

# Cross-Country Technology Adoption: Making the Theories Face the Facts

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## *Abstract*

We examine the diffusion of more than twenty technologies across twenty-three of the world's leading industrial economies. Our evidence covers major technology classes such as textile production, steel manufacture, communications, information technology, transportation, and electricity for the period 1788-2001. We document the common patterns observed in the diffusion of this broad range of technologies.

Our results suggest a pattern of trickle-down diffusion that is remarkably robust across technologies. Most of the technologies that we consider originate in advanced economies and are adopted there first. Subsequently, they trickle down to countries that lag economically. Our panel data analysis indicates that the most important determinants of the speed at which a country adopts technologies are the country's human capital endowment, type of government, degree of openness to trade, and adoption of predecessor technologies. We also find that the overall rate of diffusion has increased markedly since World War II because of the convergence in these variables across countries.

**Keywords:** Economic growth, historical data, technology adoption.

**JEL-codes:** N10, O30, O57

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