



Working Paper in

THE ROLE OF FOREIGN DIRECT INVESTMENT IN RESOURCE-RICH REGIONS

Research Protocol and Executive Summary

Kenneth B. Medlock III, PhD

James A. Baker III and Susan G. Baker Fellow in Energy and Resource Economics, Rice University's Baker Institute

Keily Miller

Senior Research Associate, Rice University's Baker Institute

February 2020

© 2020 Rice University's Baker Institute for Public Policy

This material may be quoted or reproduced without prior permission, provided appropriate credit is given to the authors and Rice University's Baker Institute for Public Policy.

Wherever feasible, papers are reviewed by outside experts before they are released. However, the research and views expressed in this paper are those of the individual researcher(s) and do not necessarily represent the views of the Baker Institute.

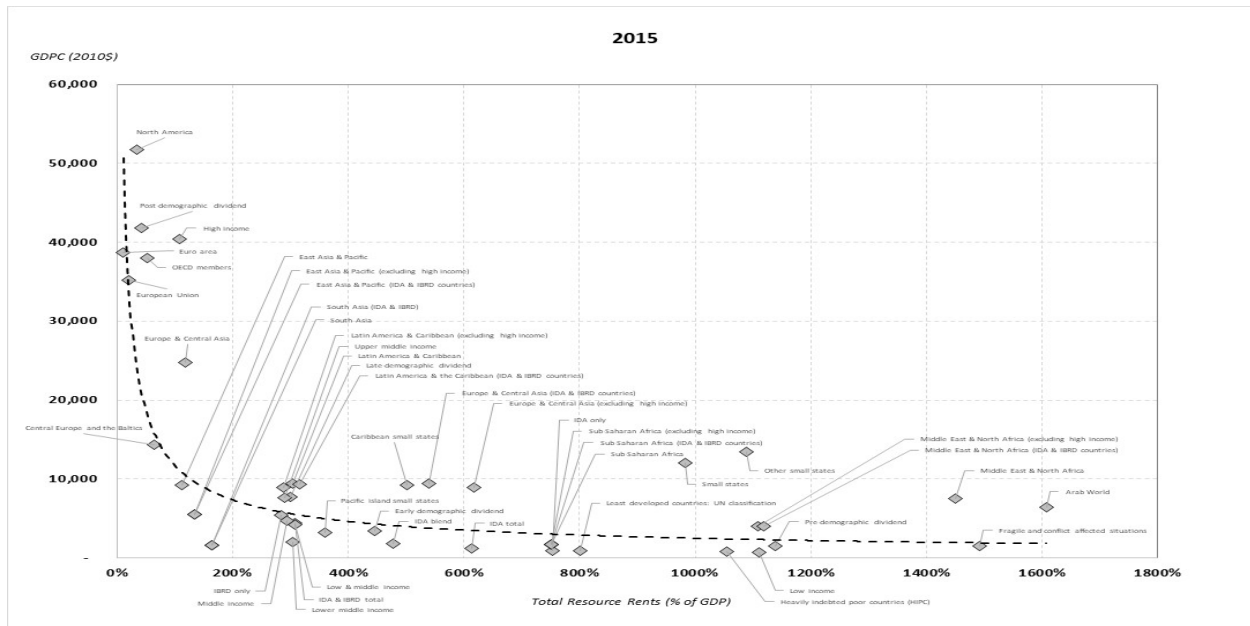
Ken Medlock and Keily Miller

"The Role of Foreign Direct Investment in Resource-Rich Regions: Research Protocol and Executive Summary"

Prelude

In the eighteenth century, Richard Steele made the general observation that “in Countries of the greatest Plenty there is the poorest Living.”¹ The puzzle of the “resource curse” persists in modern times and remains a topic of significant research.² Often referred to as “the paradox of plenty,” the resource curse addresses a broad set of issues which undermine the ability of governments to utilize natural resource wealth to measurably improve domestic public welfare.³ Contrary to the presumed economic “blessing” of countries rich in natural resources, a wide body of research in recent years has pointed to an inverse relationship between natural resource wealth and economic prosperity.

Figure 1. GDP per Capita vs Resource Rents (World Bank-defined Country Groups)



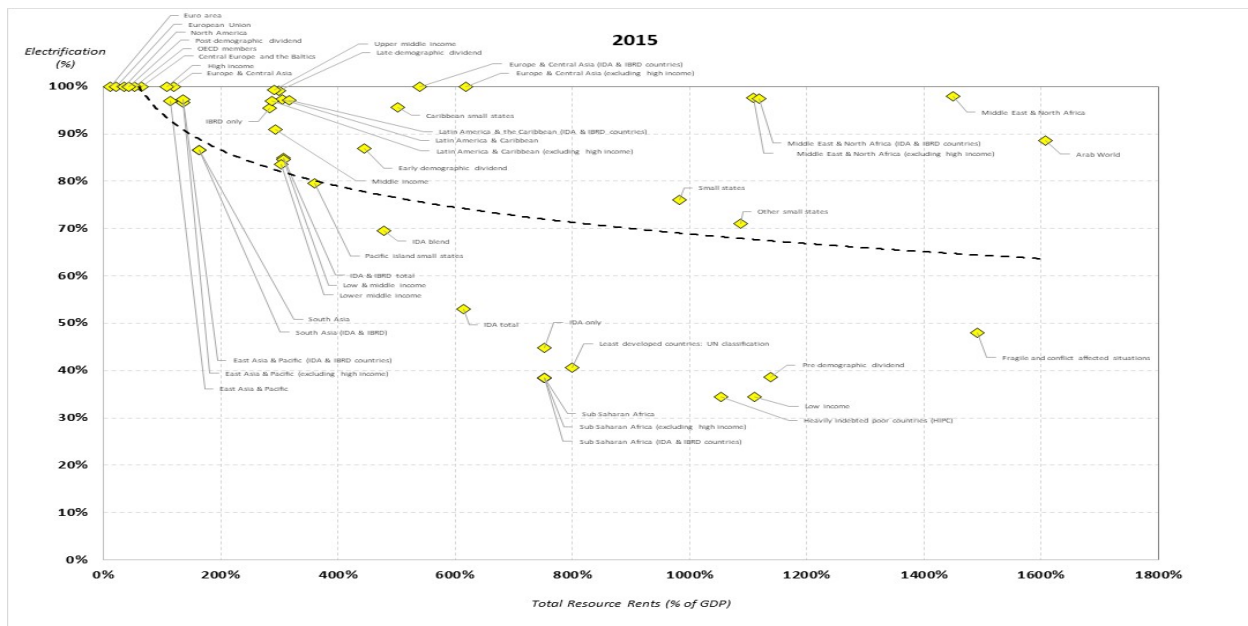
Source: Data from World Bank Development Indicators

As can be seen from figure 1, many countries endowed with abundant crude oil, natural gas or mineral resources have underutilized the prospective benefit of their indigenous natural resource wealth. While the negative correlation between natural resource abundance and economic prosperity seems strong, correlation is not causation, and the causes of the resource curse remains a subject of active research. A number of scholars have linked the resource curse with authoritarianism, regional conflict, corruption and economic instability.⁴

An irony of the resource curse is that countries endowed with large natural resource wealth relative to the size of their economies also tend to be the most energy poor in terms of electricity services provided to their economies (Figure 2). Even in countries

with large energy resource endowments, where access to electricity may seem to be, *a priori*, a foregone conclusion, low income levels and the imprint of poverty can preclude energy access across large swaths of the indigenous population. Thus, an interesting inquiry into the chain of causality between income, energy access and natural resource endowments emerges, since we cannot claim that *cum hoc ergo propter hoc*, high natural resource endowments cause low levels of economic development and insufficient access to electricity.⁵ Does natural resource wealth drive diminished economic prosperity? Or is the moniker “resource curse” simply the result of a correlation that derives from a host of intermediary issues, such as a greater propensity for authoritarianism, conflict and corruption? Purported causal linkages must withstand robust examination of a confluence of various factors in many resource-rich regions that raise legitimate questions about the role of natural resource wealth in driving economic development.

Figure 2. Electrification vs Resource Rents (World Bank-defined Country Groups)



Source: Data from World Bank Development Indicators

A wide body of literature exists that examines potential causal factors, indicators and economic effects associated with the resource curse, the bulk of which looks at the many risks and challenges associated with the resource curse through a host-country development lens. The goal of this collection of research – *The Role of Foreign Direct Investment in Resource-Rich Regions* – is different in that it investigates the bilateral dimensions of foreign direct investment (FDI) in resource-rich countries. The research delves into various drivers, deterrents, risks and opportunities associated with FDI from the perspective of both the host country and the investors. As a major pillar of economic development, FDI has been shown to correlate positively⁶ and negatively⁷

with resource abundance and with factors associated with the resource curse.⁸ The aim is to understand the drivers of capital inflows to natural resource-rich regions and the associated risks that demand attention. This collection of research does not purport to answer the question of causality. Instead, it contains a series of individual research papers that cut across three important dimensions of FDI in resource-rich countries: (i) the role of investors, (ii) contract principles and governance institutions, and (iii) investment sustainability and local content.

Motivation

Economic growth is critical to the improvement of living standards, which encompasses access to important amenities such as health care, education, and modern energy services. National governments, international agencies such as the World Bank and the United Nations, and non-governmental organizations (NGOs) all place an emphasis on welfare improvement. Improving the macroeconomy is paramount to achieving such an outcome. When countries find themselves endowed with an abundance of natural resource wealth, the objective of improving the domestic macroeconomy transforms into a centerpiece of political theater. Correspondingly, development of the domestic natural resource base morphs into a proxy for economic growth made possible by the pursuit of new sources of capital investment – usually from foreign entities.

Firms and governments that invest in natural resource development abroad are typically motivated by commercial returns and/or energy security. Hence, the investor has incentive to seek conditions that ensure a positive commercial return and a sustained rise in production of the targeted natural resource, with the potential for sustained future investment. At the same time, the host government desires a steady inflow of capital to drive increases in domestic infrastructure and resultant production growth that generates an inflow of funds to the national treasury and domestic economy. Pairing investor incentives with welfare objectives of the host government, one might expect alignment that generates positive outcomes for the domestic economy.

With incentives aligned accordingly, what role does FDI play in host country outcomes? Previous literature that investigates causal factors for the resource curse points to an important role for contract principles and governance institutions. As noted above, the majority of the literature looks at the issue from the host country perspective, so it tends to, rightfully so, focus on welfare implications. However, FDI is by definition a bilateral activity. For that reason, it is equally important to examine the issue from the perspective of the investing entity, which is likely more concerned with return on investment and production growth. If broad economic improvement can render an acceptable rate of return more sustainable, how does an entity engaged in FDI address risk, which can vary substantially from country to country? The approaches of both the investing entity and the host country are critical to ensuring long-term sustainable resource development and, concomitantly, economic prosperity.

Research Questions

Indigenous natural resource wealth can provide a basis for broad macroeconomic development. However, a lack of institutional fortitude has driven many regions around the world to fail in translating resource abundance into broader macroeconomic wealth. This frequently observed pattern lends support to the notion that natural resource wealth dooms a region to poverty and corruption – the so-called “resource curse.” Yet the resource curse is by no means universally accepted, giving rise to an exploration of how its manifestation can be avoided. From the perspective of an entity in the extractive resource industry, the existing institutional frameworks in each region present their own risk dynamics that require individual consideration and, if possible, mitigation. Hence, some very important, interrelated questions must be considered:

- What is the role of contract principles and governance institutions?
- What is the role of the private sector vis-a-vis local government?
- What can be done to ensure an environment for sustained investment, and how does local content factor?
- What role can energy and national security concerns play?

The strength of governance institutions and the rule of law are critical factors in attracting foreign investment, in general, and play an important role in the extractive industries. In particular, the sanctity of a contract establishes the long-term stability of the investment environment. Moreover, contract structures play a key role in determining the revenue streams to the firm and the host government. So, how can host governments use revenues collected from extractive industries to improve local welfare while maintaining a stable investment paradigm that encourages future capital inflows?

On the investor side, firms have an incentive to ensure their investments facilitate a local constituent benefit, particularly because doing so may contribute to sustaining a local appetite for future investment. Firms frequently face pressure to invest in local infrastructure projects, such as schools and hospitals, which offer limited *direct* benefit to the firms or their core activities. This raises fundamental questions about the obligations of the entities engaged in FDI in resource-rich countries and the “social license to operate.” What can be done, if anything, to ensure investments display a tangible local constituent benefit? Moreover, how can firms leverage interactions with local communities in a manner that sustains an appetite for future investment?

From the perspective of the host government, investments across the full value chain of the extractive industry – from offshore production, to processing and distribution, to port infrastructure and export capabilities, etc. – offer significant opportunity to provide local employment, stimulate economic growth, alleviate energy poverty and improve general welfare. Local investments – including but not limited to infrastructure required for a project’s operation – can deliver ancillary long-term benefits for the host country. Jobs associated with the extractive industries are often highly technical and require specialized skills. As such, the spillover effects of technical training can be significant,

and have the potential to pay dividends for future generations.

Nevertheless, the broader effects of these investments are largely uncertain. For instance, can these investments contribute to weaker governance institutions? If the host government effectively outsources the role of building institutions that are critical to providing a public welfare benefit, does this create an unsustainable paradigm? If improvements in economic and social well-being can foster a more stable business environment, then what approaches can host governments and foreign firms take to avoid such pitfalls?

Research Outcomes

Monetizing crude oil, natural gas and mineral resources requires enormous upfront fixed costs plus the stamina to endure long exploration, development and production timelines. In light of the scale of upfront capital outlay and requisite risk tolerance, most underdeveloped regions are fiscally unable to support large-scale resource developments absent FDI.⁹ This opens the door for multinational firms – publicly traded, privately held, or state-owned – to be the principle investing agents in these regions. In resource-rich countries, these investors often play a role in shaping and mitigating contractual, political, environmental and socioeconomic risks, many of which are often associated with the resource curse.

Consequently, the conversion of natural resource wealth into economic wealth is subject to fluctuating market conditions, investment decisions, geopolitics, policies and regulations, and a host of social and environmental variables. It is a process fraught with sovereign, commercial, political, social and environmental risks that demand industrial-scale capabilities and substantial risk tolerance for the firms involved. Investors must understand potential risks prior to making capital investment decisions. In resource-rich countries, this includes political stability as well as potential regulatory hurdles. Moreover, these risks manifest heterogeneously across various resource development opportunities around the world.

With profitability, corporate growth and state-driven security of supply representing the chief objectives that drive investment, firms and governments engaged in FDI often prefer to avoid state-craft and regional governance issues. Yet there are multiple stakeholders – foreign entities as well as host governments – that share accountability in ensuring sustainable and equitable development without falling into the resource curse. *Confronting the Resource Curse: Advice for Investors and Partners* (Goldwyn and Claybough) finds that citizens are certain to be disappointed if they are not accurately informed of the pace of development and the timing of revenues. The large upfront fixed costs and lags associated with infrastructure development can inject delays between the first investment and first production, which can be problematic for constituents and host governments that are expecting immediate benefit. The authors suggest that at a very minimum, companies must strive for transparent frameworks, political neutrality and a fair allocation of returns.

The strength of governance institutions and rule of law are critical factors in attracting foreign investment in general and play an important role in the extractive industries. *The Case of the Gulf Cooperation Council* (Stevens) explores how governments in the GCC have used oil revenues to provide infrastructure to promote welfare – such as health care, education, and public sector jobs. According to the author, countries in the GCC had the opportunity to exert a significant impact on sustainable domestic investment, through forward and backward linkages as well as general domestic spillover effects. However, extravagant use of revenues associated with indigenous resource wealth has also revealed elements traditionally associated with the resource curse.

Does Foreign Aid Help or Hurt FDI? That Is the Question (Foss) suggests that too often, host governments are not well positioned to implement market-based reforms and “liberalization.” The misalignment between the long-term nature of assistance goals and home country political cycles is problematic because foreign aid is subject to home country fiscal and political cycles. As the author demonstrates, many of the issues that hold back production growth and the expansion of domestic transparency and anti-corruption measures emanate from subnational jurisdictions, including indigenous communities and leaders and the often-fraught histories between these groups and their sovereign governments. This internal political risk dimension is one that investing entities must carefully measure before proceeding.

Two steps to avoid the resource curse have gained popularity: (i) establishing a sovereign wealth fund and (ii) promoting transparency. *Resource Curse Dynamics, The Corporate License to Operate, and the Potential of Direct Cash Dividends* (Moss) argues that neither approach is sufficient in guaranteeing better management of resource revenues, and the performance of countries that have adopted both of these approaches has been mixed. Instead, Moss proposes an alternative approach – a direct cash dividend. The potential for a cash dividend program to drive direct macroeconomic benefit, alleviate poverty, and create incentives that drive demand for transparency and sound management are at the core of the thesis. Such an approach is one that both the host government and investing entity can consider in their negotiations, particularly if it conveys a distinct and measurable local constituent benefit.

Sanctity of contracts and rule of law are important factors for establishing a long-term stable investment environment. Contract structures play a key role in determining revenue streams to investors and host governments alike. At the extreme, the risk of expropriation and/or contract abrogation can be a strong deterrent for FDI. *The collapse of the Venezuelan oil industry: The role of above-ground risks limiting FDI* (Monaldi, Hernández and La Rosa) argues that one of the main causes of Venezuela’s failure to attract FDI is the low credibility of its government in terms of respecting contractual terms. Despite low geologic risk and rising oil prices post-2006, weak institutions and legal instability have presented a barrier to many international companies making significant commitments in Venezuela. In turn, the well-documented decline in Venezuelan production has ensued, highlighting the outcome of unsustainable approaches to attracting FDI and compromising the domestic fiscal situation that would

have likely been much stronger in the presence of greater FDI and domestic oil and gas production.

That stated, there are cases where high expropriation risk and weak governance institutions have failed to deter new investment, which raises critical questions related to the degrees of risk and acceptability for foreign investment. *Shale Renders the 'Obsolescing Bargain' Obsolete: Political Risk and Foreign Investment in Argentina's Vaca Muerta* (Collins, Jones, Krane, Medlock and Monaldi) considers oil and gas investment in Argentina, where foreign companies have been recently directing new investment into developing the country's massive unconventional resource base. The authors note that capital inflows began within just one year of the 2012 expropriation of Repsol's assets in Argentina, a point that highlights some potentially unique characteristics about how the nature of unconventional resources affects the assessment of risk. The authors explore the hypothesis that investments in tight oil and shale gas extraction expose investors to fewer expropriation risks than those of conventional oil and gas, largely due to the short-cycle nature of well-by-well investment and cash flow. In particular, any action that intercedes FDI would lead to rapid production decline and, hence, revenues. Thus, shale-directed FDI may very well be exposed to a very different risk paradigm as it pertains to expropriation and the resource curse.

This lesson may be important for other markets as well, especially in regions new to resource development that may have weak or immature institutions, due to either a legacy of mismanagement or civil society underdevelopment. *Confronting the Resource Curse: Advice for Investors and Partners* (Goldwyn and Claybough) presents the regulatory and institutional frameworks that host governments must establish to serve the interests of the country. The authors provide a number of case studies of resource-rich countries – i.e. Norway, Botswana, Chile, and Canada – that are considered to have seen success.

Permian Basin Energy Producers Invest in Community Infrastructure: Motivations, Impacts, and Implications for Corporate Citizenship (Collins) investigates the approach of some operators in the Permian Basin who are unifying their efforts to attempt to solve the unique set of community and infrastructure challenges in the region. While the author does not specifically address FDI, the inflow of capital aimed at oil and gas resource development in the Permian from outside the region has been staggering. The stresses placed on existing support infrastructure and local community demands to address them provide a distinctly different view of how resource curse-related issues may manifest, even when good governance and relatively sound regulatory frameworks exist. In turn, this places an onus on firms to address local community concerns in order to maintain the license to operate.

In cases where FDI originates from foreign governments rather than private sector firms, the investor may play a very different role with a distinct energy security motivation. *Japan's FDI to the Middle East energy sectors: The Objectives, Outcomes and Implications* (Koyama) highlights the historical evolution, outcomes and implications of

some of Japan's most important investments in the energy sectors of resource-rich countries in the Middle East. Koyama's work delves into the effects that Japan's FDI has had on large-scale job creation and welfare creation in the Middle East energy sector. The research findings indicate that the broader effects may be limited due to the capital-intensive nature of the energy sector. Despite the positive social contributions that FDI flows have made, they are not sufficient to enable broader diversification of economic structures and large-scale job creation in the host countries. Hence, the energy security motivation at the root of Japan's engagement has had limited effects on the broader welfare of Middle East economies.

In addition to government-led FDI in resource rich regions driven by a desire for long-term sustained investment to secure sources of supply, it is important to reconcile host-government priorities. In some cases, the sustainability of FDI inflows can be closely linked to matters of national security, especially when the environment for FDI in developing states is improved by an external security alliance. *The Geopolitics of FDI: Can Weak States Deter Hegemons Using Foreign Investment?* (Krane) investigates the strategy of "security through investment," in which states deliberately use FDI to balance against a regional hegemon. Krane examines two cases – Qatar and Guyana – in which host countries have sought security through investment, creating more favorable environments for FDI to attract investors. In effect, the countries aim to reduce elements of regional risk by leveraging investment from abroad.

Concluding Remarks

FDI inflows in resource-rich regions can create real and lasting opportunities for growth, especially in those regions that lack the capabilities or funds to undertake large-scale developments entirely on their own. FDI has offered a cure to countries in dire need of sustained capital investment in infrastructure, economic revitalization and even strategic security. Nevertheless, sustainable investment is not solely about economic growth; it is also about corporate social responsibility, governance institutions, rule of law, and a number of other social, political and environmental factors.

The role of governance institutions (and the use of associated metrics and data)¹⁰ is critical, and there is substantial evidence to suggest that nations with more established levels of governance are more likely to avoid risks attributed to the resource curse.¹¹ Although the question of causal linkages remains open, it is clear that governance institutions are critical to attracting and keeping investors and, thus, to strengthening the macroeconomy of the host government.¹² Institutional steps can be taken to better ensure contract sanctity and manage resource revenues, and failure to take the necessary steps can have negative consequences for the host country as well as for investors. While publicly-traded firms typically try to avoid state-craft and regional governance issues, firms engaged in FDI may also consider ancillary investments that sometimes accompany upstream forays in less-developed countries as important to accomplishing of a larger set of sustainable development goals (SDGs), including

sustainability of the investment platform.

In fact, sustainability reporting – a means to provide information about how the firm is meeting various environmental, social, and/or governance metrics – is gaining traction across the extractive industries to demonstrate commitment to sustainable development by investors and other stakeholders. “Green” investments by firms engaged in FDI in resource-rich regions are gaining traction. For example, efforts aimed at reforestation or GHG emission reductions in less-developed countries where natural resources can be profitably extracted can allow firms to capture carbon credits that contribute to broader sustainability metrics.

The sustainability dimension continues to emerge as a central theme in determining the scope and scale of FDI by firms in the extractive industries. In fact, SDGs are becoming proxies for success in many discussions centered on economic growth.¹³ Amongst the seventeen United Nations SDGs, the goal of eliminating poverty is at the top of the list of a broad set of laudable aspirations. Hence, the question of how governments in less-developed countries with natural resource wealth engage with foreign entities interested in investing in the profitable development of their natural resources will remain acutely relevant.

Endnotes

¹ Steele, Richard. *The Spectator*, October 19, 1711 (No. 200).

[<https://www.gutenberg.org/files/12030/12030-h/SV1/Spectator1.html#section200>]

² See, e.g., Sachs, J.D. and Warner, A.M., 2001. The curse of natural resources. *European economic review*, 45(4-6), pp.827-838. Ross, M., 2003. The natural resource curse: How wealth can make you poor. *Natural resources and violent conflict: options and actions*, pp.17-42.

³ Dauvin, Magali & Guerreiro, David. (2016). The Paradox of plenty: A Meta-Analysis. 10.13140/RG.2.1.2066.9040.

⁴ Ross, M.L., 1999. The political economy of the resource curse. *World politics*, 51(2), pp.297-322.

⁵ Ijeoma Onyeji, Morgan Bazilian, Patrick Nussbaumer, Contextualizing electricity access in sub-Saharan Africa,

Energy for Sustainable Development, Volume 16, Issue 4, 2012, Pages 520-527,

⁶ Teixeira AA, Forte R, Assunção S. Do countries' endowments of non-renewable energy resources matter for FDI attraction? A panel data analysis of 125 countries over the period 1995–2012. *International Economics*. 2017;150:57–71. 10.1016/j.inteco.2016.12.002

⁷ Asiedu E, Lien D. Democracy, foreign direct investment and natural resources. *Journal of International Economics*. 2011;84(1):99–111. 10.1016/j.jinteco.2010.12.001

⁸ Busse M, Hefeker C. Political risk, institutions and foreign direct investment. *European Journal of Political Economy*. 2007;23(2):397–415. 10.1016/j.ejpoleco.2006.02.003

⁹ Foreign direct investment (FDI) is generally defined as a business-interest investment made by a firm or individual in a foreign country. FDI occurs when an investor acquires and/or develops assets or establishes business operations in a foreign country. As such, FDI is broad, encompassing investments in core activities of a particular firm – such as investments in oil and gas resource developments in a foreign country by a domestic oil and gas firm for sale to the international market (horizontal FDI) – as well as foreign investments in the supply chain for a core domestic activity – such as cobalt or lithium mining investments made by a battery manufacturer in a foreign country to supply itself domestically (vertical FDI).

¹⁰ See, for example, *The Worldwide Governance Indicators* available at <http://info.worldbank.org/governance/wgi/index.aspx#home> or other resources available at The Natural Resource Governance Institute (<https://resourcegovernance.org/>).

¹¹ For recent examples, see “Natural Resource Dependency and Entrepreneurship: Are Nations with High Resource Rents Cursed?” by Dustin Chambers and Jonathan Munemo in the *Journal of International Development* (2018), or “Natural resource curse and its causation channels in Africa” by Richard Mulwa in the *African Journal of Economic and Sustainable Development* (2018), or “Institutional Quality, Resource Endowment, and Economic Growth: Evidence from Cross-Country Data” by Helian Xu, Moga Tano Jilenga and Yuping Den in *Emerging Markets Finance and Trade* (2018).

¹² See, for example, “Resource Curse in Oil Exporting Countries” by Evgeny Kakanov, Hansjörg Blöchliger and Lilas Demmou in the *OECD Economics Department Working Papers* (2018).

¹³ See <http://www.undp.org/content/undp/en/home/sustainable-development-goals.html> for more on SDGs as defined by the United Nations Development Programme.