

Does Increasing Robot Density Exacerbate Wealth Inequality?

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Abstract

This article expands the economic consequences of applying automation technology beyond the labor market to encompass wealth distribution. It empirically investigates the effects of changes in robot density on household wealth inequality and potential mechanisms. By using three-digit industry codes provided by the China Census 1% sampling data in 2015, this paper achieves a more accurate matching of industrial robot data with individual data and employs instrumental variables to alleviate potential endogeneity bias. This paper finds that increasing robot density exacerbates the inequality of family wealth, and this effect has a particularly significant impact on young labor force and workers with low education. Its impact mechanism may come from the inequality of employment difficulty and the increase of the non-transferability of human capital. This study is of great importance to deeper understand the economic consequences of the accelerated use of automation technology and accurately formulate public policies to narrow the wealth gap.

Keywords: Robot Density, Wealth Inequality, Transferable Human Capital

