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Foreign Direct Investments, Natural Resources and the Green Transition: Where do African Regions stand?

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With a highly skewed distribution of population and resources, 54 countries, and truly diverse geographies, histories, and intertwined economic, social, political and environmental challenges, the African continent displays huge disparities at the subnational/regional level (Boone & Simson, 2019). International organisations have lately looked at development dynamics at various levels of subnational geography, focussing especially on the evolution of urban agglomerations (OECD, 2025). Recent research has called for greater attention to the crucial role of subnational institutions in the economic development of the continent, particularly given the historical relevance of the local dimension and the current devolution trends in many African economies (Iddawela et al., 2021). More generally, the regional/local dimension has emerged as crucial for understanding socio-economic, demographic and environmental trajectories, particularly with reference to the rich endowments of natural resources of African countries and regions, the potential opportunities provided by the green transition, and the implications of the subnational geography of the African continent for policies and strategies related to the Sustainable Development Goals (e.g., Smith & Rey, 2018).

Despite this progress in catching up with the recognition of an “Africa of regions” – a long-term view for analysing economic development in other continents such as Europe, Americas and, more recently, Asia – the lack of systematic and reliable empirical data at the subnational level makes it very difficult to study the relationships between different sources of structural change and economic development trajectories, both in absolute and comparative terms (Nel, 2018; Boone & Simson, 2019; Luken et al., 2020).

Africa’s population, today approximately 1.5 billion, is projected to double by 2050, with the bulk of such growth concentrated in urban areas (OECD, 2025), contributing to strengthening local markets and demand. At the same time, over the last decades, African countries have increasingly become attractive destinations for foreign investors seeking old and new resources and such emerging markets (UNCTAD, 2023, 2025). Despite the growth of inward FDI, the continental share on global FDI inflows remains below 4%, signalling weak integration in GVCs; in addition, only fifteen African countries account for over 80% of total FDI to the continent (World Bank, 2024). The most attractive sectors have been, unsurprisingly, the natural resource sectors, and industries with high returns to investments, such as real estate and telecommunications (Qiang et al., 2021).

This paper explores the geography of FDI in Africa using data from fDiMarkets, the Financial Times database tracking global greenfield investments by country and sector from 2003 to 2023. The database enables detailed tracking of individual projects by region/city and investor location, and provides insights into the sector and business functions of each investment; by linking functions to GVC stages (Crescenzi et al., 2014; Sturgeon, 2008), each project can be placed within the value chain. The study analyses inward and outward FDI (including intra-Africa) at the subnational level to better

grasp the emerging trends in the geography of FDI within the “Africa of regions” – with a special focus on natural resources - Coal, oil & natural gas, Metals & minerals - and Alternative/Renewable energy. To deepen the study and add a preliminary description of interregional linkages, network analysis techniques from the world city network literature (e.g., Alderson & Beckfield, 2004) are applied to identify the centrality, dominance, and connectivity patterns among African and world cities and regions.

Preliminary descriptive findings highlight three key dynamics in relation to the selected sectors:

1. Decline of hydrocarbons: FDI in coal, oil, and gas peaked in 2008 before entering a long-term downward trend.
2. Persistence of mining: Metals and minerals maintained stable importance, reflecting continued demand for critical and strategic raw materials.
3. Emergence of renewables: Since 2015, and particularly in the post-pandemic years, alternative energy investments have accelerated, underscoring a structural transition toward more sustainable industries.

The descriptive analysis at the subnational (city, city-region) scale reveals, for overall inward FDI in the observed 2003-2023 period, strong concentration in metropolitan nodes, notably Cairo, Lagos, Johannesburg, Nairobi, Casablanca, and Cape Town, with secondary clusters emerging in Accra, Tunis, and Windhoek.

Preliminary findings from the network analysis show that in the global network encompassing all sectors (unweighted global network or “base case”) 6 African cities emerge as part of innermost core of the network: Casablanca, Lagos, Nairobi, Cape Town, Cairo, and Johannesburg. When taking into account the amount of invested capital (weighted method) the network is broader but the Africa’s relative share within the global core is reduced. In the innermost core of the network there are now only three African cities: Cairo, Cape Town, and Nairobi.

Turning to the weighted networks across subnational units of analysis in the three selected sectors shows the following trends:

- 1) Coal, Oil and Natural Gas display the highest number of nodes, indicating a greater sectoral infrastructure, with higher weighted connectivity and a broader geographic spread (the sector has the deepest k-core structure). Major concentration areas are found in Nigeria (Lagos, Port Harcourt, Bonny Island, Olokola), Mozambique (Maputo, Matola, Moatize, Tete), Libya (Tripoli, Sabrata), and South Africa (Richards Bay, Mossel Bay).
- 2) Metals & Minerals has a moderate k-shell network with fewer but heavier-weighted mining hubs. There is a strong Southern Africa dominance (South Africa, Namibia, Botswana), with Central Africa mining hub in Kinshasa (DRC) and East Africa, with emerging clusters in Kigali and Kampala.
- 3) Alternative/Renewable Energy is characterized by a regionally clustered network with strong national hubs: e.g., in Egypt with Aswan, Benban, Suez, and Port Said; in South Africa, with nodes in Cape Town, Johannesburg, Limpopo, Upington, and Jeffreys Bay.

The specific identification of the sectoral networks (for the 3 sectors here observed), linking African cities to other cities in the continent and in the rest of the world to grasp more in depth their connectivity structure, is currently under progress.