

MINI TEST (v. A5)

Check this figure.

Spinning engine by Arkwright. Water powered. Developed by a team of watchmakers from 1767 to 1771 on demand of industrialist Richard Arkwright.



Why is this evidence used for supporting Bob Allen's view of the emergence of the Industrial Revolution? Can the forces in Oded Galor's model account for the concrete circumstances of the emergence of this technology?

This spinning machine was developed based by illiterate industrialist Arkwright, who invested capital in an expensive team of watchmakers for a long period to research a labour-saving machine for a task (spinning) that existed for millennia. The scientific and technological foundations for this machine were not revolutionary. As other English businessmen, Arkwright was confronted with high wages relative to the cost of capital (both the outcome of higher labour productivity: 'sheep', 'ship', 'cheap' issue). Also, he was aware of earlier inventions from the Continent (like Vaucanson's mechanical duck). As such, it illustrates the main forces in Allen's theory on the Ind Rev. Given England's high wage/interest rate ratio, there was a strong demand to develop expensive R&D and mechanize production. Demand, not supply, dictated the English early adoption of productivity-enhancing technology. Since the machine is water-powered, low energy costs do not matter here.

The forces in Galor model contribute to understand the emergence of labour-saving technology in societies that have a better "population composition" (or more prevalent "Quality" elements) and whose culture rewards "future-oriented" mindset and have developed the right institutions. However, while institutions and culture in the Continent were similar and Science and Technology were more advanced (Vaucanson's inventions were earlier), Galor cannot explain the "concrete circumstances" of the decision to develop this innovation in 1767 England.