

Allen - Why did the industrial revolution occur in Britain?

- Factor prices (relative price of wages to energy)
- Why are wages high in England
 - Trade
 - Wages were higher in Britain than in Asia.
 - Why were wages similar in Asia and in Eastern Europe? Malthusian explanation.
 - Demographic change - lower fertility rates (change in family dynamics.) Demographic transition.
- Coal was a cheaper source of energy. (Newcastle coal mines.) Why was coal cheap in all of Britain? Transportation
- People were located in London. (There was a market for coal not just in Newcastle.)
- Why didn't Holland (which also had high wages) have low energy costs?
 - Holland used peat, which at the beginning was cheaper than coal from Newcastle so they didn't form a strong market
- Why is it relative factor prices that lead to industrialization?
 - more incentive to innovate in an energy-intensive way.

- For example, consider Darby. (Used coke in blast furnace instead of charcoal). Allen attributes this to Darby's attempt to create a thinner pot using coal instead of charcoal. (He could sell thinner pots for more money.)
- This leads to cheaper energy: $\frac{\text{wage}}{\text{energy}} \uparrow$
- Cotton spinning - why in England but not France? Since wages were lower in France, capital costs were higher. $\frac{\text{wage}}{\text{energy}} \approx \frac{\text{wage}}{\text{capital}} \downarrow$ Cost of a spinning Jenny:

Jenny:	{	England: 140 days' wages
		France: 373 days' wages
- interest rates 5% + depreciation 5%.
- The Jenny costed about a 10th of a worker in France and about a 20th of a worker in England.
- The industrial revolution started off slowly.
- Profitable at the English price but not at the French price
- Only if the IR starts slowly do relative factor prices matter

Temin and Voth: Due to wars, the British government crowded out investment. Why doesn't this show up in the data? Usury laws.

- Evidence of credit rationing?
 - Loans were decreased just before wartime.
- How did they regress on interest rates if there were usury laws? The consol rate was not controlled.
- How to make the transition to the macro?
 - How to make transition from one bank to describing the macroeconomy.
 - related a measure of output to government borrowing
 - when government borrows, decreases industrial output.

Voth: Industrious Revolution

"Terrific empirical strategy"

- used published court proceedings
 - Voth was interested in what people were doing when they witnessed crime.
 - More information about when people stopped working than when they started. (since more crimes at night than in the morning.)
 - Two samples: 1750 and 1800

◦ More people worked more days in 1800s.
(worked on Monday and holidays.)

◦ Work day for average person was roughly 11 hours.

◦ How does he test for quality of recall? Internal consistency: If crime took place on Monday did the witness say it took place on Monday?

How does he deal with whether or not people are employed? They state their occupation in court.

Note: Just because this paper is empirical does not mean it is econometric.

Two criteria for judging a paper:

◦ Do I believe it?

◦ Do I care?

How does the Voth story relate to the Allen paper?

◦ Voth could be seeing an induced effect from an increase in productivity.
(Gemin doesn't agree here.)

◦ Increase in income/capita could be attributed more to increase in work hours than to increases in technology.