

## Macro Roundup Article

**Headline:** [Robots and Workers: Evidence from the Netherlands](#)

**Article Link:** <https://www.nber.org/papers/w31009>

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**Tweet:** Firms that adopted robots in the Netherlands between 2009-2020 increased output by 14.9% relative to non-adopting firms. Workers who were directly affected saw income reductions of about 1.5%. @DrDaronAcemoglu @nberpubs

**Summary:** Robot-adopting firms increase output by about 14.9%, increase employment (hours worked) by 4.3%, and reduce the labor share by 4.6 percentage points, relative to comparable non-adopting firms. The quantitative magnitudes of these estimates are very similar to those from France and Spain. As in these countries, we find negative effects on non-adopting rivals in the same industry. For example, a non-adopting firm experiences a 6.2% decline in hours worked when competitor robot adoption - that is, the share of sales by robot adopters in the same four-digit industry - increases by one standard deviation. The negative effects of robot adoption on workers employed in routine production work and replaceable occupations are predominantly through lower wages.

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