

# HUMAN CAPITAL FORMATION DURING THE FIRST INDUSTRIAL REVOLUTION: EVIDENCE FROM THE USE OF STEAM ENGINES

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## **Abstract**

We examine the effect of technical change on human capital formation during England's Industrial Revolution. Using the number of steam engines installed by 1800 as a synthetic indicator of technological change and occupational statistics to measure working skills (using HISCLASS), we establish a positive correlation between the use of steam engines and the share of skilled workers at the county level. We use exogenous variation in carboniferous rock strata (containing coal to fuel the engines) to show that the effect was causal. While technological change stimulated the formation of working skills, it had an overall negative effect on the formation of primary education, captured by literacy and school enrolment rates. It also led to higher gender inequality in literacy. (JEL: J82, N33, O14, O33)

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