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Short-Run Pain, Long-Run Gain? Recessions and Technological Transformation*

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Abstract

Recent empirical evidence suggests that skill-biased technological change accelerated during the Great Recession. We use a neoclassical growth framework to analyze how business cycle fluctuations interact with a long-run transition towards a skill-intensive technology. In the model, the adoption of new technologies by firms and the acquisition of new skills by workers are concentrated in downturns due to low opportunity costs. As a result, shocks lead to deeper recessions, but they also speed up adoption of the new technology. Our calibrated model matches both the long-run downward trend in routine employment and key features of the Great Recession.

JEL Codes: E24, E32, O33, J24
Key words: job polarization, routine-biased technical change, business cycle, human capital investment, Great Recession

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