

US Industrialization



US and Germany were the two next Great Powers who industrialized after Great Britain.

US Industrialization

When?:

US - 1820

Germany - 1850

How fast?:

Short answer: Very fast

US overtakes GB in GDP per capita in 1880

Germany — " ————— in 1870-1900

What sectors?

Leading sectors

UK: Cotton & Iron/Steel

US: Cotton (Very important) & Iron/Steel (Pittsburgh) } Important rivers + coal resources

Germany: Iron & Steel (Ruhr valley)

What were the economies like before industrialization?

Not just agriculture

Germany: Founded in 1871, Prussia: Agriculture

West Germany: Some industrialization

US: Agriculture: Not the most important

Commerce: Fish, Wood, Shipping, Slave trade

↳ Mercantile nation

Where did they get their technology from?

"Steal" it from UK → They were 50 years ahead

Tech:

↳ Tin Plating (Protecting iron from corrosion)

- Slater

- Lowell

England tries to block the transport of skilled workers to other countries
How to hide inventions:

- Patents

- Just hiding the invention

- Trade Secrets

How to get England's Tech:

They can buy it

They can steal it

Important tech:

Railways

Ironworking (Bessemer-process)

New way to create good iron from bad iron ore → important to Germany

How was business structured?

Joined Stock-companies: Banned in England (1770-1850)

What to do?

↳ Partnerships

Financing:

Two ways: Either equity (Eigenkapital) or debt

Equity:

Debt: Small banks at the time, hard to finance

↳ Why small banks? ← They are also partnerships

What does the partnership-structure entail?

- Restricted equity

- Restricted debt (small banks, borrow money from family and friends)

They reinvest a lot

Companies founded at this time:

Cadbury, Lloyds, Fry's, Barclay's ...

↳ Quakers

What is Quakers?

England has a state church (Church of England)

If you are not a member, you can't do a lot of things

You can't:

- Go to University

- Can't become a lawyer

- Can't join the military

- Can't join politics

- Can't join the church

↳ They are rich people thing

Quakers are not in the Church of England

Tight knit community

↳ Very reliable

Slater goes to the US, meets Brown

How do they structure their business?

↳ Slater gets a share of the partnership. Why? They want to encourage Slater

Principal - Agent model

(Brown (Slater

The point of the model: Brown can't observe Slater

↳ Non observable

↳ Non verifiable

Brown can't force Slater to do anything

So: He structures Slater's contract so Slater's interests align with his

↳ Go in to a partnership

Slater: Knowledge

Brown: Money, Well connected, Experience, Business Knowledge

Lowell: Same as Brown

Whaling:

More complicated than normal shipping

1) You don't know where the whales are

2) Can lose the ship

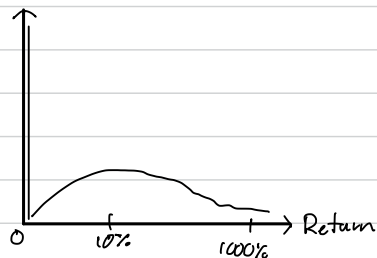
Structure of the Whaling ship:

Similar to modern venture capital syndicate

Agent: Contribute money

The agents choose a captain, he also gets a share

Distribution of return:



Incentivise captains - His actions are unobservable
Spread risk

Whale route:



Natural Resources

Today: US & Germany makes a lot of processed goods

1900th Century: Production was very natural resource intensive
what?

Iron, Coal, Cotton, Lumber, fish, sugar, tobacco etc...

How to know if industry is natural resource intensive?

look at two things:

X = How resource intensive are US imports?

Y = How resource intensive are US exports?

Create a ratio: $\frac{Y}{X}$

Turns out: In the 19th Century: This ratio was 5

Wright made this, and he used input/output tables

2) What was US like before industrialization

Agriculture and Commerce was very important before
and during industrialization

Had to import a lot of natural resources

↳ Cotton from US, Tobacco/Sugar from West Indies

↳ Go look at

c.f. China, Asian Tigers