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Regional concentration of FDI involves trade-offs in post-reform India

by
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P. Chidambaram, India's Minister of Finance, claimed that "FDI worked wonders in China and can do so in India."[1] However, China's example may also point to the limitations of foreign direct investment (FDI) liberalization in promoting the host country's economic development. FDI in China is heavily concentrated in the coastal areas, and previous studies have suggested that this has contributed to the increasing disparity in regional income and growth since the late 1970s.

The regional concentration of FDI tends to go hand in hand with agglomeration of economic activity in general and, presumably, domestic investment as well. Conversely, FDI-related spillovers, which are crucially important in order for FDI to have positive effects on growth, have a spatial dimension—i.e., their impact weakens with distance.

Against this backdrop, we systematically assessed the concentration of FDI in Indian districts by drawing on (unpublished) data from the Ministry of Commerce and Industry on projects approved during the 1991-2005 period. While some approved projects may not have been realized, the number of projects is probably much less inflated than approved FDI amounts. In addition to FDI in the strict sense, the dataset also covers technology licensing (so-called technical cases) and projects undertaken by non-resident Indians (NRIs).

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[1] *Indian Express*, November 11, 2005.

We found that the regional concentration of projects, as measured by the overall Theil index,[2] increased continuously since the start of FDI liberalization in the early 1990s. Decomposing the index reveals several sources of growing concentration. Perhaps most surprisingly, the share of districts that did not receive any projects within a three-year interval (the extensive margin of concentration) rose from 57% in 1993-95 to 74% in 2002-04, even though the total number of projects was considerably higher in more recent intervals. Simultaneously, the number of projects increasingly grew more concentrated across districts that received at least one project (intensive margin). Furthermore, inequality widened between the average number of projects of the top six districts (Mumbai, Delhi, Bangalore, Chennai, Pune, Hyderabad) and the districts with fewer projects.

The share of projects going to the top six districts rose from 31% to 77%. This is most probably because these metropolitan areas are attractive in several dimensions.[3] Their per-capita income exceeds the average per-capita income of their respective states by 27% to 136% in 2004/05. The literacy rate is 15 to 20 percentage points higher than the average in India. The top districts also stand out in terms of financial and communication infrastructure.

Comparing the levels of concentration for different types of projects, we generally found the lowest concentration for technology licensing and the highest concentration for FDI projects with majority foreign ownership shares. What the different types of projects have in common, however, is that concentration rose over time.

The level of concentration also varied considerably across major home countries of FDI. On the one hand, it was clearly above average for projects from the United States and, more surprisingly, for projects from the group of Southeast Asian neighbors. On the other hand, the level was relatively low for projects from the group of European Union (EU) countries, and particularly for projects undertaken by NRIs. The difference between the United States and the EU may possibly be attributed to the focus of United States firms on services (particularly in IT), while EU firms engaged more strongly in manufacturing.[4] The particularly low concentration of NRI projects is probably due to NRIs being more familiar with local conditions in relatively remote districts. Importantly, however, the development over time was strikingly similar for all major sources: concentration grew substantially.

Regarding policy implications, Indian policymakers may be tempted to conclude from the different levels of concentration among types and sources of FDI that India's earlier reluctance to allow wholly foreign-owned subsidiaries and its selective approval procedures prior to the reforms in the early 1990s were well-founded and could have helped to spread FDI-related benefits beyond a few economic centers. However, such a conclusion would be premature. With respect to the types of projects, foreign partners may hesitate to transfer up-to-date technology unless they hold majority ownership. Indian policymakers should consider that this involves a

[2] The Theil index is a statistic frequently used in economics to measure inequality or concentration. It is a special case of the generalized entropy index.

[3] A recent study found that metropolitan areas showed a strongly positive correlation with FDI at the district level. *See* Rajesh Chakrabarti et al., "Infrastructure and FDI: Evidence from district-level data in India," available at http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1712185.

[4] This is revealed by a sector classification of projects by the authors.

trade-off between higher overall potential and wider regional spread of FDI-related technological spillovers. With respect to the sources of FDI, the extent to which differences in sectoral focus actually contribute to variations in the level of concentration remains an open question. Further research is required to assess the importance of foreign investors' experience of operating in India when it comes to making location choices. Indian policymakers may be best advised to allow for all types and sources of FDI and use non-discriminatory means of regional policy to promote investment in remote districts.

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