The Global Diffusion of Ideas

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Abstract

We provide a tractable theory of innovation and diffusion of technologies to explore the role of international trade and foreign direct investment (FDI). We model innovation and diffusion as a process involving the combination of new ideas with insights from other industries or countries. We provide conditions for the equilibrium distribution of productivity in each country to be Frechet, and derive a system of differential equations describing the evolution of the scale parameter of these distributions, i.e., the stock of ideas. In particular, the growth of the stock of ideas in a countries is a weighted sum of the stock of ideas in all countries, where the weights are given by trade and FDI shares. We use this framework to quantify the dynamics gains from trade and FDI.

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