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Report

How innovation affects labor markets: An impact assessment

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Editor's Note:

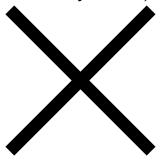
This is a <u>Brookings Center on Regulation and Markets</u> working paper.

Abstract

his paper develops an economic framework to evaluate the impact of a technological innovation on labor demand and inequality, decomposing the effects into five channels that are quantified using data that corporations routinely collect in their accounting and financial planning and analysis departments: (i) the direct channel captures how the innovation changes factor inputs for given output; (ii) the demand channel reflects how pricing decisions affect product demand; and (iii) the factor reallocation effect captures how redundant factors are redeployed in the economy. When supply chain effects matter, (iv) the vertical channel traces the effects on factor demand along a firm's value chain. Moreover, when there are significant within-industry demand effects,(v) the horizontal channel analyzes how factor demand among competitors and providers of complements is affected. The framework informs companies, policymakers, and civil society about what types of innovations and policy environments are desirable to deliver shared prosperity. This paper also provides a sample application of how an automation tool introduced in the fast food industry would generate a redistribution from unskilled to skilled workers.

Download the full working paper <u>here</u>.

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