

The Social Consequences of Technological Change: Evidence from U.S. Electrification and Immigrant Labor

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Abstract

This paper examines how technological change affects social cohesion in culturally diverse societies. I study the electrification of U.S. manufacturing between 1900 and 1940, a period of intense industrial transformation and high immigration. Electrification reorganized manufacturing production by replacing steam power with decentralized electric motors, reducing the need for close coordination among workers on the factory floor. This shift allowed firms to hire employees from more diverse backgrounds and may have lowered barriers to integration in the workplace. I link newly digitized maps of the high-voltage grid to full-count U.S. census data and exploit the staggered rollout of electrification in a difference-in-differences framework. I first study changes within industries. Electrification increased the share of immigrant workers, raised ethnic diversity, and reduced occupational segregation along ethnic lines. I then examine local community outcomes. Residential segregation among manufacturing workers declined, and intermarriage between immigrant and U.S.-born spouses increased, while naming practices show no change. Finally, I study native backlash against immigration, measured by employment in local public service occupations. As in earlier work, immigrant presence reduced public good provision, but electrification attenuated this effect, suggesting that greater integration in work and residence eased social tensions. Taken together, the results show that technological change can foster social cohesion by reshaping labor markets and community life. Electrification not only raised productivity but also contributed to immigrant integration and more cohesive communities.

Keywords: Technological Change, Electrification, Immigration, Assimilation, Social Cohesion.

JEL Codes: J15, J61, O33, N32, R23.

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