

# Innovation and Inequality: Creating a More Inclusive Economy in Germany

## ANATOMY AND DRIVERS OF INCOME INEQUALITY IN GERMANY

**Diverging market incomes have led to an increase in disposable income inequality in Germany over the last three decades.** Market incomes of the bottom 50% have stagnated since 1995 while they have increased for the top 50%. The progressivity of the tax and transfer system has largely remained constant and therefore did not fully compensate for the growing inequality in market incomes.

**Technological change is a primary driver of market income inequality.** Reductions in the cost of automation have led to declining labor demand, and thus lower wages and employment in middle-skilled jobs with high shares of routine tasks. Advances in artificial intelligence and robotics are set to continue this trend. The Covid-19 pandemic also increased the incentive to substitute labor with capital-intensive technologies.

## ONE-SIDED POLICY RESPONSE BY PROGRESSIVE POLITICAL PARTIES

**Current policy proposals by progressive parties largely focus on redistribution.** More generous unemployment schemes, funding for retraining, and a universal basic income all aim to reduce disposable income inequality through transfers rather than directly curb inequalities where they emerge: in the market.

**The focus on redistribution appears to stem from an overly deterministic view of technological change.** In public debate, technological change is often characterized as an exogenous force on which policy has little

influence. Consequently, it is viewed as something to which workers need to adjust (or if they cannot adjust, be compensated for) rather than something that needs to adjust to workers.

## TOWARDS A NEW NARRATIVE OF TECHNOLOGICAL CHANGE

**Technological change can be steered into a more worker-friendly direction without adverse effects on productivity.** Technology development and adoption respond to economic incentives and social norms set by innovation and industrial policies. Therefore, the German government *already* shapes technological change. Besides, firms can often choose between technologies with similar productivity but that have varying effects on the composition of labor demand.

## FOUR POLICY IDEAS FOR INCLUSIVE TECHNOLOGICAL CHANGE

- (1) Stronger work councils** could help managers identify labor-augmenting technology options that are more productive than their labor-substituting alternatives.
- (2) Higher capital taxation** could disincentivize the adoption of technologies that displace many workers for small productivity improvements.
- (3) Directed research funding** could foster the development of labor-intensive rather than capital-intensive technologies.
- (4) Higher stock ownership by low- and middle-income workers** (e.g., through a 'social wealth fund') could generate capital market income for those whose incomes fall due to automation.

## RANDOMIZED SURVEY EXPERIMENT WITH WORKERS AT HIGH AUTOMATION RISK

The report presents the results from a randomized survey experiment with 321 German workers, representative of 30 occupations at high risk of automation.

Workers were recruited through targeted Facebook advertisements. A random half of them were shown their occupation-specific automation risk as determined by existing studies as well as a text that emphasized the roles of government, researchers, and firms in technological change.

**(1) Workers underestimate their automation risk.** Compared to expert predictions, workers underestimate their occupations' risk of automation within the next two decades by 44 percentage points. The treatment did not induce a meaningful change in the perceptions of automation risk.

**(2) When asked directly, workers strongly prefer increasing market incomes to increasing redistribution.** Many state that it is important to them to earn their income position self-sufficiently rather than through transfers.

**(3) Workers ascribe the German government some influence on technological change.** For

example, they believe it has a higher influence on the number of new patents filed than the number of new immigrants arriving in Germany.

**(4) There is latent demand for giving work councils a larger role in firm-level technology adoption.** With the treatment, strengthening work councils' rights is the most popular policy proposal among the eight proposals included in the study.

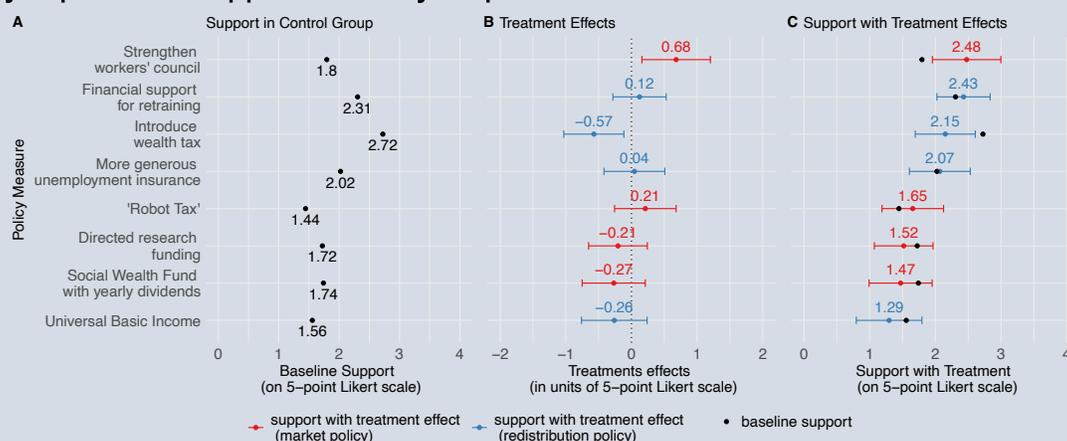
## RECOMMENDATIONS FOR PROGRESSIVE POLICYMAKERS AND POLITICAL PARTIES

**(1) Make directly improving market incomes central to your political messaging on the future of work in Germany.** Appeal to workers' sense of autonomy instead of painting a picture of "economic losers" that deserve compensation.

**(2) Advocate for procedural codetermination for work councils,** giving them the right to propose and partially enforce firm-level participatory processes on innovation questions.

**(3) Support scaling up the 'innovation spaces' program,** a subsidized format in which managers and workers can jointly explore, develop, and test different technology options.

### Survey Experiment: Support for Policy Proposals



Treatment effects are estimated in an OLS regression controlling for respondents' baseline characteristics. N = 291. Error bars show 95% confidence intervals of treatment effects.

For references and details on the analysis and policy recommendations, please refer to the full report or contact me via [lucaskitzmueller@hks.harvard.edu](mailto:lucaskitzmueller@hks.harvard.edu).