

The Industrial Revolution in Germany

I. Its starting position

- Germany was a latecomer (as opposed to Britain).
- Germany was fragmented into many different states and statelets.
- many customs barriers; different taxes
- differing weights and measures
- different coinage / currencies
- trade and production monopolies (held by states or locally by guilds)
- underdeveloped infrastructure (only few canals, bad roads)
- at times underperforming agriculture (small farms, subsistence farming)
- end of feudalism not before 1807 (*Bauernbefreiung* / emancipation of the peasants in Prussia): lack of mobility of workers
- lack of demand (because of a lack of an economically prosperous middle-class)
- lack of money for investment (no money made in large-scale agriculture and overseas trading; lack of big banks or a central bank such as the Bank of England)
- the German class system was more rigid, less possibilities of social advancement
- conservative / anti-liberal policies (to avoid any political and social revolutions after 1815)
- states continued to follow mercantile policies

II. Reforms

- reception of the ideas of the British economists (such as Adam Smith)
- introduction of liberal ideas (in the field of economics – not in politics, though)
- ending feudalism in Prussia (in 1807)
- introduction of freedom of trade / economic freedom
- abolition of the monopoly of the guilds (e.g. the obligation to join a guild to be economically active in a certain trade)
- introduction of (relatively) free markets → Customs Union in 1834
- state investment in infrastructure (e.g. the first German railway in Bavaria between Nuremberg and Fürth opened in 1835)
- the states founded commercial schools, polytechnic institutes, agricultural colleges, etc.
- at university level the natural sciences were established as academic disciplines (e.g. chemistry by Justus von Liebig in Gießen in 1824)

⇒ Unlike in Britain, in Germany the state governments played an important part in the industrialisation process.

III. The three stages of the Industrial Revolution (Britain, Germany and elsewhere):

- 1st Industrial Revolution: mechanical looms in factories and coal + iron as key industries; steam engines, steam ships, railways (in Britain from 1750s onwards)
- 2nd Industrial Revolution: chemical and electrical industries; combustion engine → cars, planes (second half of the 19th century)
- 3rd Industrial Revolution (digital revolution): space travelling, computing / IT (late 20th century)