

# Task Displacement and the Rise of US Wage Inequality

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## Abstract

This paper argues that much of the rise in US wage inequality is due to the uneven effects of task-displacing technologies---like automation and offshoring---on different groups of workers. Using a task-based model, we show that real wages depend on the range and value of tasks allocated to each group of workers. By directly altering the way tasks are allocated between workers and capital, task-displacing technologies will have sizable distributional implications despite generating small contributions to productivity. We propose a method to infer the extent to which different groups of workers have been displaced from tasks. The key logic behind our measure is that an industry undergoing rapid automation should see a reduction in its labor share. But not all tasks in an industry are automated at the same rate; this should mostly affect tasks that are easy to automate given existing technologies. Our measure of task displacement captures workers who specialize in routine jobs at industries with declining labor shares. We provide extensive reduced-form evidence suggesting that this measure of task displacement is associated with relative wage declines, identifies many of the groups experiencing stagnant or declining real wages, and by itself explain over 60% of the change in real wages between US demographic groups since 1980. Combining our model and our measure of task displacement, we quantify the effects of task displacement on real wages accounting for the productivity gains from these technologies, the possibility that these technologies shift industry composition, and the reallocation of tasks between displaced groups and others.

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