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Research Report

Patenting with the stars: Where are technology leaders leading the labor market?

David Autor, Anna Salomons, and Bryan Seegmiller Thursday, March 9, 2023

Editor's Note:

This is a Brookings Center on Regulation and Markets working paper.

Abstract

This paper considers the potential labor market consequences of the innovative activity of the largest U.S. firms (‘superstars’) over eight decades. Superstars generate a large share of innovations, and their innovations are technologically distinct and differentially impactful relative to those of other firms. Leveraging a novel patent-level measure of innovations’ labor-augmenting and labor-automating potential, we show that superstar innovations are more likely to augment labor compared to innovations pioneered by other firms, especially in recent decades. Workers of different skill types do not benefit equally, however: top firms’ differential labor augmentation is largely limited to high-paid occupations. This suggests modern-day superstar firms’ innovations contribute to the diverging labor market fortunes of high- and low-skilled workers. We highlight that the social value of augmenting innovations as measured by novelty and intellectual impact has risen while their market value has fallen—particularly for innovations which augment middle-skilled workers—suggesting that labor-augmenting innovations may be under-supplied by the market.

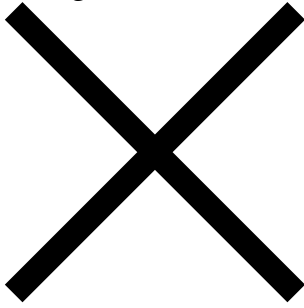
Download the full working paper [here](#).

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financial or political interest in this article. The authors are not currently an officer, director, or board member of any organization with a financial or political interest in this article.

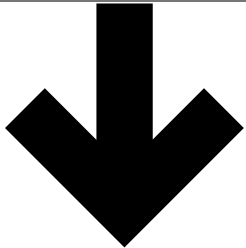

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