Aggregating Distortions in Networks with Multi-Product Firms

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Abstract

We investigate the role of multi-product firms in shaping resource misallocation within production networks and its impact on aggregate total factor productivity (TFP) growth. Using administrative data on product transactions between all the formal Chilean firms, we provide evidence that demand shocks to one product affect the production of other products within the same firm, suggesting that firms engage in joint production. We develop a framework to measure resource misallocation in production networks with joint production, deriving non-parametric sufficient statistics to quantify these effects. Applying the framework to Chile, we find that reallocation effects, considering joint production, explain 86% of the observed aggregate TFP growth for the 2016-2022 period. Ignoring joint production leads to overestimating resource misallocation.

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