

- **Industrial Revolution**

o **18th Century Economic and Social Change**

- **Britain = Birthplace of IR**

- **Reasons for why the IR began in Britain**

1. **Agricultural Revolution**

- Producing enough food to feed everyone
- New farming methods
 - Mechanical drill
 - Breeding programs
 - Crop rotation
 - ◆ Instead of leaving *fallow*
 - Fertilizer
- Created a surplus of food
 - Created labor and money available for industry
- **Enclosure Movement**
 - *Commons* = village land that was available for everyone; was bought up
 - Poorest farmers could not survive
 - Forced small farmers off land
 - Forced to search for new job
 - Mobile labor source
 - Willing to move anywhere to find a job
- Land reclamation
 - Gained more usable land
- Land ownership led to incentive to improve production
- Warmer and drier weather in 18th century
- New crops
 - Potatoes, tomatoes, turnips, sugar beets
 - From the new world
- Animal husbandry improvements
 - Sheep raising
- Societies and help groups to discuss agriculture and model farms
 - Sharing ideas
- By 1750 England exported 15% of its agricultural output
- More production = surplus of food

2. **Labor Supply (Demographic Revolution)**

- Workers forced off land
 - **Mobile labor force**
- Population growth
 - Because of improved food production
- Improved health and longer life expectancy
 - Vaccination
 - Fewer epidemics
 - Improved sanitation
 - Fewer and less devastating war
 - Cotton clothing
 - Earlier marriage and more kids
 - Improved diets

3. Inventions

- Continuation of the scientific revolution
 - Solve problems through reason
- One invention begets another
 - Compounding effect
- Most were in farming or in textiles
- At first not very important
 - No brilliant discoveries
 - New applications of existing technology
 - Small workshops replaced Domestic System
- Inventors
 - James Watt - steam engine
 - Abraham Darby - smelting process w/ coke (slowly burning charcoal) not charcoal
 - Henry Cort - puddling process (strong steel)
 - James Hargreaves - spinning jenny (multiple threads)
 - Richard Arkwright - water frame (made cloth)

4. Markets

- Place to sell goods
- Need for increased demand
 - Larger population
 - Growing middle class
 - Colonies

5. Entrepreneurs

- People who organize and manage business
- Wealthy
 - From trade and colonies
- Built factories
- Capitalists
 - Interested in profit
 - Willing to take risk

6. Transportation

- Biggest merchant force in the world
- Canals within England
- Ports
- 1830 - 1st major railroad
 - Liverpool to Manchester
- Made easier to reach markets
- Macadam roads and canals
- Huge *merchant marine* (trading ships)

7. Natural Resources

- Access to natural resources
- On British Isles
 - Coal
 - Very important resource
 - Iron
 - Very important resource
- Raw materials on colonies

8. Investment Capital (Wealth)

- Money to invest
- Wealthy landowners, and merchants
- Low interest rates
- Banking system
- Colonies

- Cheap resources
- Large middle class
 - Entrepreneurs

9. Stable Political Climate (Politically Unified)

- Avoided revolution
- Peace
- Developed responsible legislative system
 - Parliament = worked and secure
 - Government paid off all of the debt
- Act of Union, 1707
 - Created the Kingdom of Great Britain (England, Scotland, Wales)
- Same language
- No internal tariffs
- Standardized weights and measures

10. Religious Attitudes

- Protestant Ethic
 - Encouraged thrift and hard work
 - Save money
 - Focused on worldly concerns

11. Banking and Credit Facilities

- Bank of London
 - Bills of exchange

12. State assistance

- British navy protected merchant marine
- Navigation Acts
- Low taxes and high tariffs on imported goods

Production Methods

- Middle Ages
 - Guilds
 - Granted monopoly by king
 - Set prices, conditions, quality stand
 - Apprentice and master status
 - Tour de France (travel around)
 - Power of guilds slowly breaking down
 - Too exclusive and expensive

- Domestic System
 - Work done at home
 - Very important to the early IR
 - Early IR: increased output due more to an increase in domestic industry than new forms of production
 - Working very well
 - Gradually technology became important
 - Low pay rates in the countryside
 - Persistence of Domestic System
 - Factories eventually replaced workshops
 - Better supervision and discipline
 - Machinery too expensive

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- Thomas Malthus (1766 - 1834)
 - o Essay on the Principle of Population, 1798
 - War, disease, etc = natural
 - Cant do anything about it
 - Population growing faster than food supply
 - Famine / starvation is natural
 - Dismal scientist

- Physiocrats
 - o French economic philosophers
 - Searched for natural laws to explain the economy
 - o Opposed to mercantilism
 - o Land = source of all wealth
 - Not gold or silver
 - Agriculture
 - o Favored free trade