

FDI and productivity gains in developing countries: How to make sense of an inconclusive debate?

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Abstract

Policymakers see FDI as a major source for potential productivity gains, but the academic debate on its impact on developing countries is full of contradictions. This short note investigates the impact of FDI on productivity using a meta-analysis of 74 of primary empirical studies published over 1983 – 2013 and dealing with 31 developing countries. We find a positive and economically important productivity spillover from FDI.

Introduction

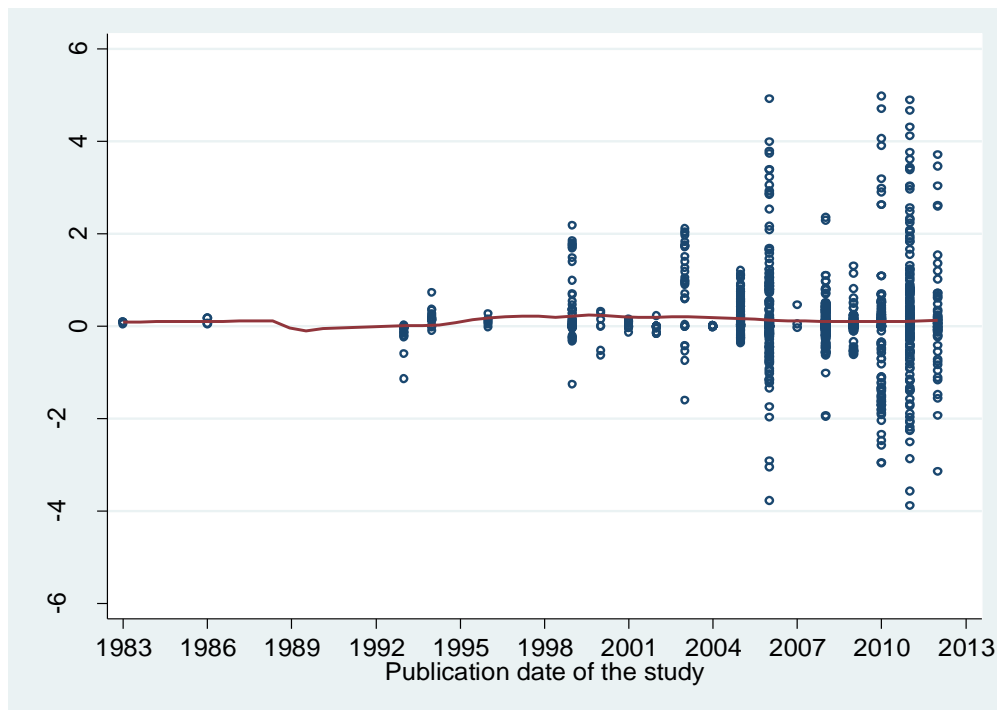
Policymakers appear to be in broad agreement on the positive productivity effect of foreign direct investment (FDI). Investment policies aim to attract FDI in order to stimulate economic growth and development. FDI, moreover, is not simply important as a means to finance development, but especially because it could generate spillovers to domestic firms. The instruments necessary to attract FDI are costly for the host country. Therefore an important issue in the debate about FDI is: did the spillovers materialize? The empirical literature increasingly appears to differ on this issue.

Over the past three decades, many empirical studies have investigated the intra-industry productivity gains from FDI. In Demena and Bergeijk (2017), we systematically review a subset of 74 empirical studies dealing with FDI spillovers in developing countries. These primary studies were conducted by 96 researchers and deal with 31 developing countries.

Contradictory Evidence

For developing countries, the empirical literature starts with Blomström and Persson (1983) that found significant spillovers in Mexico. During three decades a growing body of literature examined FDI spillovers, enabled and stimulated by increased availability of national and international firm-level data. However, the resulting empirical evidence on the actual spillovers is sobering: only about one third of the reported estimates find significantly positive spillovers and one in six findings is significantly negative. Figure 1 illustrates this heterogeneity in terms of the reported sign and size of the spillovers, in particular since the mid-2000s. The sobering message of Figure 1 appears to be that despite the substantial and increasing volume of literature that investigates the productivity gains and hence the policy relevance of promoting FDI in developing countries, the findings in the reported empirical studies are diverging.

Figure 1. Productivity spillover effects in developing countries (kernel plot, 1,545 estimated coefficients, 74 primary studies)



Source: Demena and Bergeijk (2017)

Data and method

To estimate the meta-effect of FDI spillover on firm productivity, we collected data from all accessible primary empirical studies that deal with this issue for developing countries. We use a meta-analytical approach to combine, summarize and investigate the reported estimates of productivity parameters. Doing so, first we provide the weighted average productivity gain. Next, we examined whether this productivity gain influenced by publication (or other) bias and estimate the underlying genuine spillover. Our estimate consider omitted variable bias, endogeneity problems and publication bias. Note that while we refer to productivity gains as findings from developing countries, the existing studies and thus our results are not necessarily representing the whole group of developing countries. This is because the productivity gains from FDI have not yet been estimated for a sufficiently large group of developing countries.

Findings

Basic arithmetic yields a significantly positive weighted average productivity gain of 0.16. We investigated whether this productivity gain is genuine or affected by bias using funnel plots, funnel asymmetry test (FAT), and general-to-specific (GETS) meta-analytical approaches. In line with the pioneering evidence presented by Görg and Strobl (2001) and opposing to the two most recent meta-analyses by Iršová and Havránek (2013) and Mebratie and van Bergeijk (2013), our study clearly identifies publication bias. Additionally, bias occurs due to misspecification error. The reported spillover estimates on average overstate the true spillover by 44%, but this is not caused by publication selection from editors and reviewers or authors' prior interest for "best practice". Unlike Iršová and Havránek (2013) who find insignificant productivity for a mixed sample of developing and developed countries, we find that the underlying genuine productivity gain is statistically significant and economically important with a magnitude of 0.09.

Despite the apparent disagreement in the literature, our meta-analysis provides robust evidence that FDI is economically important for productivity gains in developing countries. An increase of FDI by 10-percentage-points according to our findings can result in a 0.9% increase in productivity gain in developing countries.

For the full version of our study see our *working paper*:

http://metaanalysis2014.econ.uoa.gr/fileadmin/metaanalysis2014.econ.uoa.gr/uploads/Demena_Binyam_Afewerk.pdf or its *published version*:

<http://onlinelibrary.wiley.com/doi/10.1111/joes.12146/abstract>

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