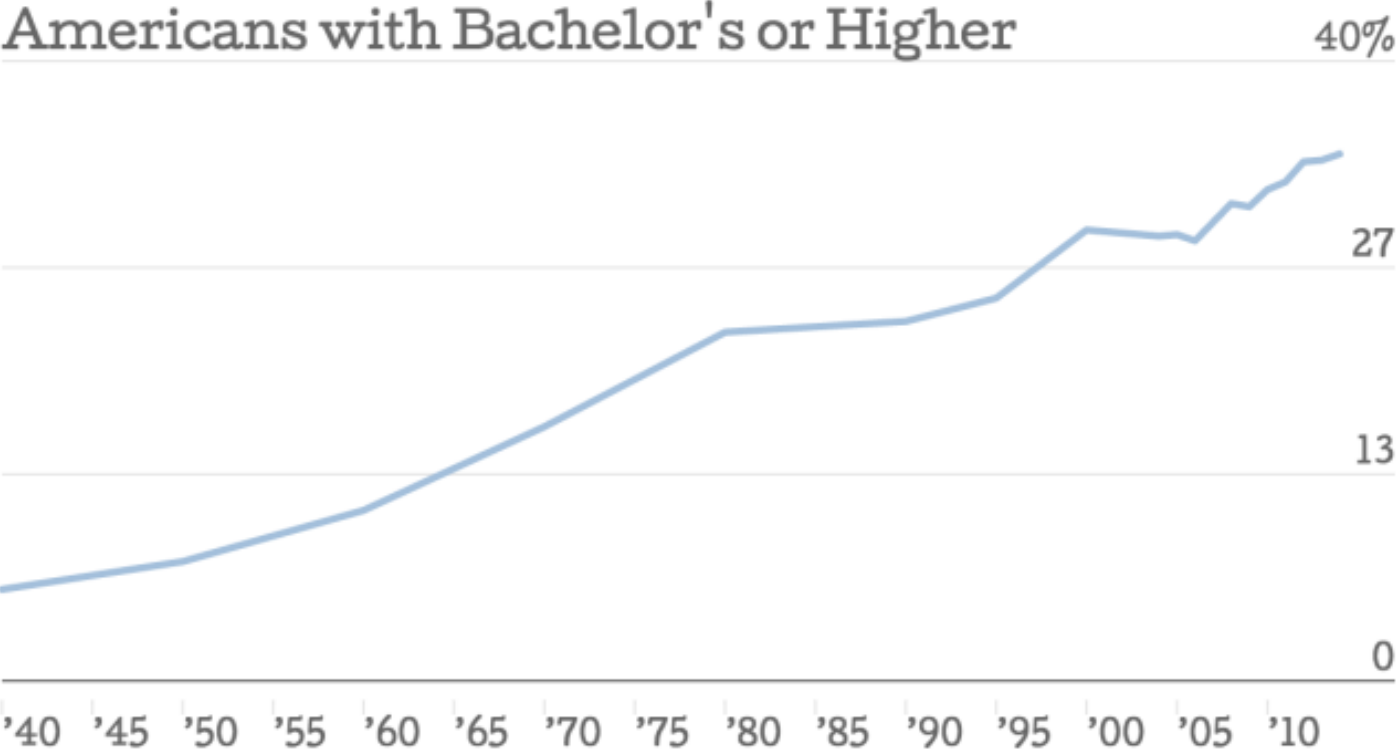
Education Premiums for White Men by Cohort



SOURCE: Calculations made using census data from IPUMS.

■ FEDERAL RESERVE BANK OF ST. LOUIS

Number of Americans with College Historically High



USNews

Lindsey Cook for USN&WR; Source: NCES

Why the Disagreement on Free Trade

Economists are more internationally diverse than general population

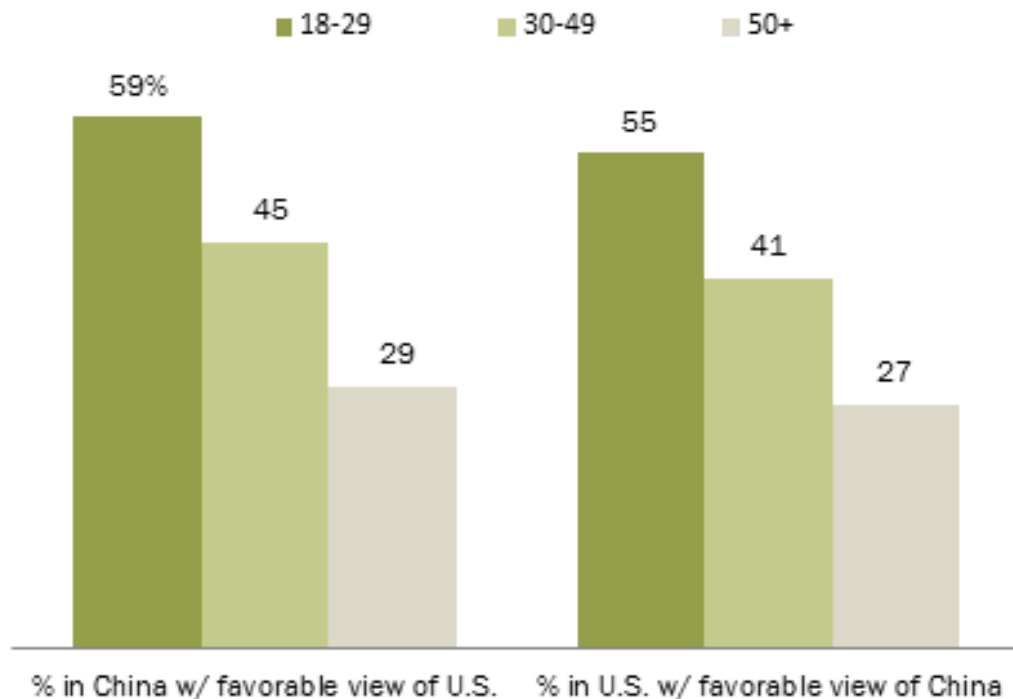
- Few Americans oppose free trade among U.S. states, even though it has similar impact
- Economists care more than the general public about gains that go to other countries

Percent of Americans that think trade with China is beneficial / That have favorable view of China

- Ages 18-29: 56% / 55%
- Ages 30-49: 43% / 41%
- Ages 65+: 37% / 29%

Why the Disagreement on Free Trade

Younger Generation in China and U.S. Holds More Positive View of the Other Country



Views Evolve Over Time, Differ By Partner

In 1970's Toyota revolutionized car manufacturing process (Just-in-Time Production System)

- American car manufacturers could not compete. Didn't adopt practices until the 1980's
- Anti-Japan sentiment was very high: [Murder of Vincent Chin](#)

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Japan agreed to voluntary limit exports of cars in response to U.S. pressure

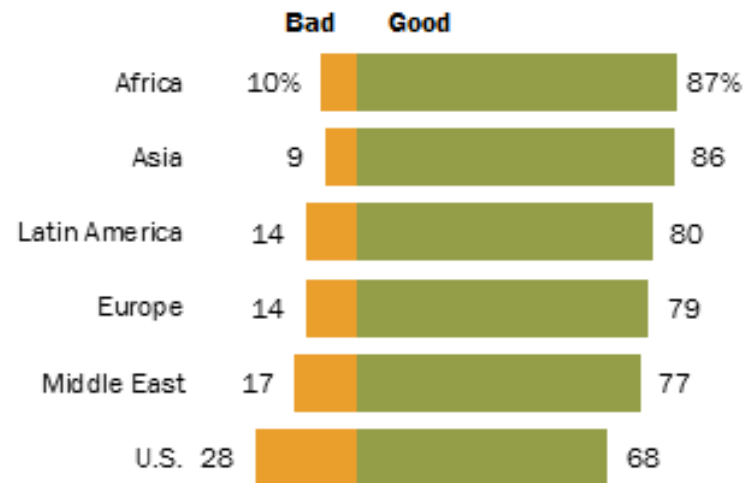
- U.S. could not put tariffs on Japanese cars due to GATT
- Boosted profits of domestic car producers. Net negative welfare due to higher prices faced by consumers [Berry, Levinsohn, Pakes (1999)]

Today: 75% of Americans think trade with Japan is good for U.S. (vs 45% for trade with China)

Views on Trade Differ by Country

Growing Trade Seen Positively

Growing trade and business ties with other countries is ___ for our country



Note: Median percentages by region. Russia and Ukraine not included in Europe median.

Source: Spring 2014 Global Attitudes survey, Q27.

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The Destructive Nature of Economic Progress

Economist Joseph Schumpeter in 1942

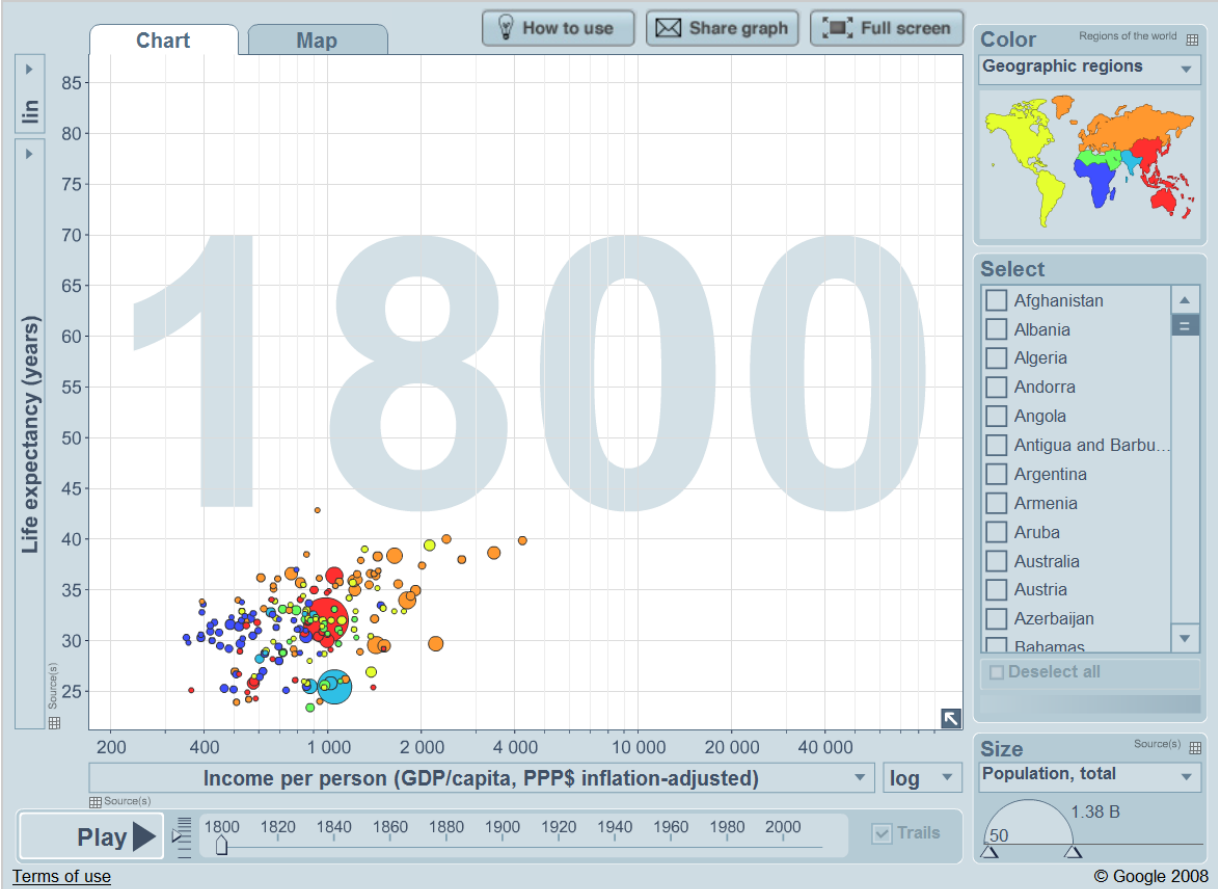
The gale of **creative destruction** ... revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one

Source: [*Capitalism, Socialism, and Democracy*](#)

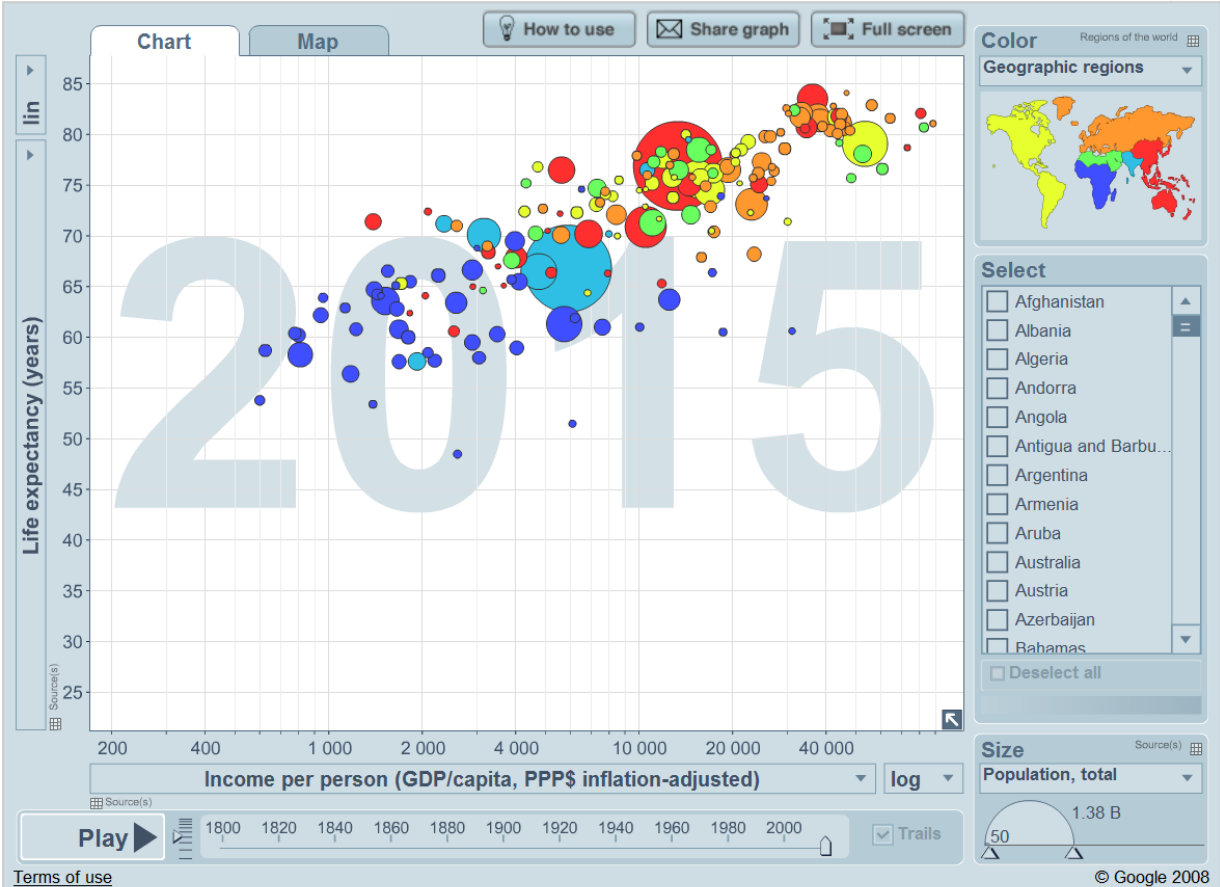
Economic progress is violent and disruptive

- The gains from economic progress are immense
- Billions of people have been lifted out of extreme poverty, saving lives

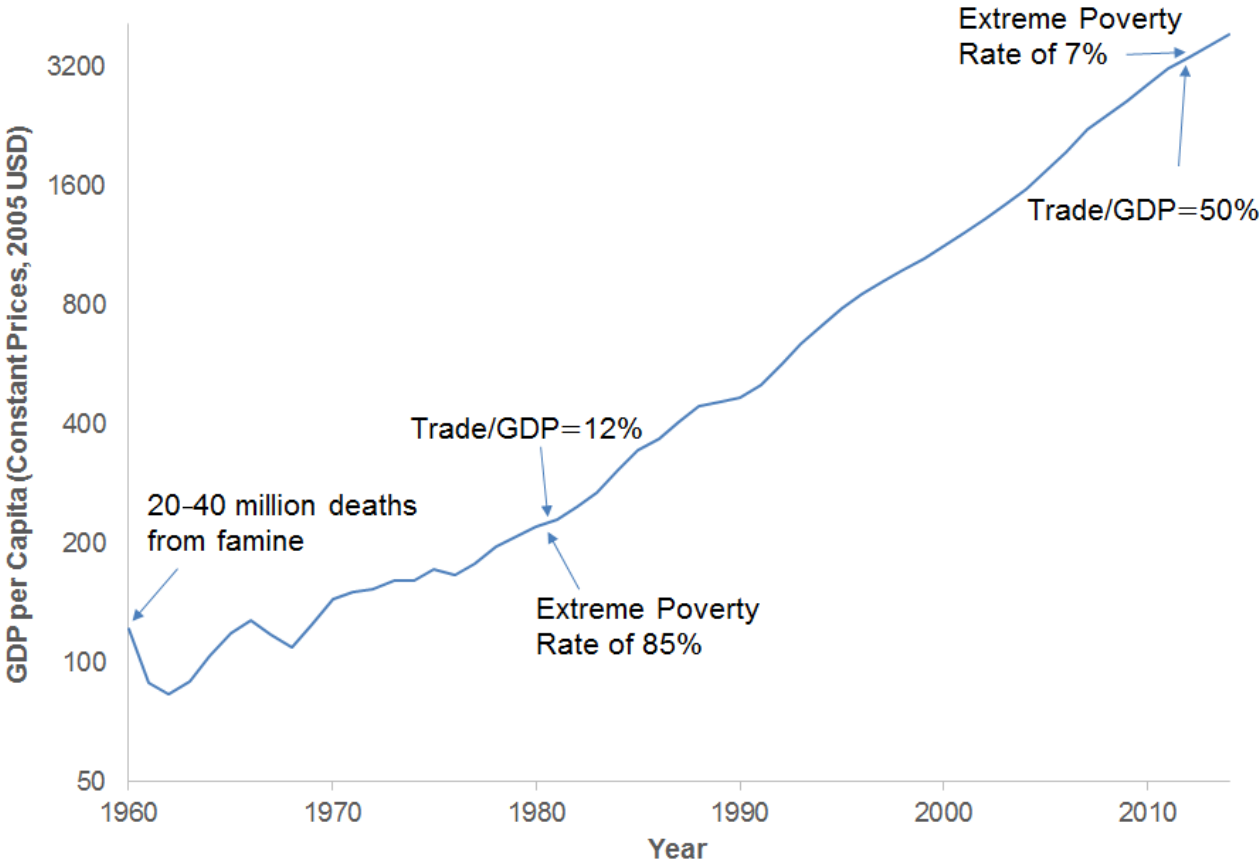
Life Expectancy vs Real Income per Person: 1800



Life Expectancy vs Real Income per Person: 2015



GDP per Capita for China, 1960-2014



What About the Losers?

Losers from free trade suffer real harm

- Despite this, Economists still overwhelmingly support free trade
- Theory and data suggest benefits outweigh the costs, especially over long run
- Not politically feasible to completely compensate losers of trade, but can lessen blow

First Best versus Second Best

International Trade does potentially have undesirable consequences

- May increase inequality
- Falling wages for less skilled individuals in U.S.

Better ways to address those consequences than stopping free trade

- Can address inequality without losing benefits of comparative advantage
- In practice, protectionism rarely protects the weak, more often protects the powerful

Trade Adjustment Assistance (TAA) Program

Program administered by the U.S. government to assist people who lost jobs due to trade

- \$1 billion in benefits paid to 280,000 displaced workers in 2010

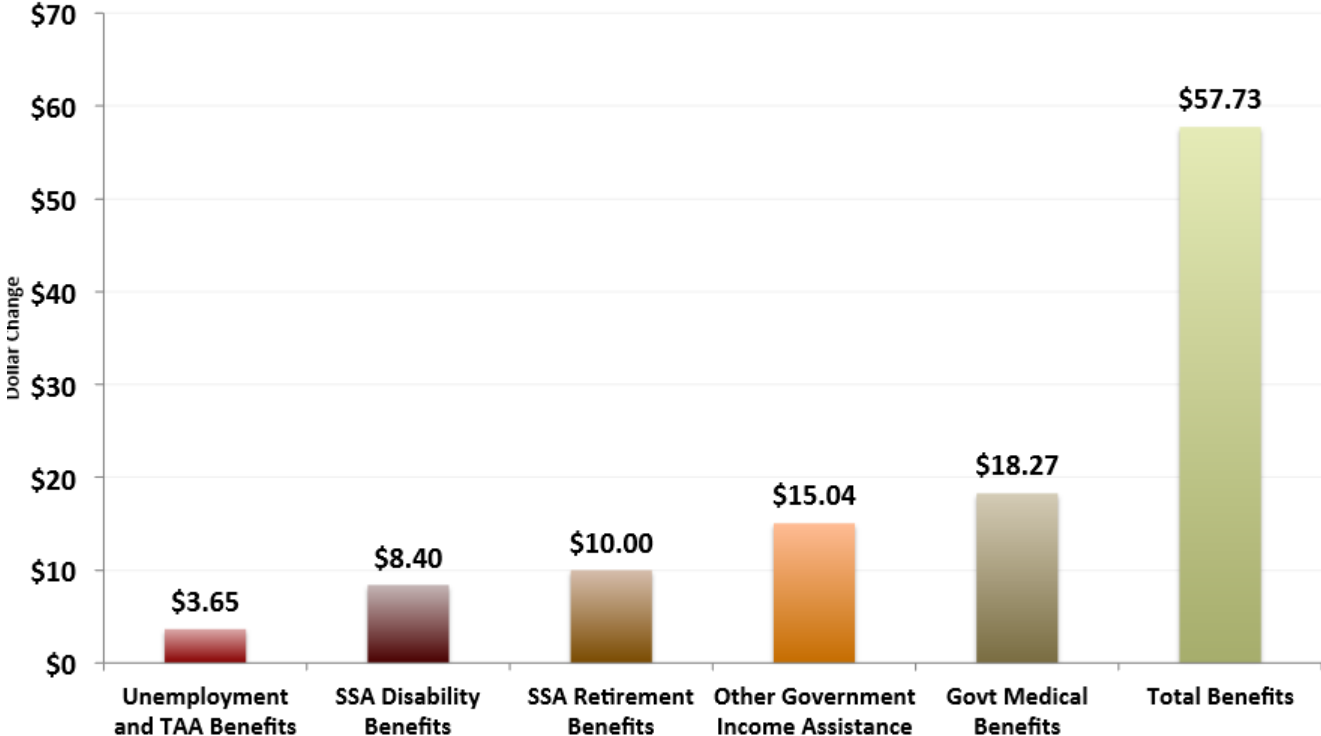
Potential benefits include

- Job training + relocation and job search costs
- Wage supplementation
- Subsidized health insurance

This is on top of other benefits such as unemployment benefits, SNAP, etc

Increased Imports Lead to Increased Government Transfers

Effect of an \$1000 Per Worker Increase in Imports from China during 1990-2007 on Dollar Change of Annual Transfer Receipts per Capita



How do Economists Study the Impact of Trade?

Models you learn as undergraduates/MA students not well suited to these questions

- They are intuitive and simple, which makes them good as introductions to a topic
- Partial equilibrium graphical analysis not well suited for quantitative work
- Difficult to generalize and add features to this model

Economists use modern general equilibrium models

- Need to take the model seriously and analyze the data carefully
- Atheoretical empirical work is dangerous. Need theory to address endogeneity issues.

What Features Do we Need in Our Model?

To do welfare & counterfactual analysis, need to model what agents want and how they behave.

- We have the basis for this in the framework we've been working with

Our basic general equilibrium model has key three elements

- Consumers Problem
- Firms Problem
- Market Clearing

What Features Do we Need in Our Model?

Our 2x2 Ricardian GE model is still not suited to thinking about Carroll County

- Only two countries and two goods
- Completely inelastic labor supply/no unemployment
- All consumers are identical, no sense of specialized labor
- All firms are identical within a country
- No sense of local labor markets within a country

We can address all of these issues, keeping the same basic framework

Examples of Papers that Deal with Trade and Unemployment

The China Syndrome by Autor, Dorn, Hanson (2013)

- Detailed data for trade, employment, & transfers for commuting zones in the United States
- Examine effect of increase import exposure on government benefits and unemployment
- Model welfare using a multi-country ricardian framework and theory based gravity regressions

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