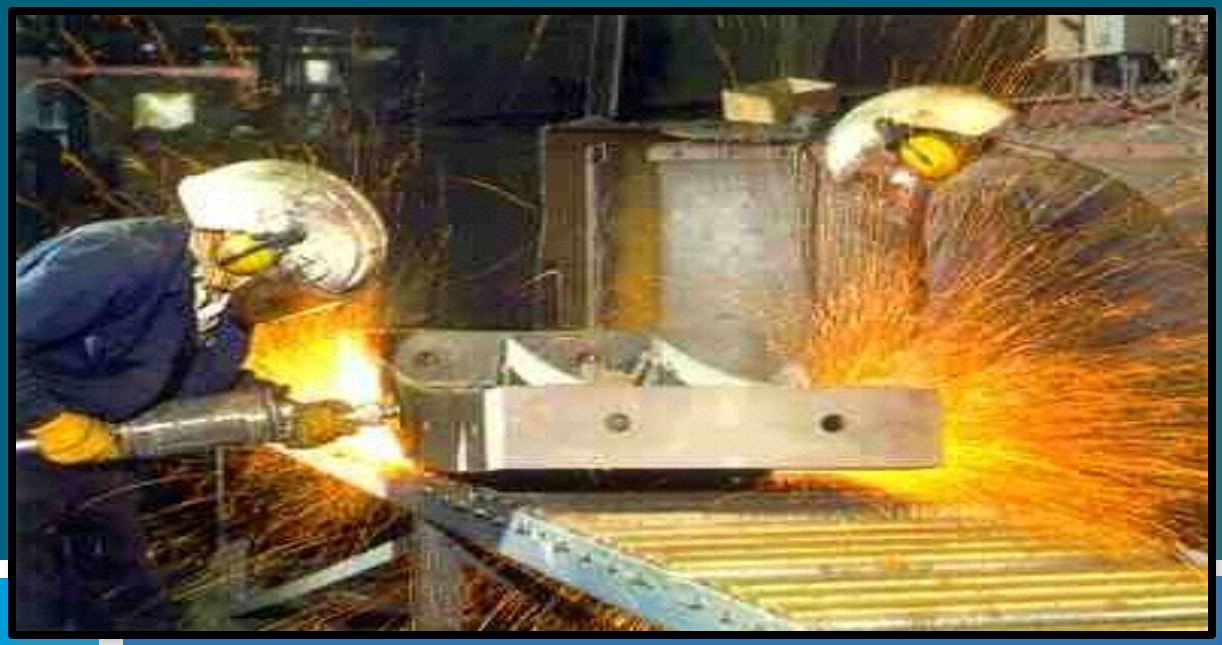
INDUSTRY:

THE MANUFACTURING OF GOODS IN A FACTORY



Economic geography

- **Study of how people support themselves, with the *spatial patterns* of *production*, *distribution*, and *consumption* of goods & services,**

Economic Power Shift

- The recent success of **Japan, South Korea, Taiwan, China** and other Asian states has ended the industrial dominance of the Western World (USA, Western Europe)
- This unit answers why this has happened

Key Issues (don't write this)

- 1. Where did industry originate?
- 2. Where is industry distributed?
- 3. Why do industries have different distributions?
- 4. Why do industries face problems?

Factory Locations

- Function of factories: make stuff to sell to people who need stuff
- Therefore, two factors determine where factories will be located:
  - **location factors:**
    - **where the markets for the products are**
    - **where the resources needed to make the products are**

Where would you put your Bieber assembly factory?

Market

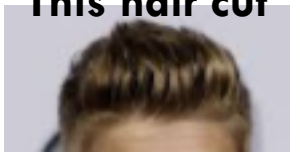
Resources

Lame Lyrics

Swag on you, chilling by the fire while we eatin' fondue

Sweet dance moves

This hair cut

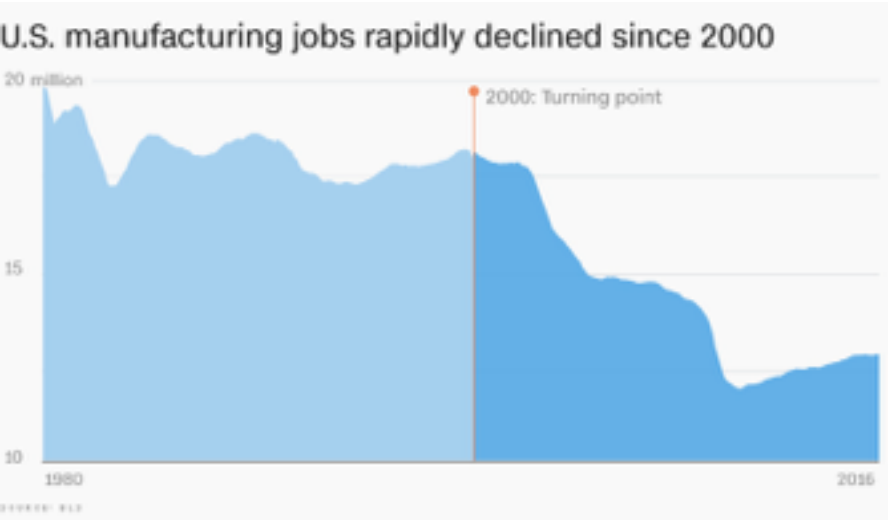


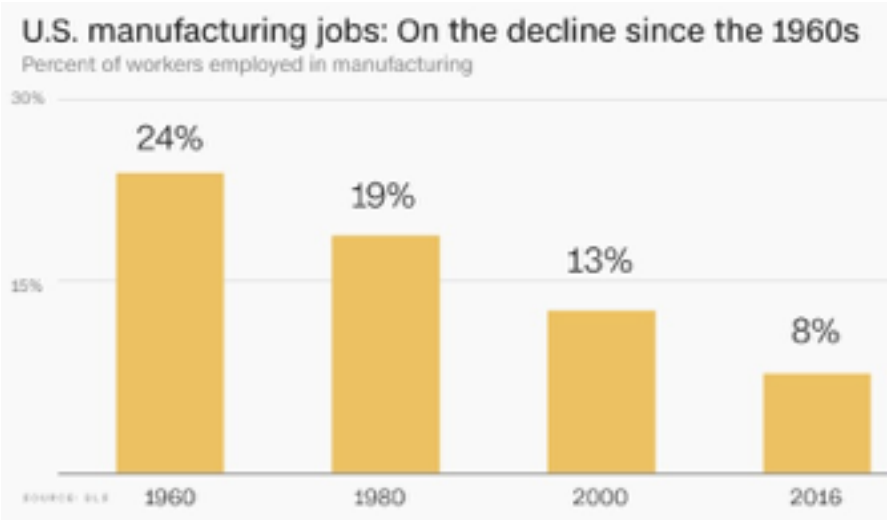
Every community has industrial assets and challenges

- **Geographers identify:**
  - **assets that make it competitive with other communities**
  - **challenges/handicaps that make it more difficult to compete**
- What are some industrial assets that the Triangle has?
- What are some challenges/handicaps?

Changing industrial landscape

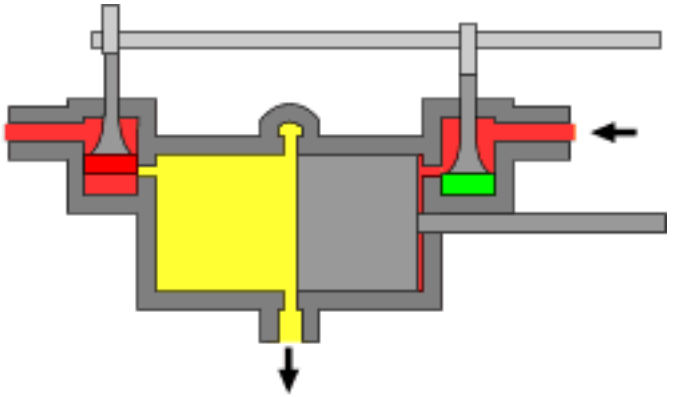
- **A generation ago, industry was highly clustered in a handful of more developed countries, but industry has diffused to less developed countries.**
- How has this changed American life and the US economy?





Industrial Revolution

- **Industrial Revolution - the social and economic changes in agriculture, commerce and manufacturing that resulted from tech. innovations and specialization in late 18th century Europe**



IR Birth and Diffusion

- **Began in England around 1750, diffused to W. Europe & USA in the 19th century, rest of the world in the 20th century**
- **Effects:**
  - **new tech replaced human labor**
  - **changed the role of government in economics (industrial capitalism/communism)**
  - **ended the cottage industry**
  - **changed geopolitics**
  - **urbanization**

Products, like textiles,
were no longer made in the home

Why did the Industrial Revolution begin when and where it did?

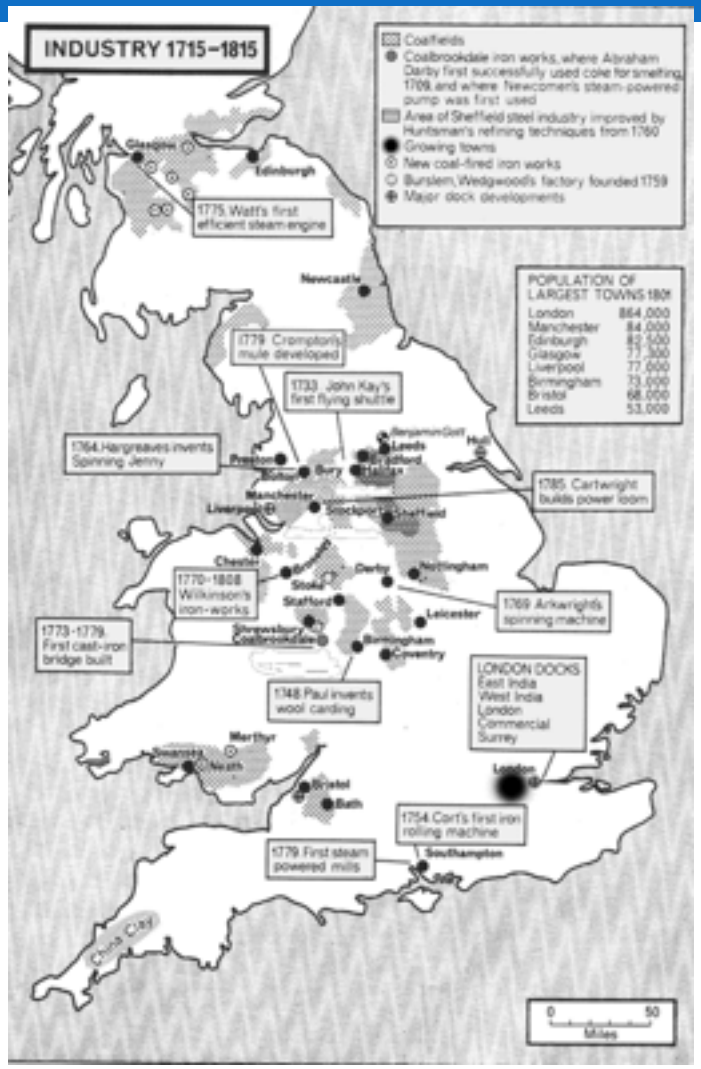
- **IR began in England because of**
  - **the availability of**
    - **capital (money)**
    - **natural resources**
      - **water power**
      - **coal**
      - **iron ore**
  - **new technologies were engineered**
    - **steam engine - James Watt**

Increased Availability of Resources - Iron Ore

- Iron ore is a metal mined from the ground, but it's not useful until it is **smelted (melted down in a coal furnace)**
- **Henry Cort** patented "puddling and rolling" which removes impurities from the ore, creating **wrought iron**
- Wrought iron was used in building materials and in construction of **steam engines**

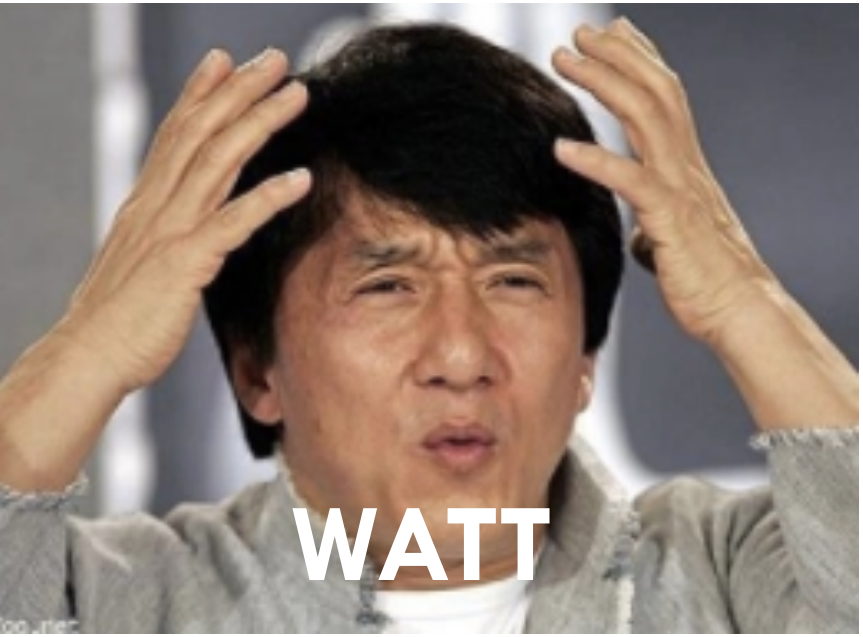
This pointy tower thing is made from wrought iron

Coal energy replaces wood energy



- Wood was the primary energy source before the IR, but it became scare from over harvesting/overuse
- Coal was plentiful and produced more energy than wood.
- **Coal was the most important ingredient in producing iron,** but it was **difficult to transport**
- As a result, the iron industry went from dispersed to clustered near coal fields.

Say Watt?



- **James Watt** did not invent the steam engine
- By his birth (1736) Newcomen steam engines were widely used to pump water from coal mines
- Watt was paid to repair a Newcomen engine in 1764 and discovered many inefficiencies with its design. **He began manufacturing a new and improved steam engine in 1775**
- **His steam engine was made of iron, run by coal and was used in:**
  - **mining, paper mills, flour mills, cotton mills, iron mills, distilleries, and canals**
- He also invented the rotary engine

Transportation advances

- **Two types: canals and railways**
- **Canals were dug between major manufacturing cities so that products could be shipped via barge**
- **Canals were superseded by the railway or "iron horse"**
- **The first railway was opened in 1825**

Textiles

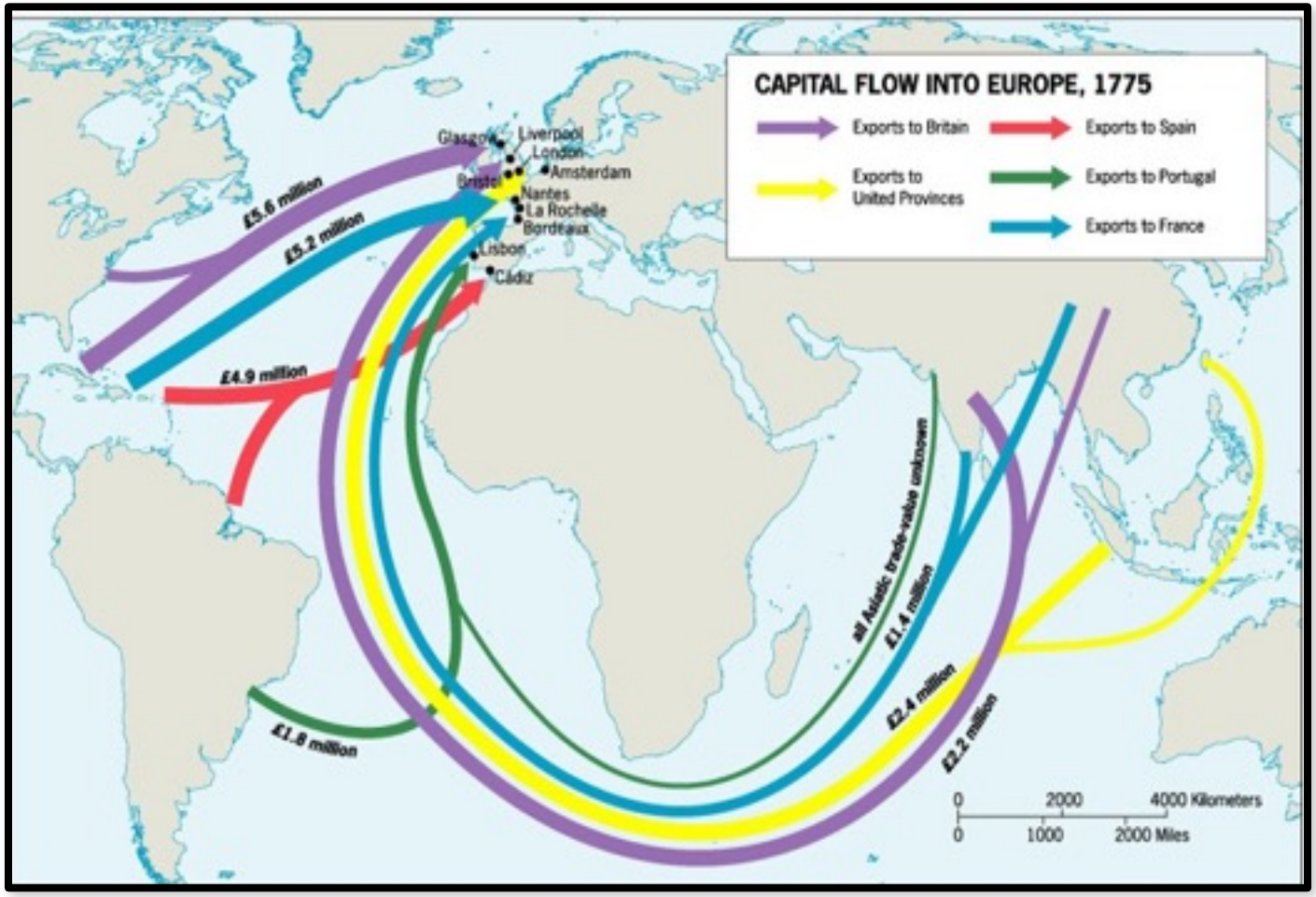
- **A series of inventions between 1760 and 1800 transformed textile production from a dispersed cottage industry into a concentrated factory system.**
- **Richard Arkwright** invented a spinning frame in 1768 (it spun yarn used in textiles more quickly) BUT it needed more power than humans could supply.
- Guess Watt it used instead…

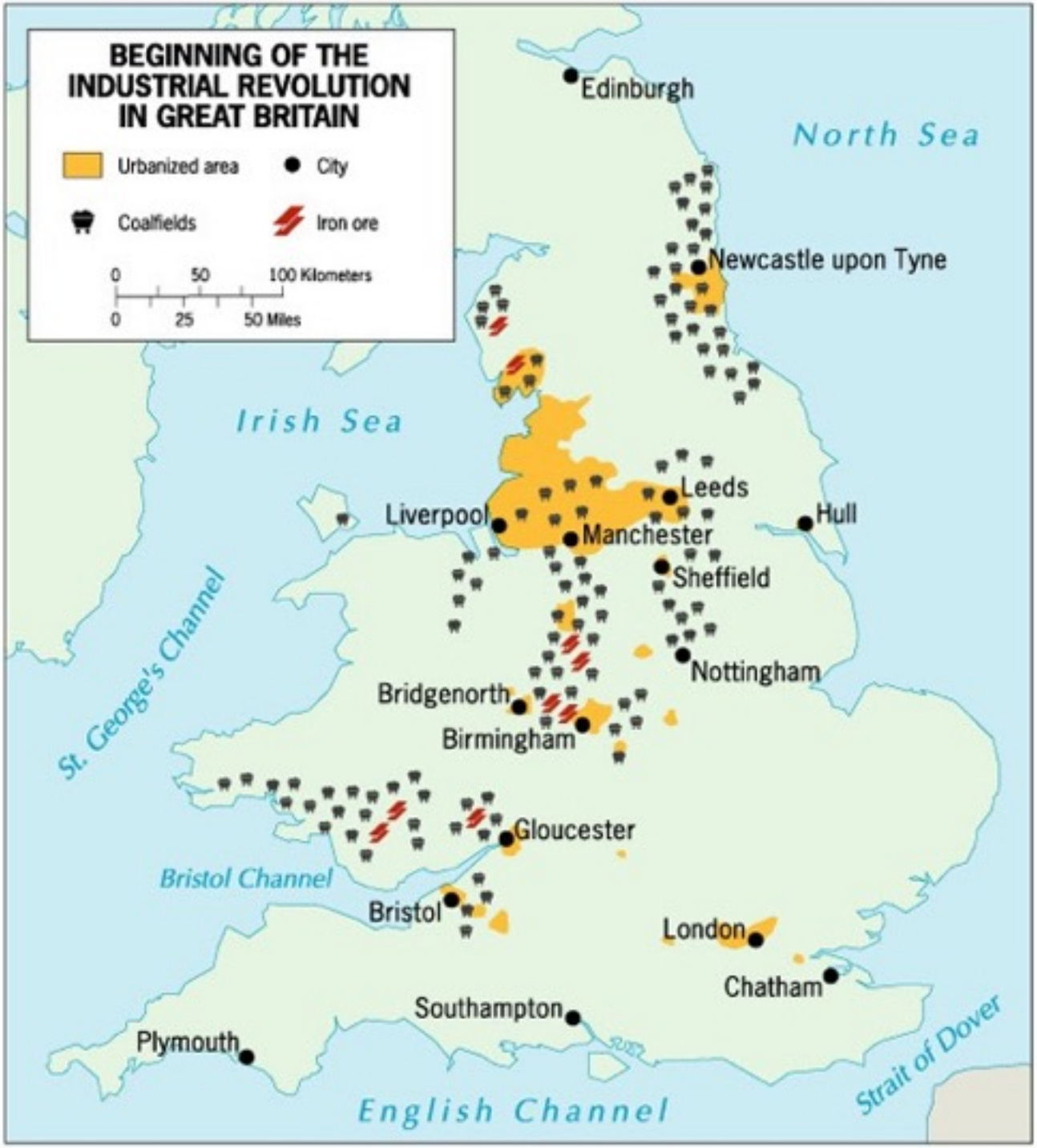
A system began to perpetuate itself

- Coal was needed to smelt iron, which was used in steam machines for mining coal. Steam engine locomotives made of iron and running along iron tracks were powered by coal which was mined by steam engines.
- Each industry fed off of the others industries.

Flow of Capital into Europe, 1775

Needed flow of capital in order to fuel the industrial revolution.





10 min: Fill in your maps this early IR resources:

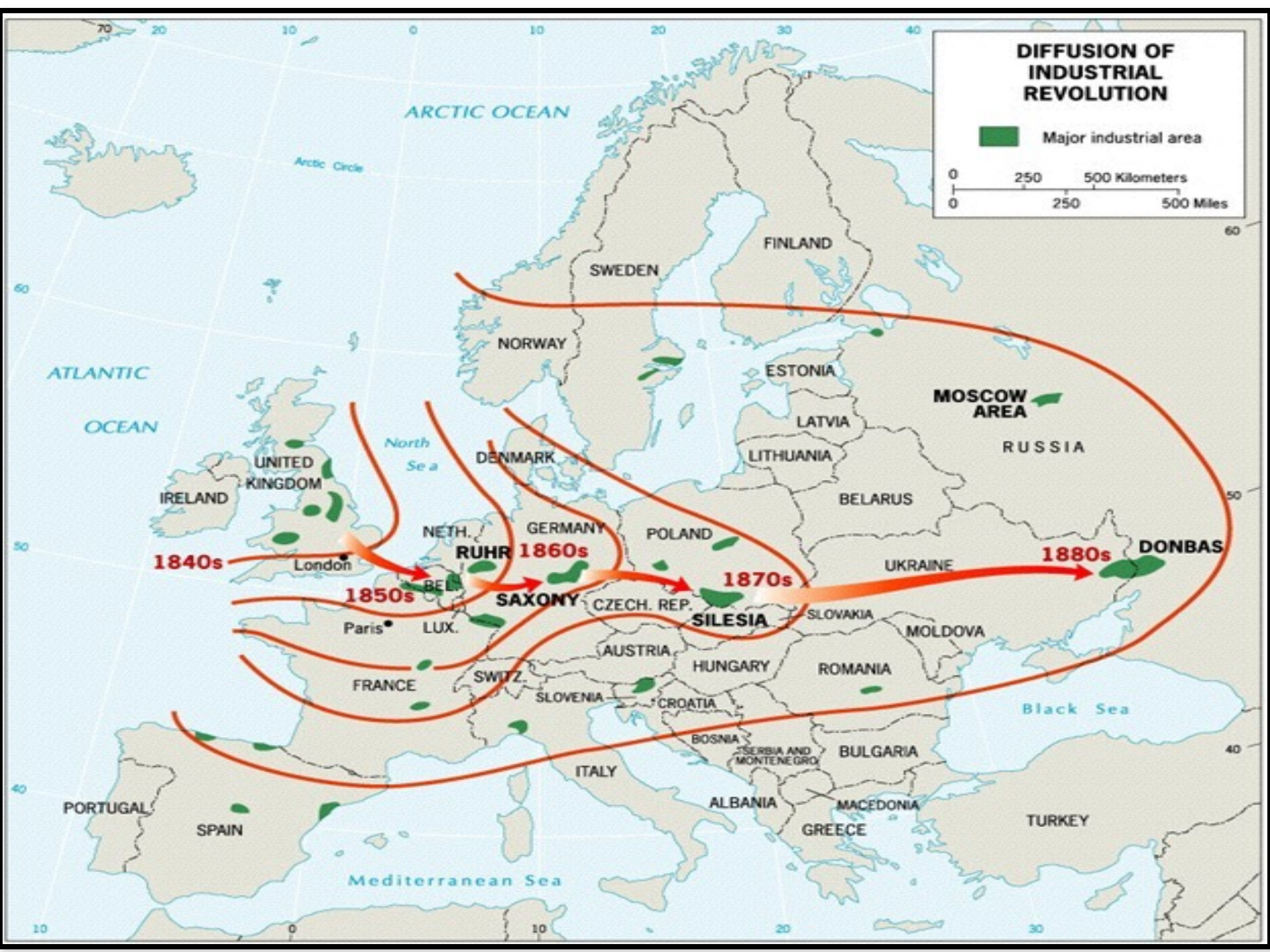
Textiles Production: Liverpool and Manchester

Iron Production: Birmingham

Coal Mining: Newcastle

DIFFUSION FROM THE UNITED KINGDOM

- Britain's Crystal Palace became the most visible symbol of the Industrial Revolution, built to house the 1851 "Great Exhibition of the Works of Industry of All Nations."
- When Queen Victoria opened the Crystal Palace, the United Kingdom was the world's dominant industrial power.
- From the United Kingdom, the Industrial Revolution diffused eastward through Europe and westward across the Atlantic Ocean to North America.
- From these places, industrial development continued diffusing to other parts of the world.


DIFFUSION OF INDUSTRIAL REVOLUTION
Major industrial area
0 250 500 Kilometers
0 250 500 Miles
ARCTIC OCEAN
Arctic Circle
ATLANTIC OCEAN
North Sea
Black Sea
Mediterranean Sea
FINLAND
SWEDEN
NORWAY
ESTONIA
LATVIA
LITHUANIA
BELARUS
RUSSIA
MOSCOW AREA
DENMARK
UNITED KINGDOM
IRELAND
London
NETH.
GERMANY
POLAND
RUHR
1860s
1840s
1850s
SAXONY
1870s
SILESIA
1880s
DONBAS
UKRAINE
BEL.
LUX.
Paris
CZECH. REP.
SLOVAKIA
MOLDOVA
AUSTRIA
HUNGARY
ROMANIA
SWITZ.
FRANCE
SLOVENIA
CROATIA
BOSNIA
SERBIA AND MONTENEGRO
BULGARIA
ITALY
ALBANIA
MACEDONIA
GREECE
TURKEY
PORTUGAL
SPAIN

Diffusion to Mainland Europe

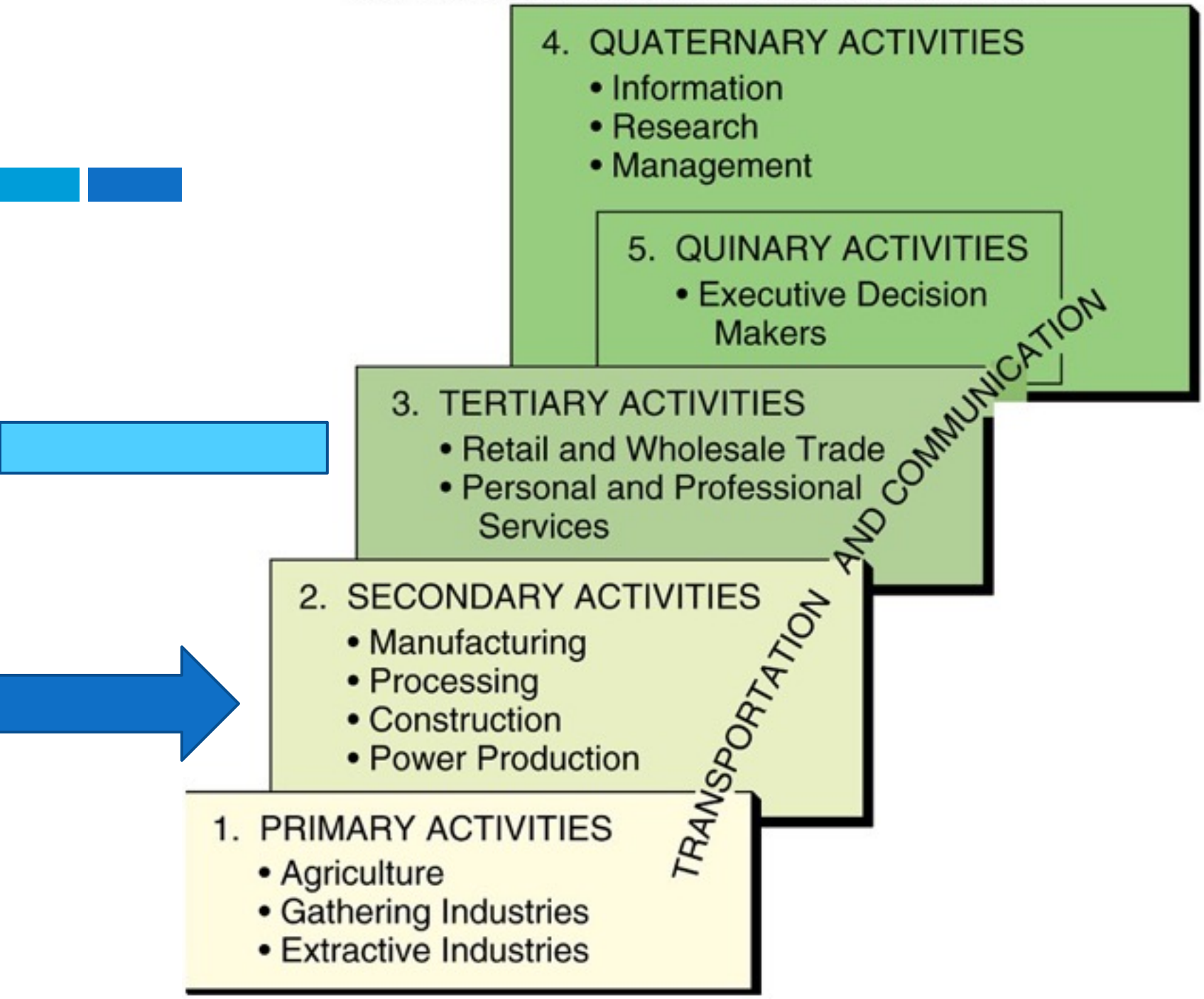
Early 1800s, innovations diffused into mainland Europe.

Location criteria: proximity to coal fields
connection via water to a port
flow of capital

Later Diffusion

Late 1800s, innovations diffused to some regions without coal.

Location criteria: access to railroad
flow of capital



SITUATION FACTORS

Why are industries located where they are?

Bellringer

- Set your Vocabulary and your Map on your Industrial Locations DESK.
- Review your Vocabulary when you're Done

Bulk reducing industry

- Copper
  - Mining: needs to be near input, why?
  - Concentration: transforms copper ore to a product of a much higher value
  - Smelting: what is the input?
  - Refining: proximity to inputs less critical
- Steel
  - How does the importance of inputs change?
  - Mid-1800s: Pittsburgh
  - Late-1800s: Cleveland, Youngstown, Toledo, Detroit
  - Early 1900s: Chicago; Gary, Indiana
  - Mid-1900s: East and West coasts: LA, Trenton
  - Late 1900s: Mostly gone – Lake Michigan and East Coast

Bulk Gaining Industries

- Fabricated Metals
  - Cars
- Beverage Production
  - Water?

Single Market Manufacturers

Perishable products

Modes of transportation

LOCATION THEORIES

Location Theory

- Location Theory – predicting where industry will or should be located.

- List as many things as you can.
  - What should you consider when deciding where to locate an industrial factory?

INDUSTRIAL LOCATION THEORIES

- A location decision must consider all these several factors . . .
  - The source of our suppliers… resources… raw materials
  - The political (taxes), cultural climate
  - Labor
  - Market
  - Transportation
  - Power Supply

Location Models

Weber's Model

Manufacturing plants will locate where costs are the least (least cost theory)

Theory:

Least Cost Theory

Costs: Transportation costs, market location, Resources location

Hotelling's Model

Location of an industry cannot be understood without reference to other industries of the same kind.

Theory:

Locational interdependence

Losch's Model

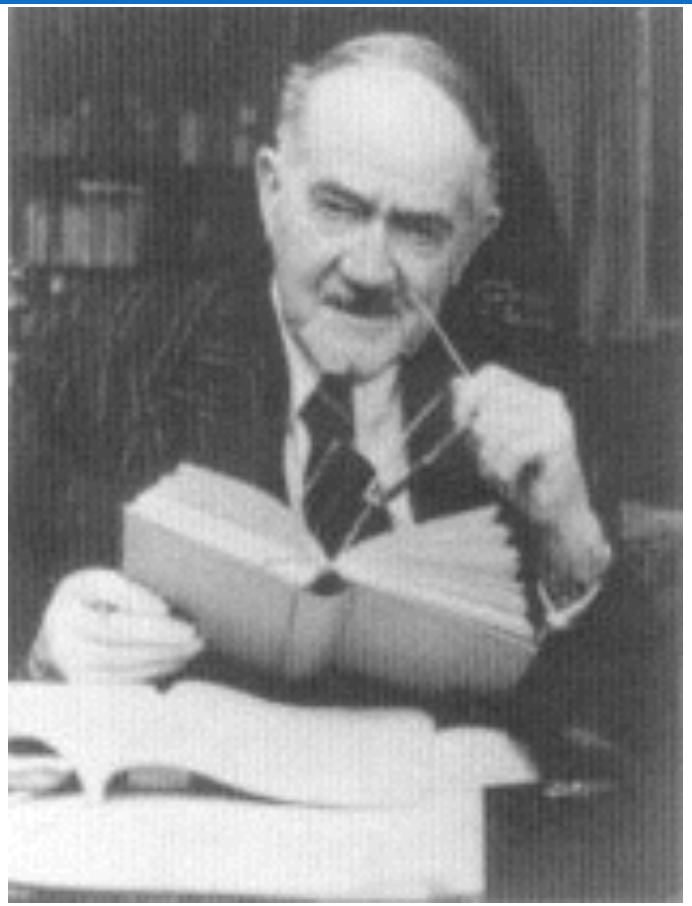
Manufacturing plants choose locations where they can maximize profit.

Theory:

Zone of Profitability

LEAST-COST THEORY

- The Classical Model developed by economist Alfred Weber (1868-1958)
- Considerations:
  1. Location of Raw Materials
  2. Location of the Market
  3. Transportation Costs



WEBER'S FIVE ASSUMPTIONS

1. UNIFORMITY - An area is completely uniform physically, politically, culturally, & technologically
2. ONE PRODUCT/MARKET - Manufacturing involves a single product to be shipped to a single market whose location is known
3. RAW MATERIALS FROM MULTIPLE LOCATIONS - Inputs involve raw materials from more than one known source location
4. INFINITE /IMMOBILE LABOR - Labor is infinitely available but immobile in location
5. FIXED TRANSPORTATION ROUTES - Transportation routes are not fixed but connect origin & destination by the shortest path; and transport costs directly reflect the weight of items shipped & the distance they are moved.

Final Decision for Location

- Final decision regarding location is based on:
  - Distances
  - Respective Weights of the Raw Material Input
  - Final Weight of the Finished Product
  - Material (Resource) or Market (Finished Product) Oriented
- Weight/Bulk gaining industries:
- Weight/Bulk reducing industries:

Other Locational Considerations

Agglomeration Economies

- **Agglomeration-** The spatial concentration of businesses/industries for mutual benefits.

- **Deglomeration** – when it's more profitable for a company to move to an isolated location.

Examples of Agglomeration

- Dalton, Georgia
  - All but 1 of the top 20 U.S. carpet makers
- Wall Street
  - Banking Industries are located near the Stock Market
- Silicon Valley, California
  - High-Tech Companies/Computers
- Research Triangle
  - pharma

Benefits of Agglomeration

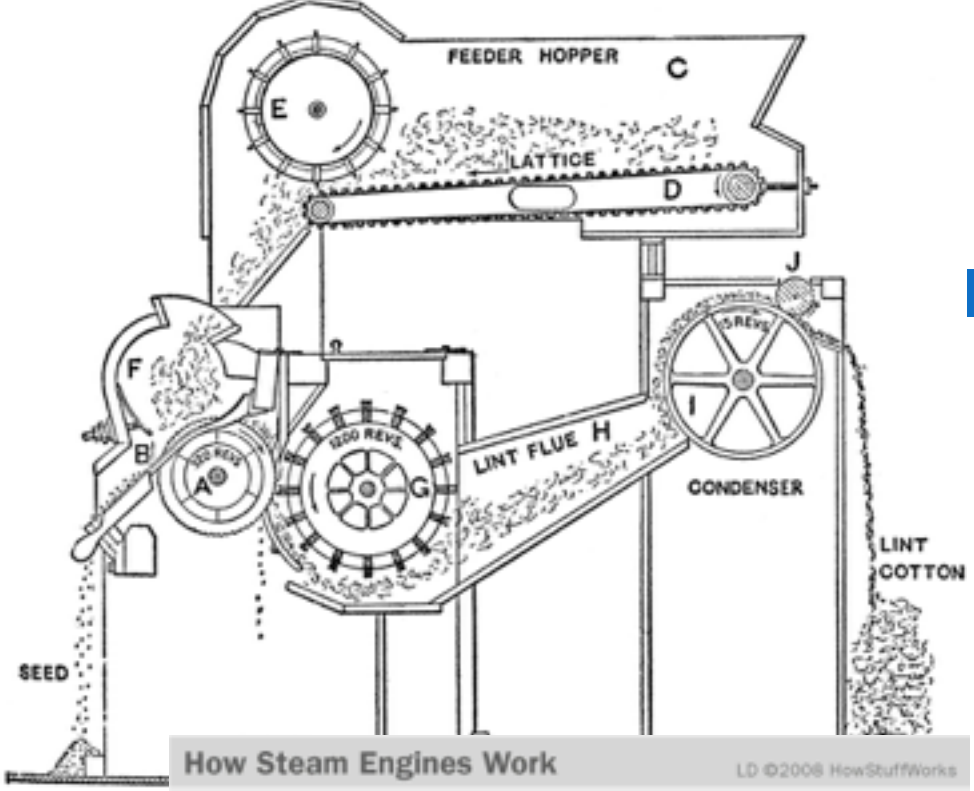
- Similar or interrelated companies nearby
- Pools of Skilled & Ordinary Labor
- Capital
- Infrastructure
- **Localization Economy -** when businesses group in an area in order to share the labor force
- **urbanization economy -** businesses group in cities to take advantage of infrastructure… ex: subway, powergrid, fiber optics
- **Multiplier Effect –** each new firm added will lead to the further development of infrastructure & linkages

Disadvantages of Agglomeration

- Congestion
- High Land Values
- Pollution
- Increased Government Regulation
- **Deglomeration** – when it's more profitable for a company to move to an isolated location.

SITE FACTORS

Inventions


FEEDER HOPPER
C
E
LATTICE
D
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F
B
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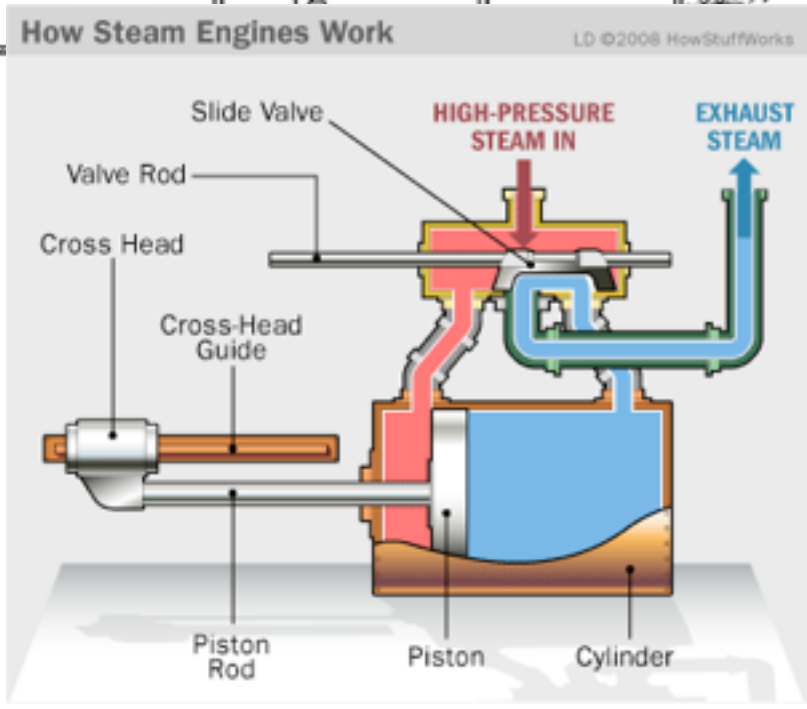
LINT FLUE
H
I
CONDENSER
LINT
COTTON
SEED


How Steam Engines Work
LD ©2006 HowStuffWorks
Slide Valve
HIGH-PRESSURE STEAM IN
EXHAUST STEAM
Valve Rod
Cross Head
Cross-Head Guide
Piston Rod
Piston
Cylinder

LAND

- Encompasses natural and human resources
- Rural: one-story buildings are more efficient; not enough space for giant one story factories in cities
- Trucks: need to be close to major highways

Land

- Environmental Factors:
  - Climate
  - Cultural facilities
  - Low cost energy

LABOR

- ½ billion workers are engaged in industry globally
- China – ¼
- India – 1/5
- MDCs – 1/5
- More people = lower wages

Labor

- Labor-Intensive Industries
  - Wages and compensation for labor is a high percentage of total expenses
  - Apparel and Textiles

CAPITAL

- Borrow money to establish new factories
- Industry must establish itself in an area where banks are willing to lend money to them
- Silicon Valley
  - ¼ of all capital in the U.S.
- How does this effect the relationship between LDC's and MDCs?

INDUSTRY IN THE UNITED STATES

Industrialization

- Industry and manufacturing were at their height in the united states in the late 1800's and early 1900's.
- Production increased greatly due to Fordism.
- USA was at forefront

Fordism

- **Fordism** – assembly line production of identical commodities by a rigidly controlled and specialized labor force for mass markets.
- INCREASED EFFICIENCY, MADE GOODS CHEAPER
  - Named for Henry Ford

Deindustrialization

- Industry had been concentrated around Pennsylvania to Michigan
- Industry has been declining in this region
- Called the Rust Belt because the factories were left to rust

Abandoned Factories

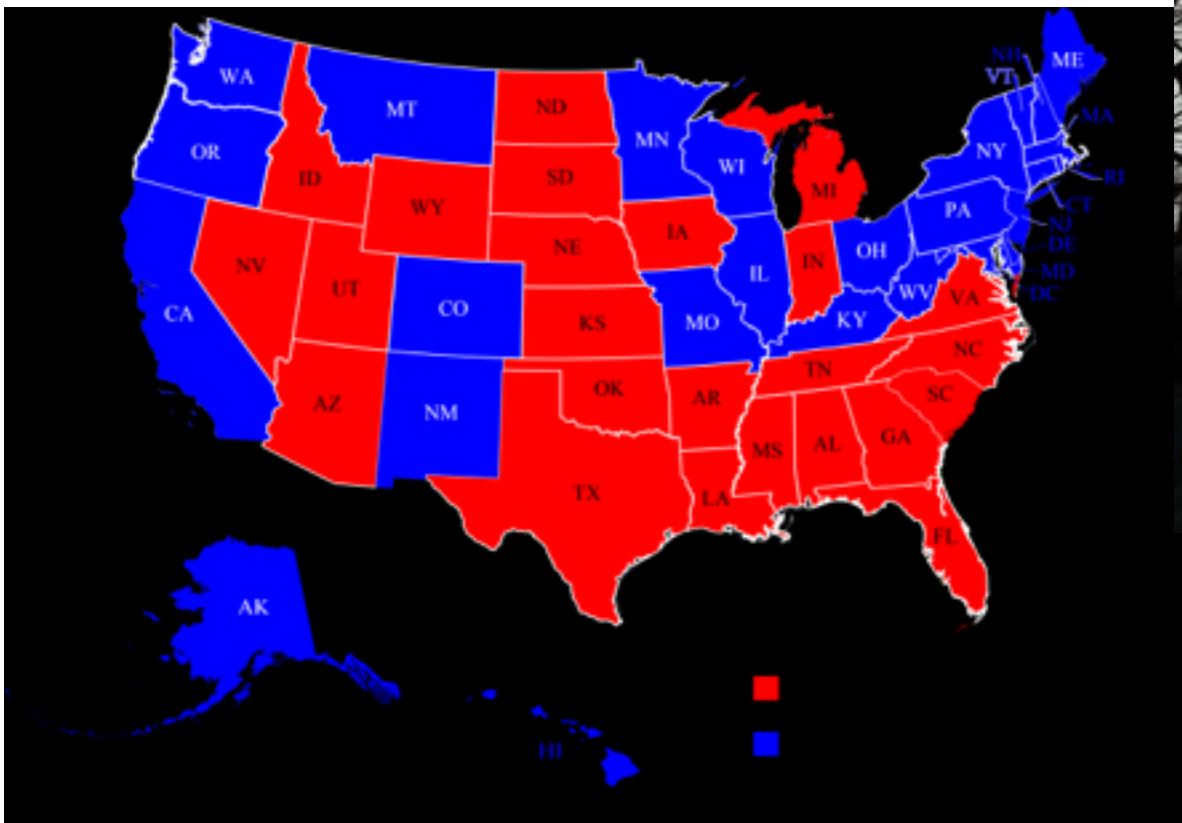
Deindustrialization

- Because land, labor, and capital are more desirable in LDCs, the United States has become deindustrialized.
- The US economy is based on service industries, such as sales, telecommunications, banking, sales
  - Benefit of Services: Low/No Transporation cost

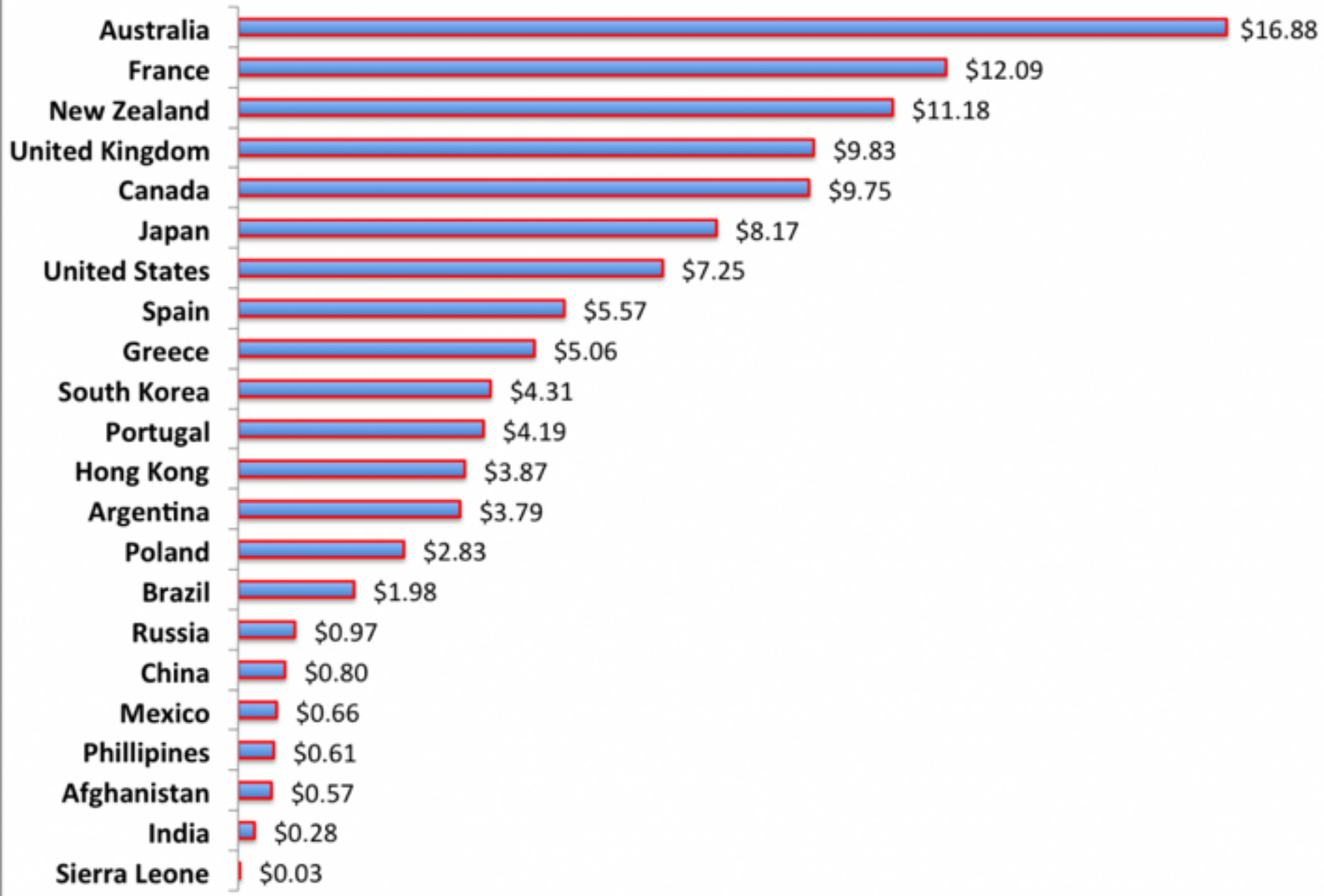
GOVERNMENT AND LOCATION

Government and labor

- Right –to - work Laws: requires “open shop”, workers do not have to join the union as a condition of employment
- How does this draw industry into a certain area?
- Is it good for employees of these industries?



Minimum Wages Around The World



Measures of Development

3 Types of Measures

- Social & Economic Development Measures
- Gender inequality
- Human Development Index (HDI)

- No one measure tells the entire story of a state's development, but combining these measures paints a more complete picture
- **development -** the improvement in the material conditions (goods and services) of a place, as well as the diffusion of tech and knowledge.

Social & Economic Development Measures

- **Gross National Income (GNI)** - calculates the monetary worth of what is produced within a country plus income received from investments outside the country
- **Sectoral Structure of an Economy** - ex: some states rely on primary sectors (1st sector), the USA's economy is increasingly service-oriented (tertiary, quaternary)
- **Income Distribution -** how a society's entire wealth is distributed amongst its people

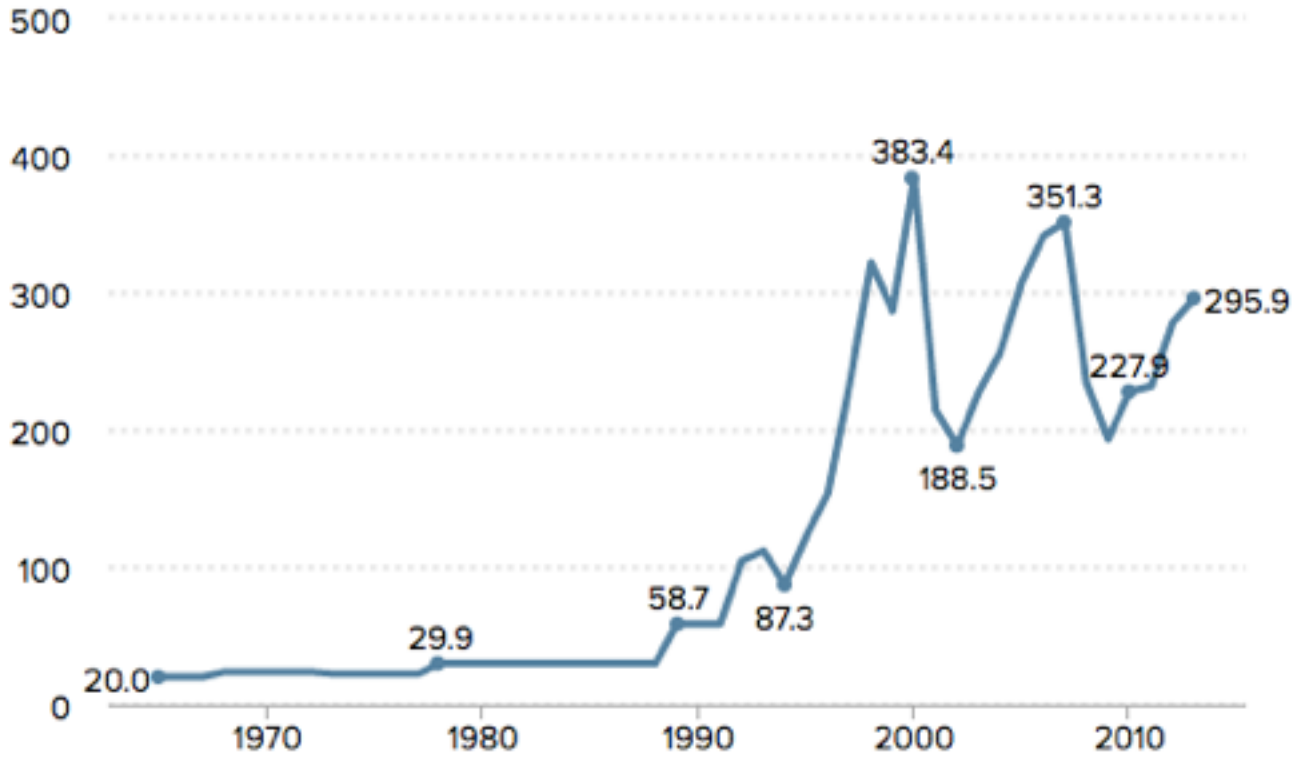
USA Income Distribution

Segment	% Income	Cum. % Income
Bottom 20%	3.6%	3.6%
Second 20%	8.8%	12.4%
Third 20%	18.2%	30.6%
Fourth 20%	29.2%	59.8%
Top 20%	40.1%	99.9%

https://www.youtube.com/watch?v=QPKKQnijnsM

Extreme inequality—CEOs versus the workers they manage

CEO-to-worker compensation ratio, 1965–2013



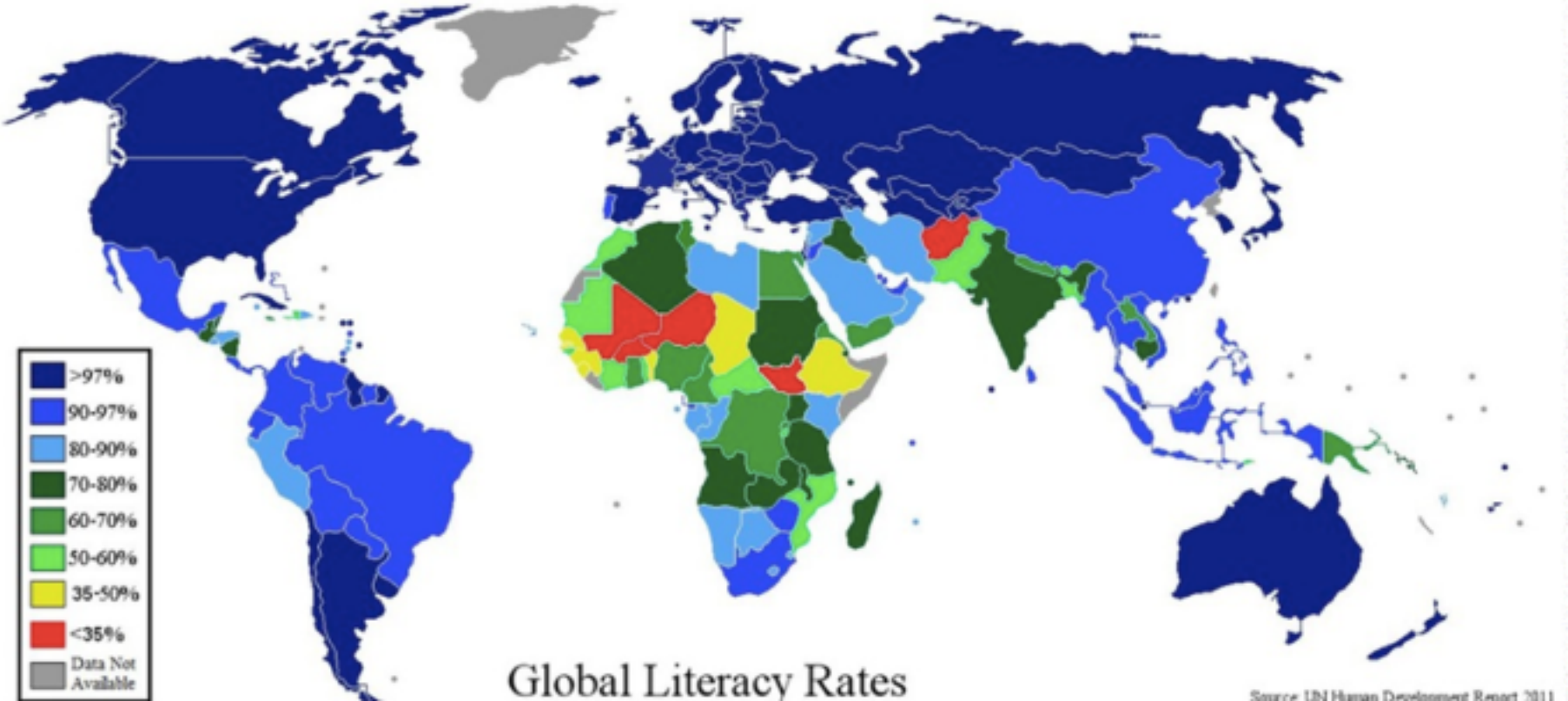
Note: CEO annual compensation is computed using the "options realized" compensation series for CEOs at the top 350 U.S. firms ranked by sales. Typical worker compensation is average compensation of production/nonsupervisory workers in the key industries of the firms included in the sample. ...

Source: EPI analysis of data from Compustat's ExecuComp database, Bureau of Labor Statistics Current Employment Statistics, and Bureau of Economic Analysis NIPA tables

Reproduced from Figure C in *CEO Pay Continues to Rise as Typical Workers Are Paid Less* ...

Social & Economic Development Measures

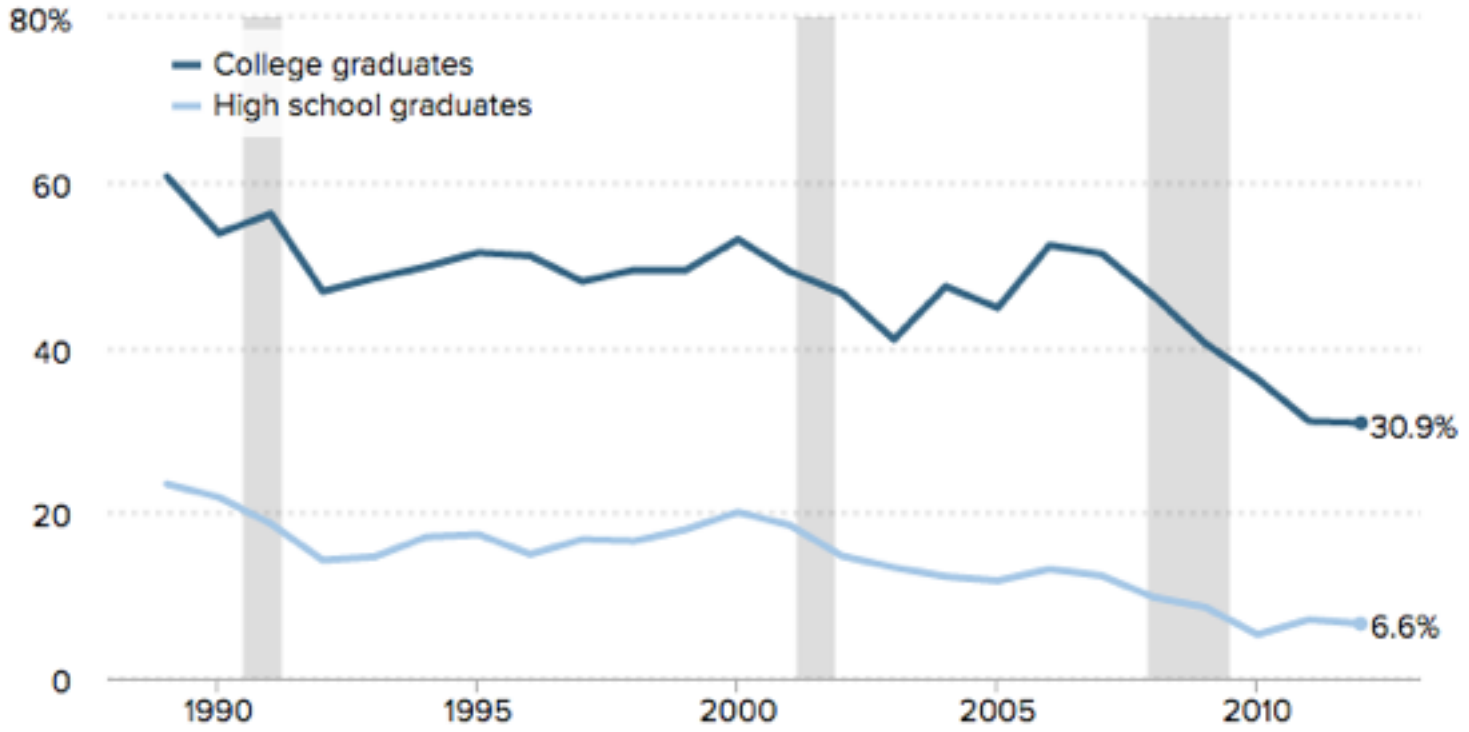
- Fertility Rate
- Infant Mortality Rate
- Access to Health Care
- Literacy Rates



Access to Health Insurance

Eroding health insurance coverage led to health reform

Share of employed recent high school and college graduates with health insurance provided by their own employer, 1989–2012



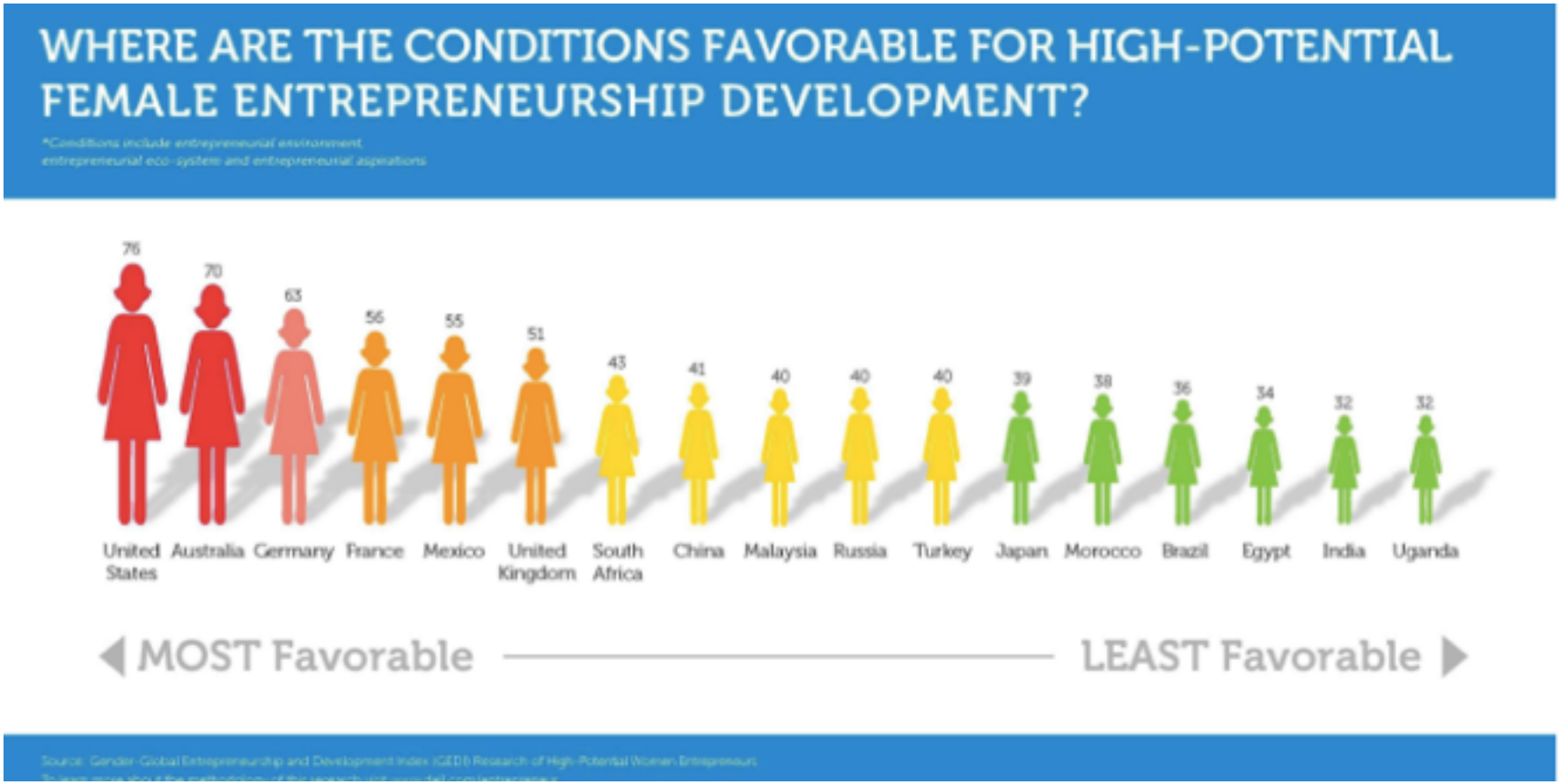
Note: Coverage is defined as being included in an employer-provided plan where the employer paid for at least some of the coverage. Data are for college graduates age 21–24 who do not have an advanced degree and are not enrolled in further schooling, and high school graduates age 17–20 who are not enrolled in further schooling. Shaded areas denote recessions.

Measures of Social/Econ Dev.

- **Human Development Index (HDI)** - *Google search UN Development Programme Human Development Index (HDI)*

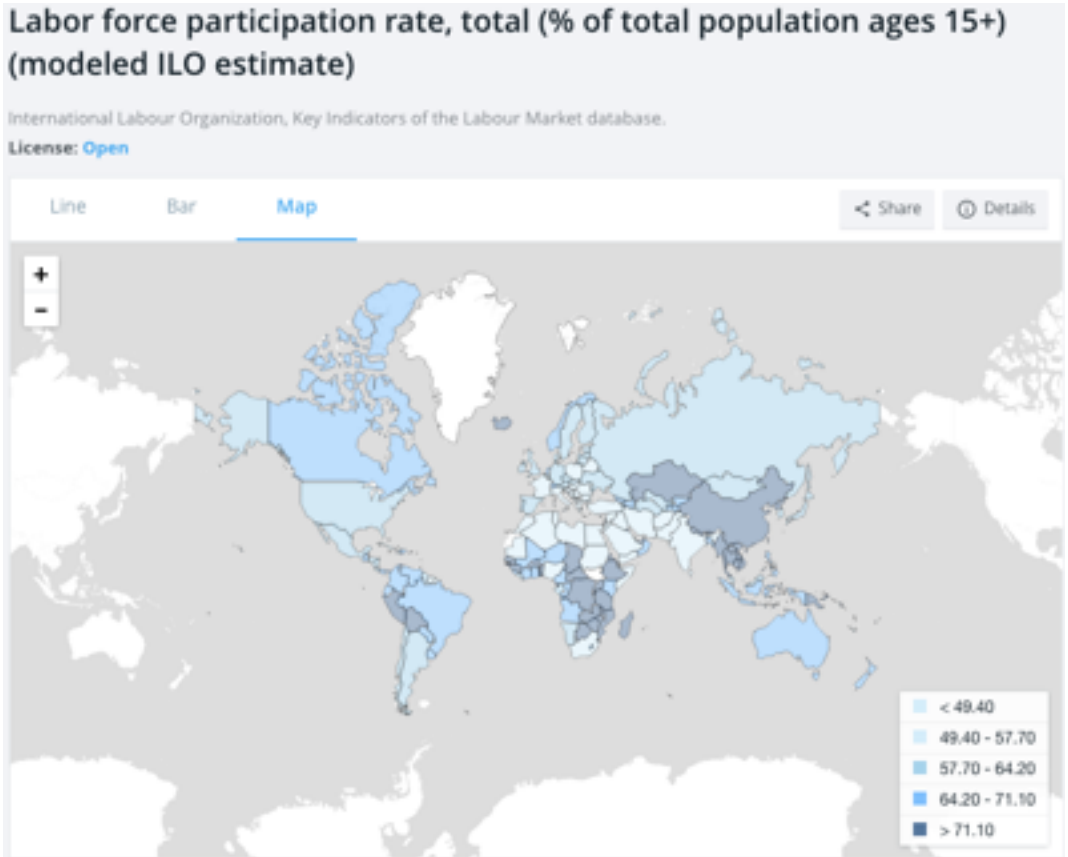
Measures of Gender Inequality

- **Indices (plural of indexes) of Empowerment**



Measures of Gender Inequality

- **Reproductive Health Measures - such as maternal health (source United Nations)**
- **Labor Market Participation**



UN Millennium Development Goals

- UN Millennium Development Goals measure yearly progress on their eight goals
  1. Eradicate Extreme Poverty and Hunger
  2. Achieve Universal Primary Education
  3. Promote Gender Equality and Empower Women
  4. Reduce Child Mortality
  5. Improve Maternal Health
  6. Combat HIV/AIDS, Malaria and other Diseases
  7. Ensure Environmental Sustainability
  8. Develop a Global Partnership for Development

Theories of Development

- **Rostow Stages of Development**
- **Wallerstein's World Systems Theory**
- **Dependency Theory**

Structuralist Theories

- **Structuralism-** A term for development models that treat economic inequality among countries/regions as a result of historically derived power relationships. Strong nations require other nations to be weak.

Dependency Theory

- Even as developing countries make economic advances, they remain weak and subservient to core nations and corporations
- **neocolonialism -** the practice of using capitalism, globalization and cultural imperialism to influence a developing country in lieu of direct military control (imperialism) or indirect political control (hegemony)

Global Interdependence

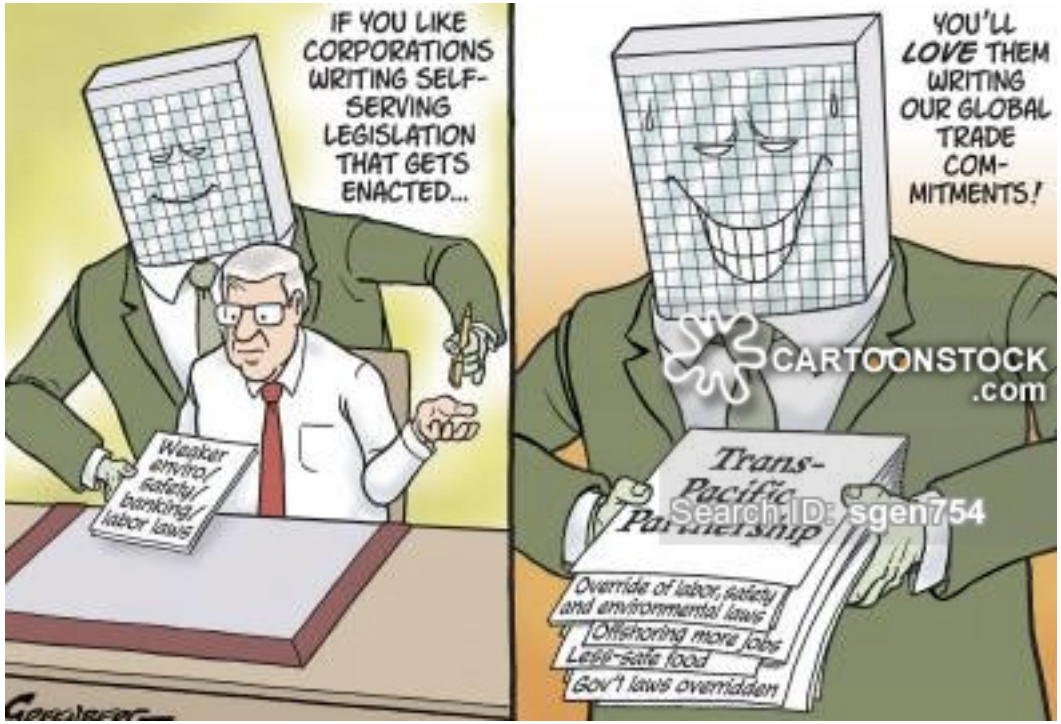
Analyze the causes and consequences of international trade and growing interdependence in the world economy

Why states trade with one another

- **Complementarity comparative advantage** create a basis for trade between different regions of the world
  - **complementarity** = when two regions, through trade, can specifically satisfy each other's demands.
  - **comparative advantage** = when countries specialize in the production of goods and services they can produce with the lowest cost
- This concept posits that countries trading together stimulates their economies

International Trade/Trade Blocs

- International trade & trade blocs (EU, NAFTA, TPP) have become increasingly important because of globalization
  - *Why?*
  - *Google search Trans-Pacific Partnership explained Vox*
  - *Why are some US government officials so against it?*

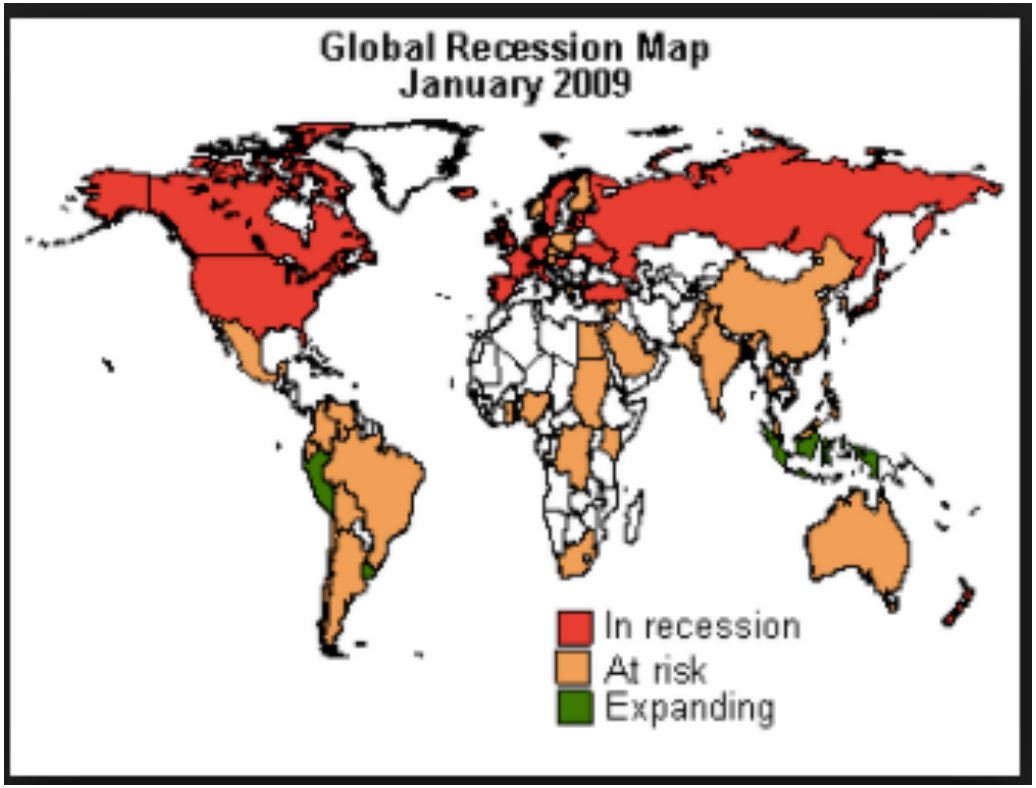


Free trade and Fair Trade

- **Free trade -** *only* market forces (supply and demand) influence trade - not tariffs or other regulations
- **Fair trade -** higher prices are paid to producers (products like coffee, sugar) in developing states *if* they meet certain labor and environmental criteria

Consequences of Global Interdependence

- Financial crises are no longer localized to countries, but entangle the whole world



Barriers to Economic Development

- Low Levels of Social Welfare
  - Trafficking
- Foreign Debt
  - Structural adjustment loans
- Political Instability
- Widespread Disease
  - Malaria

Foreign Debt Obligations

Total interest payments compared to the export of goods and services.

Foreign Debt Obligations

Foreign Debt and Economic Collapse in Buenos Aires, Argentina, 2001

Widespread Disease

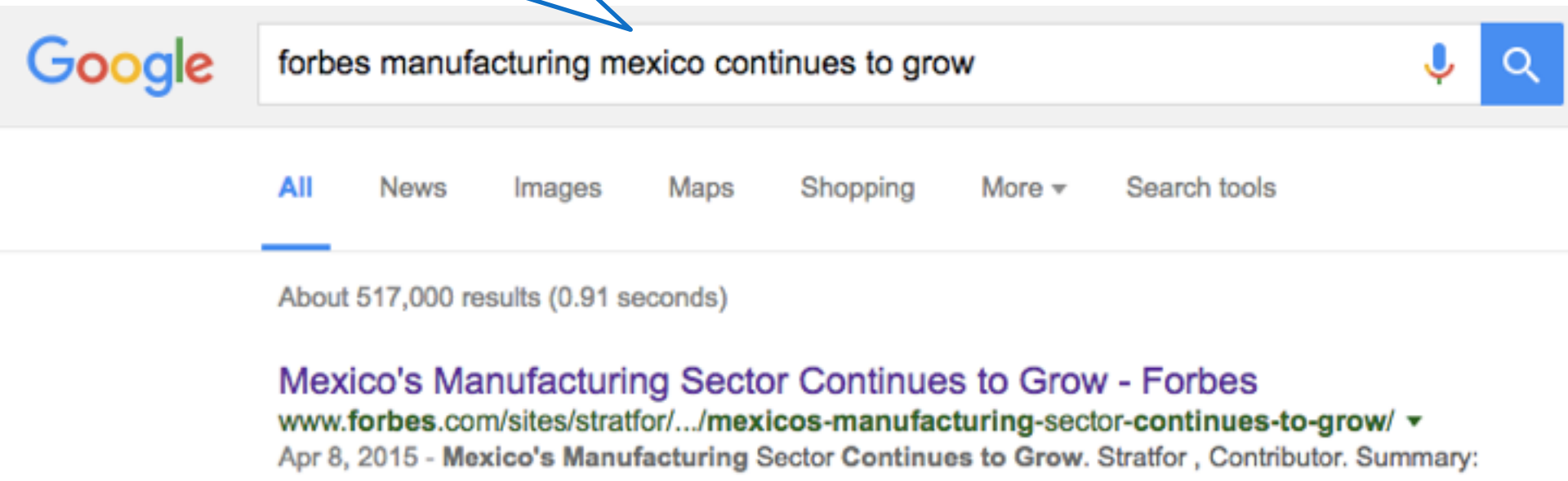
- **Malaria kills 150,000 children in the global periphery *each month*.**

Tamolo, India

This baby sleeps under a mosquito net distributed to villagers by UNICEF workers.

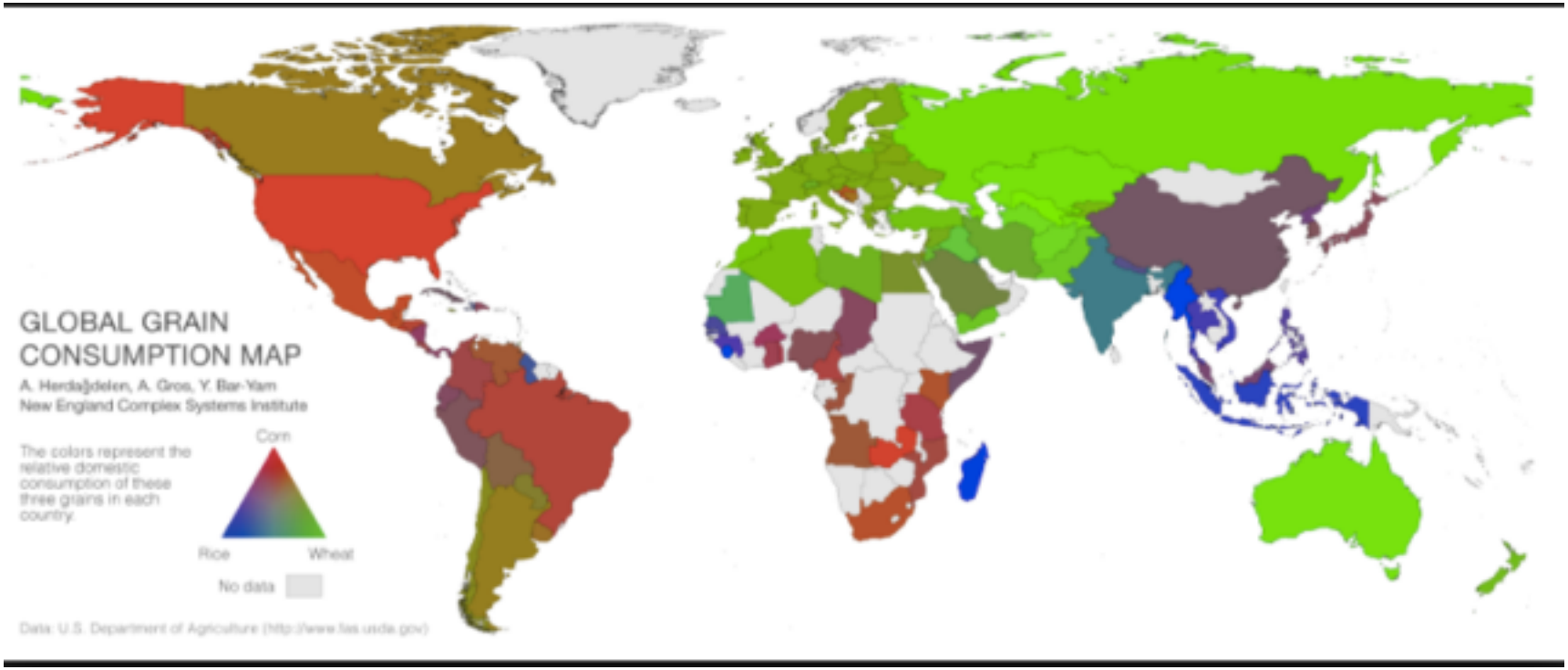
Consequences of Global Interdependence

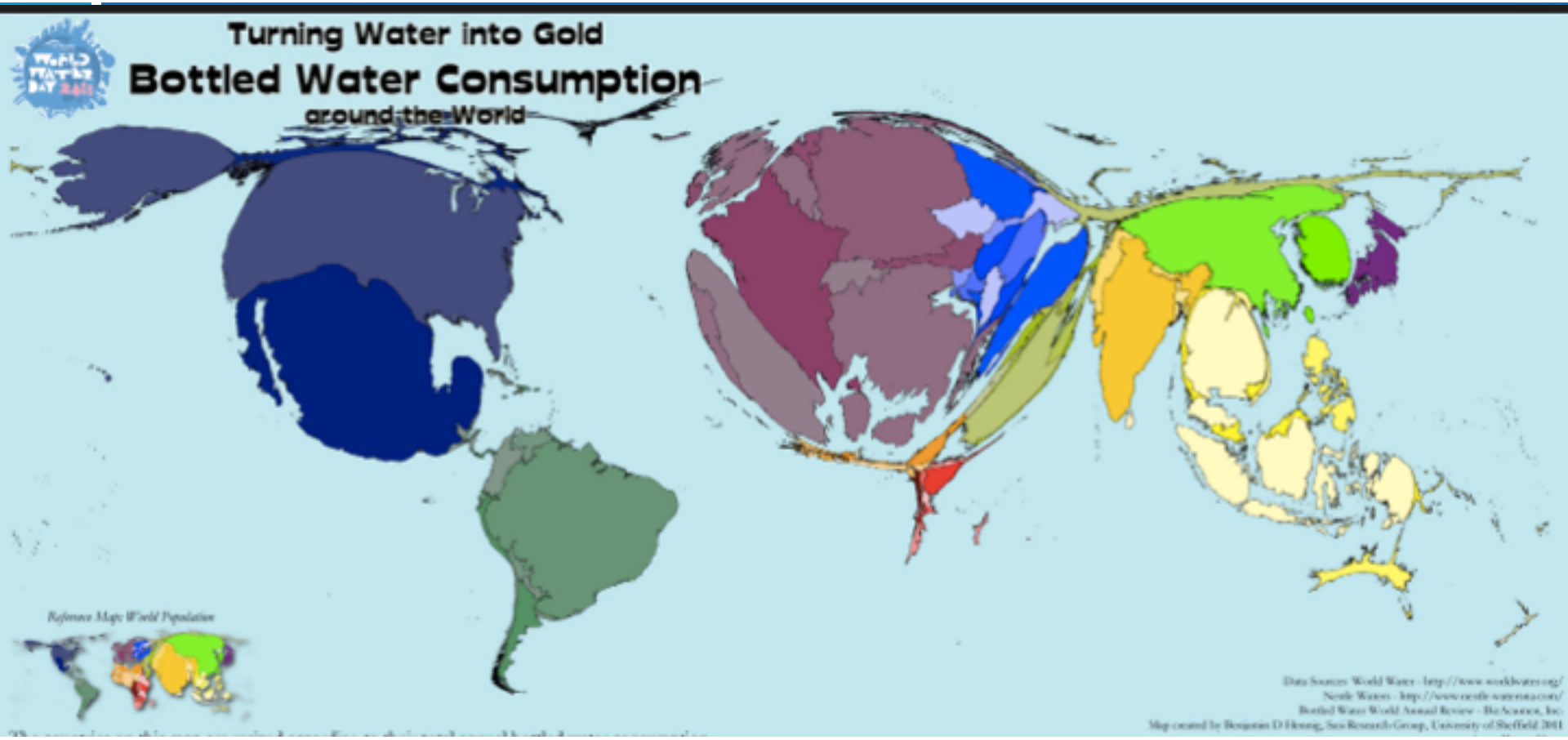
- **Manufacturing has shifted to newly industrial states**
- *Google this*



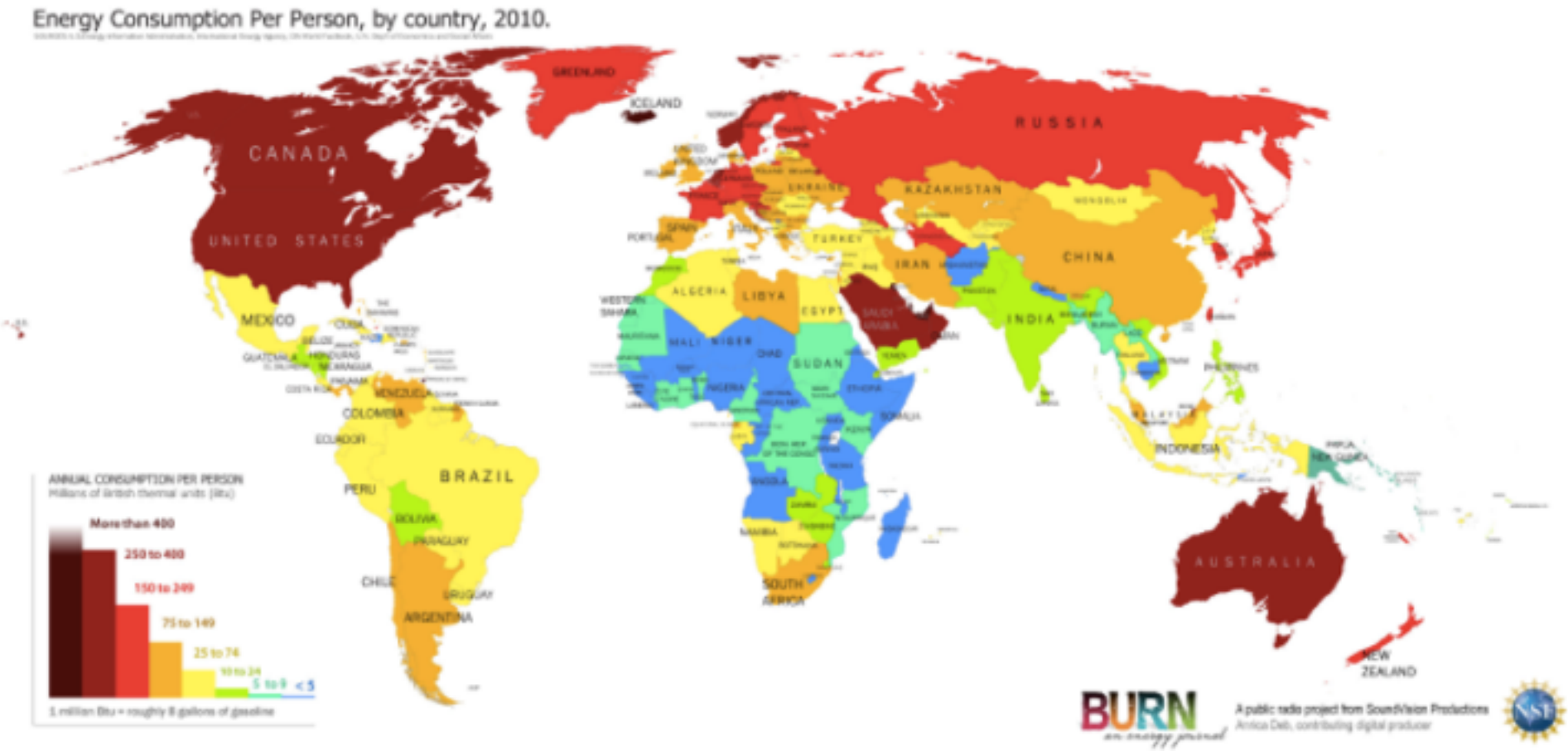
Consequences of Global Interdependence

- **There are extreme imbalances of consumption of goods…**

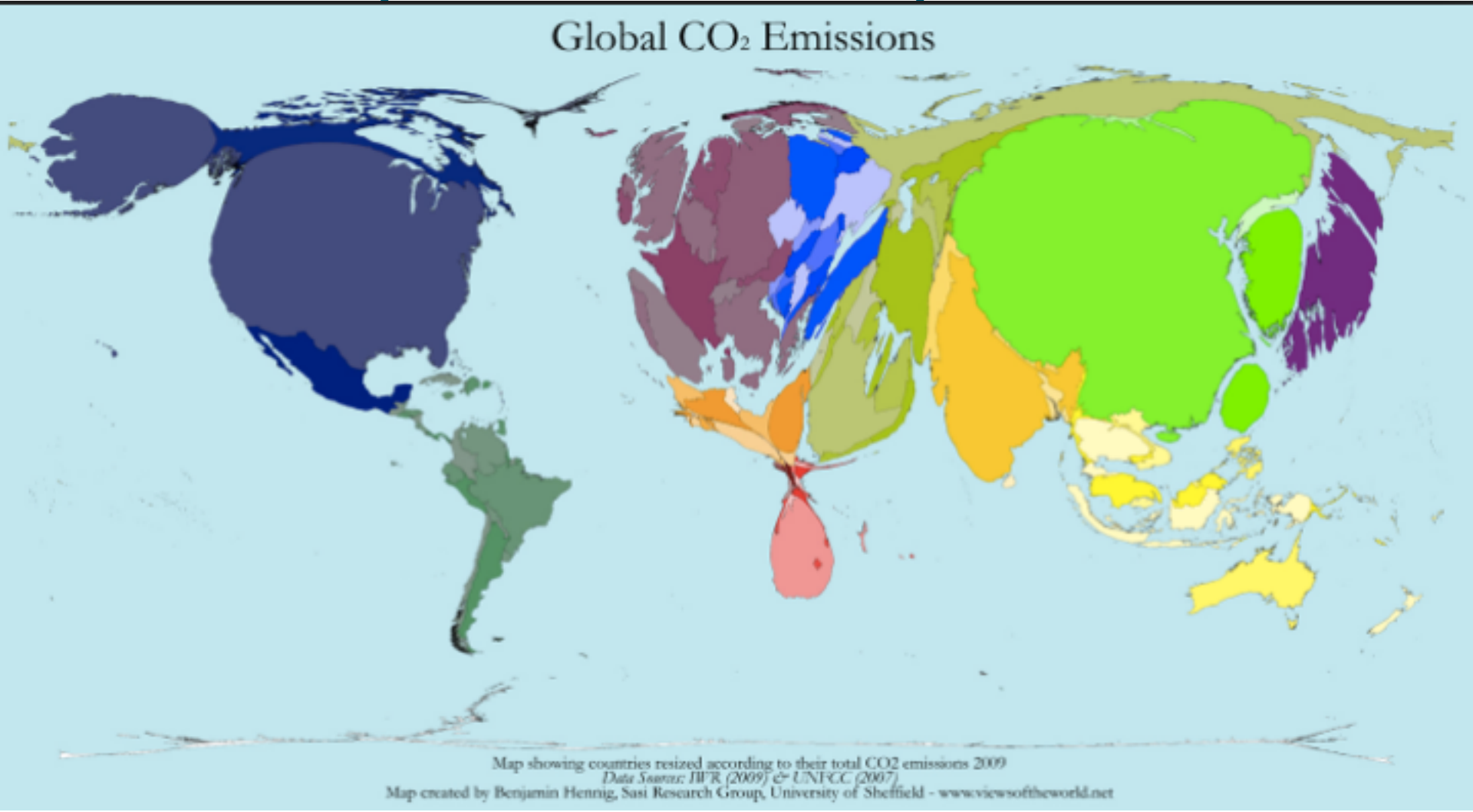



Turning Water into Gold
Bottled Water Consumption
around the World
Reference Map: World Population
Data Sources: World Water - http://www.worldwater.org/
Nestle Waters - http://www.nestle-waters.us.com/
Bottled Water World Annual Review - Beverage Marketing Corporation, Inc.
Map created by Benjamin D Hennig, Sues Research Group, University of Sheffield 2011

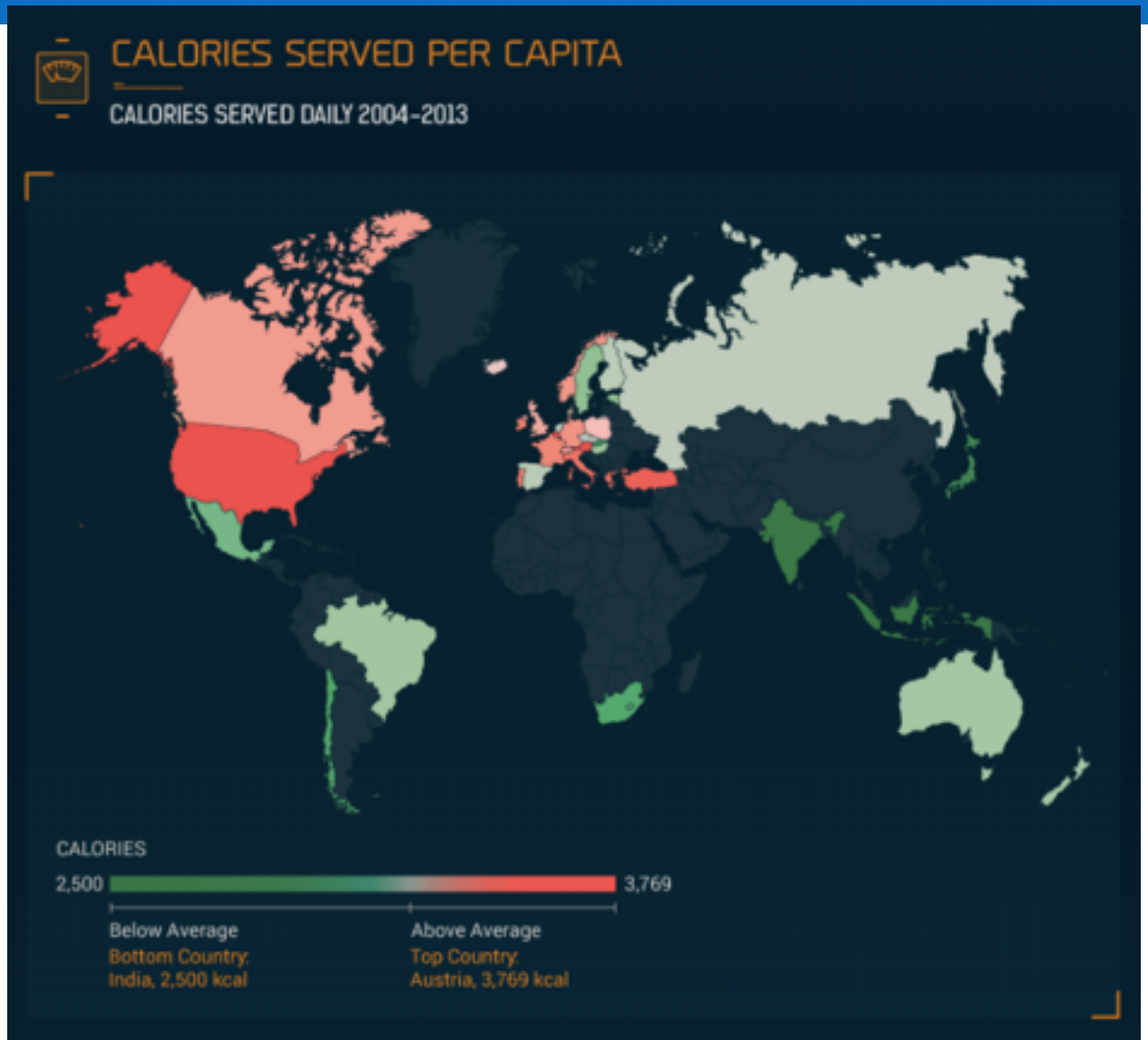
Why is this energy consumption trend unsustainable in the century to come?



Consumption is tied to pollution



MDC people require 130% (on average) their daily calorie requirement.



Economic Restructuring and Deindustrialization

Explain how economic restructuring and deindustrialization are transforming the contemporary economic landscape

outsourcing

- Turning over much of the responsibility for production to independent suppliers
- Outsourcing and economic restructuring have led to a decline in jobs in manufacturing regions and to relocation of segments of the workforce to other areas.

- http://www.youtube.com/watch?v=i5zg1fG7m88

Export-processing zones (EPZs)

- Small areas with exceptional investment and trading conditions that governments create to stimulate and attract foreign investments

Governments enact policies to encourage business development

Maquiladoras

- Foreign-owned assembly companies located in the US – Mexico border region
  - Cheaper labor
  - Favorable tax breaks
  - Lax environmental regulations
  - Close to markets at minimal cost

Maquilladoras

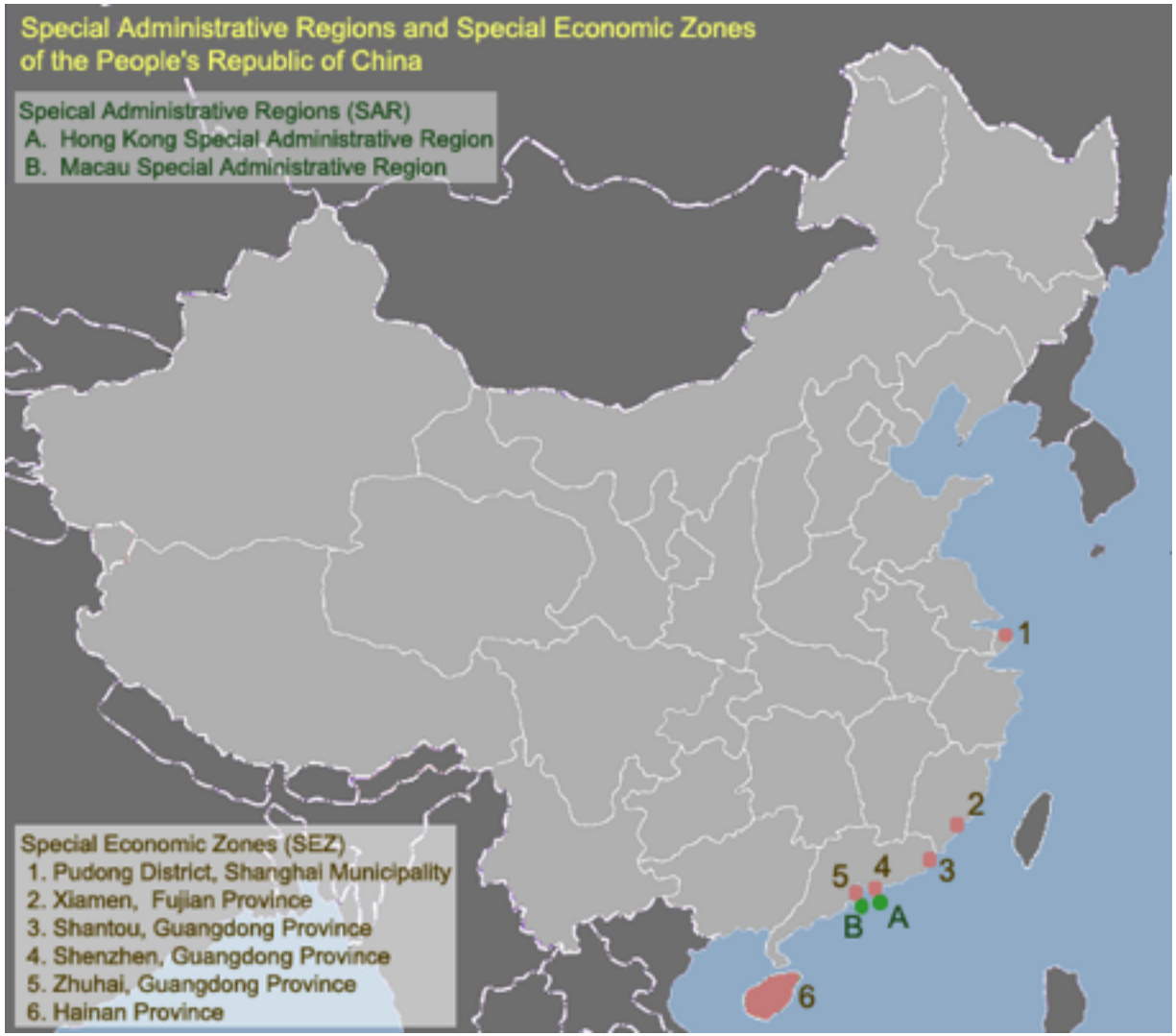
Examples of Maquiladoras in Mexico

BMW
Kodak/Verbatim
Eberhard-Faber
Fisher Price
Ford
JVC
GM
Hasbro
Hewlett Packard
Honda
Honeywell, Inc.
Hyundai Precision America
IBM
Mercedes Benz
Mitsubishi Electronics Corp.
Motorola
Nissan
Philips
Samsonite Corporation
Samsung
Sony Electronics
Toshiba
Xerox

Type of employment: *Worker from Auto Trim de Mexico S. A. de C. V*
Work Schedule: *40 hours per week*
Daily wage: *$8.29*
Minimum wage (Geographic Area A): *$3.44 per day*
Wage per hour: *$1.04*
Weekly salary: *$58.09*
Discount for union dues (4%): *$2.32*
Net pay: *$55.77*

Amount leftover per week for clothes, shoes, entertainment and medical attention: *$2.03*

Special Economic Zones (China)



Other government policies

Offshore Financial Services	Offer low tax rates and privacy laws for wealthy corporations and individuals

- Education
- Taxes, Subsidies
- Education and Funding
- Environmental Regulations

The economic landscape has been transformed by the emergence of service sectors

79.6 percent

The services sector is an important part of the U.S. economy. According to BEA, in 2009 services accounted for **79.6 percent** of U.S. private-sector gross domestic product (GDP), or $9.81 trillion. Services jobs accounted for more than **80 percent** of U.S. private-sector employment, or 89.7 million jobs.

The Services Sector: How Best to Measure it?
trade.gov/publications/ita-newsletter/1010/**services**-sector-how-best-to-measure-it.asp

- The US economy has transitioned from manufacturing to service-based
  - **service economies** focus on research and development, marketing, tourism, sales, and telecommunications.
- **The services sector accounts for 80% of the US economy**

Table 2.1 Employment by Major Industry Sector

Industry Sector	Thousands of Jobs			Change		Percent Distribution			Compound A of Cha
	2004	2014	2024	2004–14	2014–24	2004	2014	2024	2004–14
Total(1)	144,047.0	150,539.9	160,328.8	6,492.9	9,788.9	100.0	100.0	100.0	0.4
Nonagriculture wage and salary(2)	132,462.2	139,811.5	149,131.6	7,349.3	9,320.1	92.0	92.9	93.0	0.5
Goods-producing, excluding agriculture	21,815.3	19,170.5	19,227.0	-2,644.8	56.5	15.1	12.7	12.0	-1.3
Mining	523.2	843.8	924.0	320.6	80.2	0.4	0.6	0.6	4.9
Construction	6,976.2	6,138.4	6,928.8	-837.8	790.4	4.8	4.1	4.3	-1.3
Manufacturing	14,315.9	12,188.3	11,374.2	-2,127.6	-814.1	9.9	8.1	7.1	-1.6
Services-providing	110,646.9	120,641.0	129,904.6	9,994.1	9,263.6	76.8	80.1	81.0	0.9
Utilities	563.8	553.0	505.1	-10.8	-47.9	0.4	0.4	0.3	-0.2
Wholesale trade	5,663.0	5,826.0	6,151.4	163.0	325.4	3.9	3.9	3.8	0.3
Retail trade	15,058.2	15,364.5	16,129.1	306.3	764.6	10.5	10.2	10.1	0.2
Transportation and warehousing	4,248.6	4,640.3	4,776.9	391.7	136.6	2.9	3.1	3.0	0.9
Information	3,118.3	2,739.7	2,712.6	-378.6	-27.1	2.2	1.8	1.7	-1.3
Financial activities	8,105.1	7,979.5	8,486.7	-125.6	507.2	5.6	5.3	5.3	-0.2
Professional and business services	16,394.9	19,096.2	20,985.5	2,701.3	1,889.3	11.4	12.7	13.1	1.5
Educational services; private	2,762.5	3,417.4	3,756.1	654.9	338.7	1.9	2.3	2.3	2.2
Health care and social assistance	14,429.8	18,057.4	21,852.2	3,627.6	3,794.8	10.0	12.0	13.6	2.3
Leisure and hospitality	12,493.1	14,710.0	15,651.2	2,216.9	941.2	8.7	9.8	9.8	1.6
Other services	6,188.3	6,394.0	6,662.0	205.7	268.0	4.3	4.2	4.2	0.3
Federal government	2,730.0	2,729.0	2,345.6	-1.0	-383.4	1.9	1.8	1.5	0.0
State and local government	18,891.3	19,134.0	19,890.1	242.7	756.1	13.1	12.7	12.4	0.1
Agriculture, forestry, fishing, and hunting(3)	2,111.3	2,138.3	2,027.7	26.9	-110.5	1.5	1.4	1.3	0.1
Agricultural wage and salary	1,149.0	1,384.0	1,307.3	235.0	-76.7	0.8	0.9	0.8	1.9
Agricultural self-employed workers	962.3	754.3	720.4	-208.1	-33.8	0.7	0.5	0.4	-2.4
Nonagricultural self-employed workers	9,473.6	8,590.2	9,169.5	-883.4	579.3	6.6	5.7	5.7	-1.0

Sustainable development is a strategy to address resource depletion and environmental degradation

Sustainability Issues

- **sustainable development** is development that **meets the needs of the present without compromising the ability of future generations to meet their own needs**

Trying to be sustainable

- Sustainability addresses issues of…
  - natural resource depletion, mass consumption costs, pollution, climate change, human health, and social & economic equity
- **Ecotourism** - A form of tourism pursued by many ecologically concerned people, who visit regions with pristine ecosystems without damaging the economic system