

## Faculti Summary

<https://faculti.net/automation-and-the-rise-of-superstar-firms/>

The paper examines two significant trends in the U.S. economy over the past two decades: the rise of automation, particularly through robotics, and the concurrent increase in industry concentration dominated by a few large firms. These trends are observed to be interconnected, with automation technologies being adopted predominantly by larger firms, which in turn fosters further concentration in various industries.

The study poses questions about whether these trends are mere coincidences or if they have a causal connection, exploring how automation contributes to increased sales concentration among top firms while having an insignificant effect on employment concentration. It outlines a theoretical framework where firms make choices between adopting labor-only technology or automation technology, recognizing that larger firms are better positioned to invest in costly automation due to their greater productivity and capacity to absorb fixed costs.

Data indicate that the declining robot prices have primarily benefited larger firms, enhancing their productivity and leading to greater market power—thus increasing industry concentration. The authors utilize an instrumental variable approach informed by earlier robot adoption in European countries to establish causality in the observed relationships. The findings suggest that about 80% of the increase in sales concentration in U.S. manufacturing can be attributed to the decline in robot prices.

In considering policy implications, the paper discusses whether taxing robots would be beneficial. It suggests that while a tax could address market inefficiencies driven by large firms' market power, it may also hinder productivity gains. The authors propose that a small subsidy for businesses utilizing robots could enhance social welfare by balancing these conflicting interests. Overall, the research highlights the dynamic interactions between technological advancement and market structure, advocating for nuanced policy responses to maximize economic welfare.