

Nunnenkamp, Peter; Liu, Wan-Hsin; Bickenbach, Frank

Research Report

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

Columbia FDI Perspectives, No. 118

Provided in Cooperation with:

Columbia Center on Sustainable Investment (CCSI) - A joint center of Columbia Law School and the Earth Institute, Columbia University

Suggested Citation: Nunnenkamp, Peter; Liu, Wan-Hsin; Bickenbach, Frank (2014) : Regional concentration of FDI involves trade-offs in post-reform India, Columbia FDI Perspectives, No. 118, Columbia University, Vale Columbia Center on Sustainable International Investment (VCC), New York, NY

This Version is available at:

<https://hdl.handle.net/10419/253952>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



Columbia FDI Perspectives

Perspectives on topical foreign direct investment issues by
the Vale Columbia Center on Sustainable International Investment

No. 118 March 31, 2014

Editor-in-Chief: Karl P. Sauvant (Karl.Sauvant@law.columbia.edu)

Managing Editor: Shawn Lim (shawnlw@gmail.com)

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

by

Peter Nunnenkamp, Wan-Hsin Liu and Frank Bickenbach *

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).

* Peter Nunnenkamp (peter.nunnenkamp@ifw-kiel.de), Wan-Hsin Liu (wan-hsin.liu@ifw-kiel.de) and Frank Bickenbach (frank.bickenbach@ifw-kiel.de) are senior researchers in the International Economy and International Economic Policy research program at the Kiel Institute for the World Economy. This *Perspective* is based on Frank Bickenbach, Wan-Hsin Liu and Peter Nunnenkamp, "Regional concentration of FDI in post-reform India: A district-level analysis" (Kiel: Institute for the World Economy, 2013), which also references literature that supports various points made in this *Perspective*. The authors are grateful to Padma Mallampally, Premila Nazareth and Indira Rajaraman for their helpful peer reviews. **The views expressed by the authors of this *Perspective* do not necessarily reflect the opinions of Columbia University or its partners and supporters. *Columbia FDI Perspectives* (ISSN 2158-3579) is a peer-reviewed series.**

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.

The material in this Perspective may be reprinted if accompanied by the following acknowledgment: "Peter Nunnenkamp, Wan-Hsin Liu and Frank Bickenbach, 'Regional concentration of FDI involves trade-offs in post-reform India,' Columbia FDI Perspectives, No. 118, March 31, 2014. Reprinted with permission from the Vale Columbia Center on Sustainable International Investment (www.vcc.columbia.edu)." A copy should kindly be sent to the Vale Columbia Center at vcc@law.columbia.edu.

For further information, including information regarding submission to the *Perspectives*, please contact: Vale Columbia Center on Sustainable International Investment, Shawn Lim, shawnlw@gmail.com or shawn.lim@law.columbia.edu.

The Vale Columbia Center on Sustainable International Investment (VCC), a joint center of Columbia Law School and the Earth Institute at Columbia University, is a leading applied research center and forum dedicated to the study, practice and discussion of sustainable international investment. Our mission is to develop and disseminate practical approaches and solutions, as well as to analyze topical policy-oriented issues, in order to maximize the impact of international investment for sustainable development. The Center undertakes its mission through interdisciplinary research, advisory projects, multi-stakeholder dialogue, educational programs, and the development of resources and tools. For more information, visit us at www.vcc.columbia.edu.

Most recent Columbia FDI Perspectives

- No. 117, Rudolf Adlung, "Multilateral investment disciplines: Don't forget the GATS!" March 17, 2014.
- No. 116, Gary Hufbauer and Sherry Stephenson, "The case for a framework agreement on investment," March 3, 2014.
- No. 115, Joachim Karl, "The 'spaghetti bowl' of IIAs: The end of history?" February 17, 2014.
- No. 114, Louis T. Wells, "Government-held equity in foreign investment projects: Good for host countries?" February 3, 2014.
- No. 113, Anthea Roberts, "Recalibrating interpretive authority," January 20, 2014.

All previous *FDI Perspectives* are available at <http://www.vcc.columbia.edu/content/fdi-perspectives>.