

IndusRevNotes

Feb 22 2022

IndusRev in GB

- Starts in GB ~1750, 1850 GB most powerful, 1900, US+Germ pass Britain

Origins(why GB)

- Agricultural revolution inc food production, lower prices enable purchase of manufactured goods
- Inc population bc ^ and cottage industry provide workers
- Supply of capital
 - Well developed paper currency use
 - Profits from cottage industry + trade
 - Rich ppl shifting from merchantry or cottage textile industry
- Entrepreneurs(spirit)
 - GB society especially likes econ progress
 - Much risk of failure, ruthless decision-making
- Mineral Resources
 - Britain small, ez to transport goods, lotsa rivers
 - Public investment in infrastructure, no internal customs
- Role of Government
 - Stable parliament, prot private property
 - Very laissez-faire
- Markets
 - Victories over Fr+Dutch gives them lotsa colonies
 - Best markets non-european - less luxury-wanting
 - Domestic market w/ best standard of living of anywhere
 - Demand leads ppl to inc supply by industrializing

Tech Changes and New Forms of Industrial Organization

- Cotton Industry
 - GB already Leading textiles w/ cottage industry
 - Flying shuttle inc cloth, need more yarn -> Spinning Jenny, Water frame, 'mule' inc yarn->power loom
 - Entrepreneurs use ^ inventions to organize ppl in factories near rivers
 - ^ Organization of ppl near rivers pops up towns
- Steam Engine
 - Og for pumping water out of mines, adapted w/ shaft to turn wheels
 - Lets spread away from rivers, ensuring success of IndRev
 - 1760 import 2.5mil lbs cotton, 1840 366mil lbs
 - Factory system out-competes all workers everywhere
 - Powered by seemingly endless supply of coal

- The Iron Industry
 - Linked to inc in coal mining
 - New (way more efficient) methods of refining iron
 - Used coke (pre-burned coal) to heat pig iron faster, made stronger 'wrought iron'
 - 1850s prod more iron than rest of world combined
- Transportation Revolution
 - Need for more efficient ways to move goods, New roads and canals, invention of Railroads
 - Early rr in mines, 1804 first real rr, 1830 first public rr
 - Faster (50mph) rr change perception of space - New sense of power w/ modifying nature, thru mountains, etc
 - Side affects: jobs in upholstery, glass, etc etc, more joint stock compaines, inc in civil engineering ability
 - Dec prices of goods, inc markets, inc factories, cyclic like many indrev things
- The Industrial factory
 - Workers no longer own means of production
 - New inc discipline need to keep expensive machines running
 - New systems to have constant effort output (diff from agricultural growing season rush etc)
 - Adults disciplined by fines and firing (esp for drunkenness for obv reasons), Children by beating
 - Reflected in new churches - Methodism (must be disciplined, laziness sinful)
 - Resulting change in attitude, factory life became norm

Britain's great exhibition 1851

- Held at crystal palace - entirely glass and iron
- 6 mil ppl visit over 6 months - many domestic but many international
- Even trees inside palace - reflects human domination over nature
- Also demonstrate colonial power w/ culturally relevant things from india
 - Criticized as inefficient compared to marvelous British system (lol)
- "workshop, banker, trader of the world"

The Spread of Industrialization

- Spread to americas + continent w/ diff speeds
- Pre 1850 - USA, Germ, Fr

Industrialization on the continent

- Low countries, Fr, Germ largely agrarian
- Making similar advances w/ agritech, pop inc, inc trade
- Britain industrializes bc had good infrastructure, no tolls btw boundaries, fewer guilds, more spirit
- Borrowing Techniques and practices
 - Britain tries to prevent spread of inventions (dosent let artisans leave-1825)
 - Not very effective, ~2k tech ppl on continent, 1840 new generations spreading knowledge further
 - France and Germany est tech schools to train ppl
- Role of Government
 - Gavs used to econ involvement
 - Aided tech education, grants to inventors and entrepreneurs, financed factories

- Infrastructure!!! - canals, rr
- Also tariffs - Frederick list argues for them - free trade lets british goods run wild w/o competition
- Centers of industrialization
 - Cotton important but heavy industry more import
 - Factories older mostly, belguim has a lot of coal, modernizes manufacturing with it(most industrialized on continent)
 - Factories more dispersed, cottage industry held on longer
 - France does more luxury goods
 - Until 1820s all machines came from britain
 - More focus on iron stuff w/ coke

The indRev in the US

- 1800 US was very agrarian
- Samuel Slater first factory(waterpwr textile) in 1790
- 1813 power looms, then surpass britain w/ innovation(interchangeable musket parts), 'american system' reduces need for artisans
- Transportation - initially limited by large size, steamboat+rr+canals enable entire US as market for northeastern goods
- Labor Force - primarily moved from rural areas(rapid pop grow), some go west, many do factories esp women(Textiles), some seek to employ entire families
- Decline in rural births dec labor pool, more immigrants from euro
- Women, children, immigrants all unskilled, needs lotsa machine investment - faster mechanization than artisan-full britain
- Northeast higher income, better quality of life, growing myth of social mobility(rich got richer, poor inc purchasing power)

Limiting the Spread of Industrialization in the nonIndustrialized World

- Russia remained rural and agricultural, remained serfs, not much middle class, tsars preferred stability of providing agricultural stuffs
- Why south???
- The Example of India
 - Prevented from industrializing(BEIC controlled much), limited credit, raised transpo, land costs
 - Markets flooded with British goods, unable to be profitable

Social Impact of the indRev

- Much of europe stayed the same, but change obvious

Population Growth

- Inc in pop 18thc cont thru 19thc
- Easier to track w/ census+gov bookkeeping
- Birthrates dropping, deathrates inc w/ less war, famine
- Industrialization didn't directly change population
- Pop % in industry tasks inc

- 1850 Industry still small and decentralizes - islands in agricultural sea
- Overpopulation in countryside
- **The Great Hunger**
 - Ireland mostly peasants working for selfish absentee british lords
 - Potatoes ez to grow, half pop depends on them for survival
 - 1845 potato blight, 1mil die of famine, 2mil emigrate to US+Br
- **Emigration**
 - ~110k/yr immigrants esp from places w/ worst conditions
 - Spurred by bad conditions w/ poor harvests
 - ~1mil left germany
 - More often agricultural ppl move to cities to find work(urbanization)

The Growth of Cities

- Euro not predominantly urban until 20thC
- Cities chg from just for gov+merchants to factories too
- Britain expand in numbers of cities and ppl in each city - became food importer(not exp) bc agri decline
- Continental urbanization happened just less extreme(linked to urbanization)
- **Living conditions in early indrev**
 - Miserable working conditions continuity, just more exadgerated w/ more ppl
 - Wealthy+midclass live in suburbs, as approach city center conditions get worse(Rowhouses)
 - Sanitary conditions bad(streets as sewers)
 - Soot blackened buildings
 - Deaths outnumber births in cities
 - Food often fake(lead instead of pepper), gov refused to intervene bc 'competition'(until 1875 food and drug act)
 - Social investigations in france, then in britain(poor law commission) - see physical and moral differences in city ppl vs midclass
- **Urban Reformers**
 - Well-off see ^^ as danger to society - rebellion, etc
 - Edwin Chadwick - law bkgd, joined poor law comissions, advocated for modern sanitary reforms - lead to Public health act & National board of health
 - Midclass afraid of cholera
 - ANY RELIGIOUS ANDYS HERE??? USUALLY THERE ARE

New Social Classes: The Industrial Middle Class(imc)

- Bougie change from merch/gov/artisan/law/scholar to industrial entrepreneur/banker/teach/doc/shopkeepsish+craftspplish
- **New Industrial Entrepreneurs**
 - Constructed factories, purchased machines, assessed markets - aimed solely to get money by growing biz
 - Hard jobs, many many functions(capital, markets, objectives, org factory/labor, train supervisors)
 - Reinvested profits, feared bankruptcy
 - When did go bankrupt, new ppl take place

- Diverse bkgnds- many successful merchants, some farmers(sheep w/ cotton), religious dissenters(use support of religious communities)
- British aristocrats also became entrepreneurs(MS DALLOWAY SHII)
- **Significance of Industrial Entrepreneurs**
 - 1850 traditional entrepreneurs decline for biz aristocracy(new generation inherit)
 - New role along traditional landed elites

New Social Classes: Workers in the Industrial Age

- Factory workers eventually form proletariat but thru 1850 not majority in cities
- Mostly artisans+crafts ppl, some in luxury biz earn more
 - Guilded workers w/ apprentices but guilds gradually losing power w/ industry
 - Generally anti-industrialization bc it could repl
- ****Working Conditions for Industrial Working Class(IWC)**
 - Psychological affects of discipline(disc. earlier)
 - Worst conditions in cotton mills(hot, dirty)
 - Coal mines w/ ppl dig +horses pull, 3-4ft high tunnels, fumes, humidity
 - Child labor important agriculturally but now more exploited, paid 1/6-1/3 man
 - Pauper apprentices - Orphans in parishes rented out to factories
 - Many became deformed from weird positions
 - Parliament does change for children 1830s+40s for factories and mines(other small places not so much like pottery works)
 - Factory act 1833 dec child labor, repl by women(paid 1/2 man), excessive hrs outlawed in 1844(similar only in factories+mines)
 - Seems natural to continue full family involvement from factory system
 - Still most women work was domestic or agriculture, mostly single women
 - Poor pblm addressed w/ poor laws + workhouses

Efforts at Change: Workers

- Labor organizations to do change
- Some religious involvement - charity
- Combination acts 1799-1800 reaction to french radicalism outlaw workers associations
- Trade Unions still fine tho - skilled workers form them(cotton spinners, ironworkers, coal miners, shipwrights)
 - Preserve current workers position(gatekeep)
 - Gain Benefits from employers(gaslight)
- **The Trade Union Movement**
 - Blatantly illegal strikes lead to repeal of combination acts + new legislation to oversee unions
 - 1820s+30s focus on national unions(robert owen cooperative over competitive lifestyle)
 - Grand National Consolidated Trades Union seeks 8hr work day - lacked real workclass support, collapsed, smaller unions reign
 - Most successful small union - Amalgamated Society of Engineers(1850) unemployment benefits for small weekly payment
- **Luddites**
 - Skilled craftspeople attack machines threatening livelihoods(futile, lol)
 - Show intense passion vs industrialization - never caught, have lotsa local support

- **Chartism**

- First important working class polit mvmnt
- Peoples Charter - Created 1838 by working mens assoc - Universal male suffrage, payment for parlipl, elim of prop qualifications for MPs
- Female support
- 2 petitions w/ milions of signatures presented to parliment 1839+1842, seeking peaceful change
- Underlying threat of force "peacefully if we can, forcibly if we must"
- Parliment didnt want democracy, rejected chartism, died by 1848
- Increased workingclass consciousness, gave sense of proletariat unity

Efforts at Change: Reformers and Government

- Ppl like wordsworth see indrev as destruction of natural world
- Reform ppl campaign vs abuses of factories, esp for children
- **Government Action** - dealing w/ poor ppl
 - Factory acts 1802-1819 limiting child labor to 12hrs/day, <9yrs forbidden to work, children to recieve education during work(ONLY IN COTTON MILLS, NO ENFORCEMENT)
 - Factory act 1833 further strengthened w/ 9-13 8hrs, 13-18 12hrs, factory inspectors able to fine
 - also 1833 2 hrs of education required in a working day
 - 1847 13-18+women dec to 10hrs
 - 1842 coal mines act elim boys<10+women in mines