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Resource Discoveries, FDI Bonanzas and Local Multipliers: Evidence from Mozambique

Giant oil and gas discoveries in developing countries trigger FDI bonanzas. Across countries, it is shown that in the 2 years following a discovery, the creation of FDI jobs increases by 54% through the establishment of new projects in non-resource sectors such as manufacturing, retail, business services and construction. Using Mozambique's gas driven FDI bonanza as a case study we show that the local job multiplier of FDI projects in Mozambique is large and results in 4.4 to 6.5 additional jobs, half of which are informal.



Natural Resources, FDI Job Multiplier and Economic Development

Large resource wealth has for several decades been associated with a curse, slowing economic growth in resource-rich developing countries (Venables, 2016). More recently, this wisdom has been questioned by several studies. Arezki et al. (2017) point out that giant discoveries trigger short-run economic booms before windfalls from resources start pouring in. And Smith (2017) provides evidence for a positive relationship between resource discoveries and GDP per capita across countries, which persists in the long term.

In a **new paper** (Toews and Vézina, 2018) we contribute to this research by showing that giant oil and gas discoveries in developing countries trigger foreign direct investment (FDI) bonanzas in non-extraction sectors. FDI has long been considered a key part of economic development since it is associated with transfers of technology, skills, higher wages, and with backward and forward linkages with local firms (Hirschman, 1957; Javorcik, 2015). Using Mozambique, where a **giant offshore gas discovery has been made in 2009**, as a case study, we estimate the local multiplier of FDI projects. We find that the FDI job multiplier in Mozambique is large, highlighting the job creation potential of FDI in developing countries.

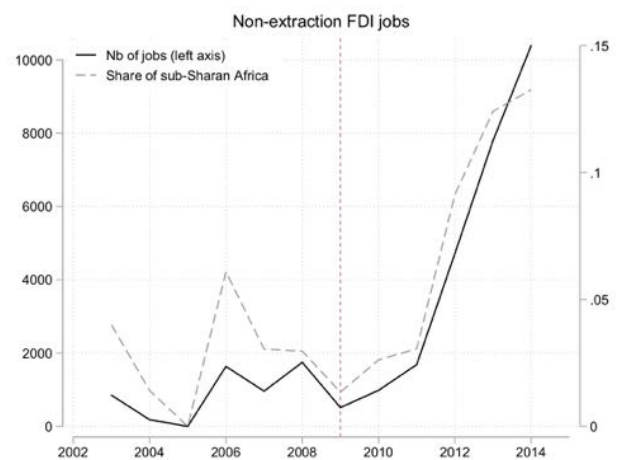
Resource Discoveries and FDI Bonanzas

In our study we focus on jobs created by FDI bonanzas triggered by resource discoveries. Multinationals might invest in countries being blessed by giant discoveries for a variety of reasons before production starts. First, they might expect to benefit from the decisions of oil and gas companies to increase investment in local infrastructure and to increase demand for local services provided by law firms and environmental

consultancies. Second, multinationals may also expect governments and consumers to bring forward expenditure and investment by borrowing. Finally, multinationals might invest since particularly large discoveries have the potential to operate as a signal leading to a coordinated investment by a large number of multinationals from a variety of industries and countries.

Using data from **fDi Markets** we show that, indeed, FDI flows into non-extraction sectors following a discovery. FDI increases across sectors and by doing so creates jobs in industries such as manufacturing, retail, business services and construction. Using Mozambique as a case study we show that following the gas discovery, multinationals decided to invest in Mozambique triggering job creation in non-extraction FDI to skyrocket (see Figure 1).

Figure 1. FDI Bonanza in Mozambique



Source: Author's calculations using fDiMarkets data.

FDI Job Multiplier

Using the FDI bonanza in Mozambique as a natural experiment, we proceed by estimating the FDI job multiplier for Mozambique. The concept of the local job multiplier boils down to the idea that every time a job is created by attracting a new business, additional jobs are created in the same locality. In our case, FDI jobs are expected to have a multiplier effect due to two distinct channels. Newly created and well paid FDI jobs are likely to



increase local income and in turn the demand for local goods and services (Moretti, 2010). Additionally, backward and forward linkages between multinationals and local firms increase the demand for local goods and services (Javorcik, 2004).

Using concurrent waves of household surveys and firm censuses we estimate the local FDI multiplier for Mozambique to be large. In particular, we find that every additional FDI job results in 4.4 to 6.5 additional local jobs. Due to the combined use of household survey and the firm census we are also able to conclude that only half of these jobs are created in the formal sector, while the other half of the jobs are created informally.

References

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Conclusion

Our results suggest that giant oil and gas discoveries in developing countries lead to simultaneous foreign direct investment in various sectors including manufacturing. Our results also highlight the job creation potential of FDI projects in developing countries. Jointly, our results imply that giant discoveries do have the potential to trigger extraordinary employment booms and, thus, provide a window of opportunity for a growth takeoff in developing countries.

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