Research Note
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Foreign Direct Investment and Structural Transformation in Africa

Authors: Bernard Hoekman, Marco Sanfilippo, Margherita Tambussi

FDI fosters local employment and the shift of workers to modern sectors and high-skilled activities, especially if performing production and high-value added activities in the field.

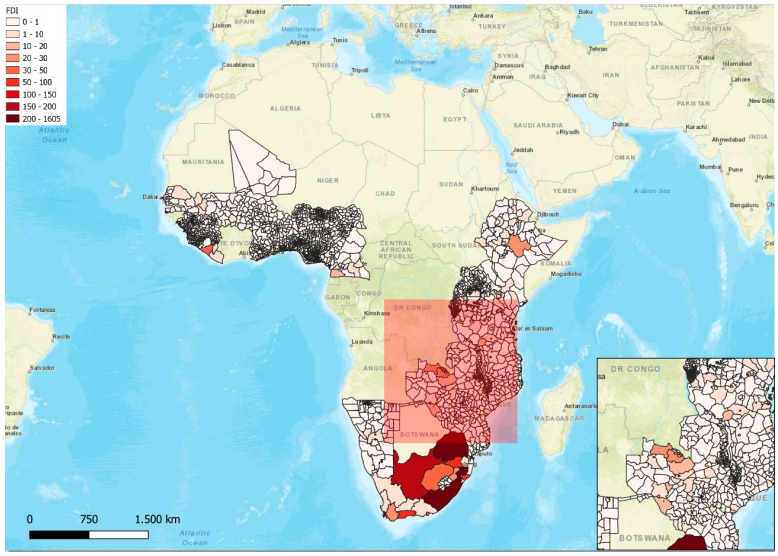
Foreign direct investment (FDI) is considered by policymakers as an important driver of local economic development. For example, foreign investors may establish supply chain linkages with domestic firms, enhancing their productive capacities (e.g. Alfaro-Urena et al., 2022), or impact the labour market by creating new employment opportunities, better jobs and stimulating workers' mobility (e.g. Setzler and Tintelnot, 2021; Poole, 2013). However, the empirical evidence on the effects of FDI is mixed. While there is an extensive literature on the impact of FDI on growth and economic development, little research has been done to understand whether FDI matters for structural transformation. Moreover, and with some exceptions (e.g. Toews and Vezina, 2022; Mendola et al., 2022), empirical work generally lacks enough granularity to account for the heterogeneous features that can affect the "quality" of FDI projects, or their impact at the subnational level.

In this project, we use finely disaggregated data to evaluate the consequences of attracting FDI projects at the level of each local labour market, conditioning on the activity performed by foreign investors. We look at the role of FDI in driving the process of structural transformation at the subnational level for a sample of 24 African countries over the past 30 years.

A new dataset linking local labour markets to FDI projects

To recover information on the local labour market, we construct a novel database that combines population censuses from IPUMS International with information from the Demographic and Health Surveys (DHS). The information provided by these two sources is harmonised using a common administrative division identifier that is consistent over time. Our final sample includes data on 40,665,627 individuals over the period 1987-2019 in 2,567 subnational units in the 24 countries considered. We then combine the DHS and IPUMS data with data on 4,918 FDI projects at the level of each administrative unit using the unit identifier. Figure 1 shows the African countries considered in our sample disaggregated by administrative units and the number of FDI projects at the subnational level.

Figure 1: Mapping local labour markets and FDI



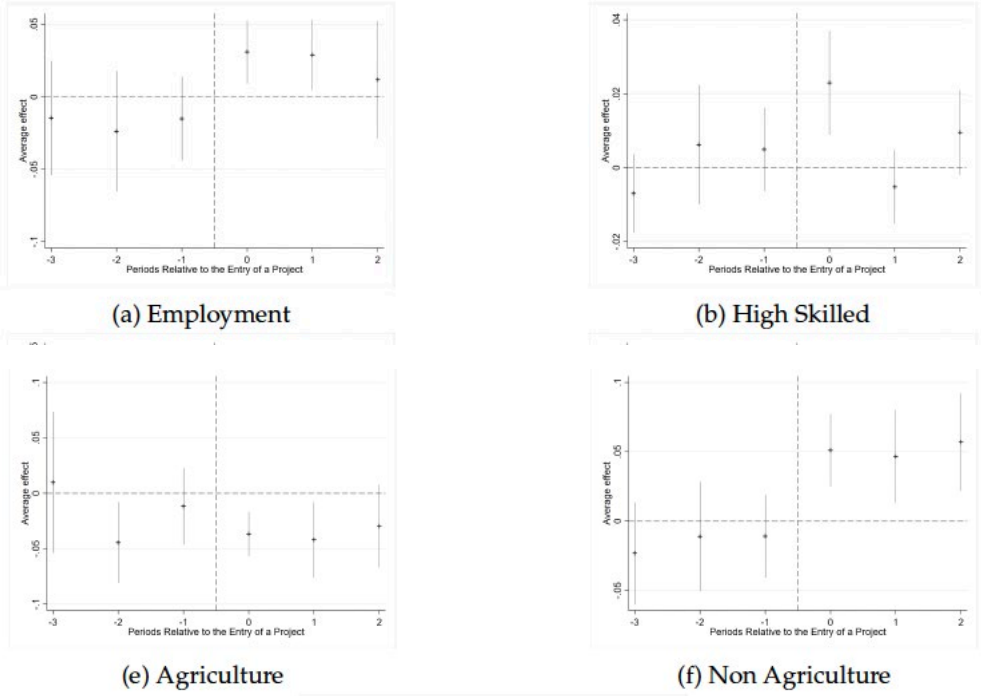
Note: Authors' elaboration on fDiMarkets data, on IPUMS shapefiles and Humanitarian Data Exchange (HDX) shapefiles.

FDI and structural transformation

We link the entry of FDI to a set of indicators related to the structural transformation of local labour markets, focusing on three dimensions of structural transformation: (1) the shift of workers from agriculture to modern sectors; (2) the shift of workers from low- to high-skilled occupations; and (3) the shift of workers out of self-employment. We consider a geographic area as treated when it receives its first FDI project. We then compare the outcomes of interest for treated areas with the same areas before treatment and a control group of areas that did not receive FDI in an event study setting. We follow recent econometric literature and adopt the approach proposed by Callaway and Sant'Anna (2021) for staggered difference-in-differences design, using the doubly-robust DiD estimator. This method has the advantage of correcting the potential bias due to negative weights while conditioning pre-trends to a set of covariates. The latter is important given that the presence of FDI projects tends to correlate with certain observable characteristics of the host location, such as the rate of urbanisation and schooling in the treated areas.

Our main results are summarised in Figure 2. They show that locations experience an increase in employment after receiving FDI. The effect on the occupational composition of workers is limited to an increase in the employment of highly skilled workers in the year of the treatment, which does not persist over time. On the other hand, the role of FDI as a driver of structural transformation towards modern industries is more evident and persistent.

Figure 2: FDI and Structural Transformation – Evidence from an Event Study Analysis



Next, we investigate FDI heterogeneity based on the information about the activity performed by foreign firms. This reveals that most of the findings are driven by FDI projects involving the establishment of new production facilities. The entry of foreign firms in high-value added services (e.g. financial, business, R&D) drives a change in the composition of the labour force towards more skilled workers. Investment in extractive activities is not associated with structural transformation or skill upgrading, while there is some, albeit weak, long-run evidence of increases in the share of self-employment.

FDI fosters structural transformation since it stimulates the demand of domestic firms

In the final part of the paper we explore a potential demand side mechanism through which FDI may be associated with the performance of domestic firms. For a sample that includes the 24 countries covered by our analysis, we match FDI data with firm level information from the World Bank Enterprise Surveys (WBES). The data cover over 26,000 domestic firms operating in the manufacturing and service sectors. We link FDI to domestic firms using both their geographic location and sector of activity. We exploit the spatial and temporal features of the FDI project and enterprise survey data by comparing the performance of domestic firms located in relative proximity to FDI projects to that of firms in locations where FDI will occur in years subsequent to when the survey data were collected. The resulting difference-in-difference controls for possible selection effects. We show that exposure to FDI (defined both in terms of horizontal and vertical linkages) is associated with growth in sales and employment, and upgrading in domestic firms, especially in the manufacturing sector.

Policy Impact

This project responds to the need to bring more granular evidence on the impact of FDI in developing countries. By showing which types of FDI affect individuals' employment decisions, and especially the shift towards “better” jobs, our findings can better inform policymakers and investment promotion agencies to target the entry of some specific types of investors. This is deemed particularly relevant for resource-

constrained developing countries, many of which are in Africa, whose reliance on external flows is crucial to support the private sector and broader development goals.

Moving forward

Further work is still needed to uncover some of the underlying mechanisms behind these effects (e.g. migration and spatial spillovers). The database covering labour market information at the subnational level that has been constructed for this project opens the way to a number of related research questions on the local drivers of job creation and structural transformation in Africa.

References

ALFARO-URENA, A., I. MANELICI, AND J. P. VASQUEZ (2022): "The Effects of Joining Multinational Supply Chains: New Evidence from Firm-to-Firm Linkages," The Quarterly Journal of Economics.

CALLAWAY, B. AND P. H. C. SANT'ANNA (2021): "Difference-in-Differences with multiple time periods," Journal of Econometrics, 225, 200–230.

MENDOLA, M., G. PRAROLO, AND T. SONNO (2022): "Curse or Blessing? Multinational Corporations and Labor Supply in Africa," CEPR Discussion Paper N. 16964.

POOLE, J. P. (2013): "Knowledge Transfers from Multinational to Domestic Firms: Evidence from Worker Mobility," Review of Economics and Statistics, 95, 393–406.

SETZLER, B. AND F. TINTELNOT (2021): "The Effects of Foreign Multinationals on Workers and Firms in the United States," The Quarterly Journal of Economics, 136, 1943–1991.

TOEWS, G. AND P.-L. VEZINA (2022): "Resource Discoveries, FDI bonanzas, and local Multipliers: Evidence from Mozambique," The Review of Economics and Statistics, 104, 1046–1058.

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