Estimating the Productivity Gains of Importing

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Abstract

Trade in intermediate inputs raises firm productivity as it enables producers to access both better and novel inputs of production. The question is: by how much? This paper develops a framework to answer this question. We explicitly allow for (i) firms sourcing from multiple countries, (ii) heterogeneity in the quality of these varieties, (iii) heterogeneity of fixed costs at the firm level and (iv) non-homothetic import demand. We provide direct evidence that all these aspects are empirically important. Our main results are as follows. First, we derive a simple formula, which is a consistent estimator for the distribution of productivity gains of past liberalization episodes and can be implemented in readily available firm-level data. In particular, the formula only requires knowledge of firms' domestic expenditure share and the elasticity of substitution between domestic and foreign varieties, which we obtain via production function estimation and exogenous variation in import spending. Secondly, we show that to perform counterfactual policy analysis the full model needs to be estimated. With homothetic demand, this is possible using simple linear econometric techniques. When non-homotheticities are allowed for, we need to take into account the entire non-linear structure of the theory. For the population of French importers, we find that the average firm-level gains relative to autarky are XX% [estimation in progress]. A 10% reduction in trade barriers increases firm productivity by XX% [estimation in progress] on average.