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The uniqueness of uranium: The Problematics of Statecraft in Niger

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ABSTRACT

How does the nature of uranium affect the ability of developing states to leverage it for the purposes of economic development? Two potential explanations for Niger's inability to gain from its uranium deposits—first, the resource curse, and second, Niger's asymmetric bargaining power with Areva—have dominated conventional wisdom. However, we contend that these explanations are incomplete because of the difficulties specific to uranium as a commodity. Instead, we highlight five principal challenges—strict international regulations, non-transparent uranium pricing markets, limited supply and demand, constrained global supply chains, and the lack of domestic usage—to explore why uranium *per se*, above and beyond the resource curse and asymmetric bargaining, presents unique challenges for developing countries to leverage for economic development. To show this phenomenon, we draw on our 2016 fieldwork interviewing members of the Nigerien government and those in the Nigerien uranium sector to demonstrate the challenges of translating its vast uranium deposits into sustained economic growth.

1. Introduction

Natural resources can be an important source of revenue for developing countries. Commodities such as petroleum, copper, and diamonds have enriched and propelled states from the Middle East to Latin America into success stories (e.g. Larsen, 2006; Robinson et al., 2003). However, the link between natural resource wealth and economic development is far from guaranteed, and many states with abundant resources have remained mired in poverty (c.f. Frankel, 2012; Van der Ploeg, 2011).

This very fate has befallen Niger, which is rich in uranium deposits, a key component of nuclear power and nuclear weapons. In 2015, Niger was the world's fourth largest producer of uranium, accounting for 7.2%, or 4057 tons, of total global production. Niger's SOMAIR is the world's 5th largest uranium mine in terms of production, alone accounting for 5% of total global uranium production. Measured by proven uranium reserves, Niger falls slightly to 8th place globally, with 5%, yet remains a substantial actor in the world uranium market (OECD, 2014). However, despite the wealth of uranium deposits, Niger has remained impoverished. Its per capital GDP in 2017 was USD 895,[1] and is ranked second to last in the Human Development Index (HDI) (World Bank, 2017).

Two prevalent explanations try to account for the discrepancy between Niger's vast uranium deposits and its lackluster economic development. The first of these is the resource curse. According to this paradigm, even though natural resources could provide important sources of revenue, factors ranging from an overvalued currency to rent seeking among national elites inhibit a country's potential to profit from its uranium deposits (c. f. Frankel, 2012). In the case of Niger, these have included burdensome external debts, poor checks and balances in the government, and financial mismanagement. Second, others have argued that Niger has suffered from an asymmetric relationship with Areva, the French state-owned nuclear power company that has dominated Niger's uranium extraction industry since before independence. They contend that since Areva has locked Niger into a series of unfavorable procurement contracts that undervalue Niger's uranium exports, the country receives insufficient compensation to lift it out of underdevelopment (Idrissa, 2016). However, we ask: to what extent do the resource curse, on one hand, and Niger's asymmetric relationship with France and Areva, on the other hand, fully explain Niger's inability to translate its vast uranium deposits into economic development?

While both explanations certainly comprise important parts of an answer, we suggest that alone, they are insufficient. In particular, we argue that a more complete explanation for Niger's inability to leverage its uranium into robust economic development lies in the unique political economy of uranium as a commodity. We highlight five principal challenges—strict international regulations, non-transparent uranium

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pricing markets, limited supply and demand, constrained global supply chains, and the lack of domestic usage—to explore why uranium *per se*, above and beyond the resource curse and asymmetric bargaining, has proven difficult for developing countries to leverage for their economic development. By using the experience of Niger—a developing country that has remained impoverished despite decades of exporting uranium—we analyze how the unique attributes of uranium as a commodity have stymied Niger's economic development. To accomplish this, we rely on a series of in-person interviews conducted in 2016 with those associated with the Nigerien uranium industry (including government and industry officials, and members of civil society), as well as interviews with non-Nigerien-based uranium experts. To our knowledge, this is the first paper to specifically and comprehensively examine the political economy of uranium as a commodity for the purposes of economic development, and one of the few that has examined the political economy of Niger's uranium industry.

The article proceeds as follows. First, we provide a brief history of the Nigerien uranium sector and its current contribution to the nation's economy. Next, we detail the two existing explanations for Niger's inability to profit from its uranium deposits—the resource curse and the asymmetric relationship with Areva. Then, we systematically address five challenges particular to uranium—strict international regulations, non-transparent uranium pricing markets, limited supply and demand, constrained global supply chains, and the lack of domestic usage—that make it difficult for developing countries to leverage for wide-scale economic development, especially in the Nigerien context. We conclude with possible ways forward for a uranium-exporting country, as well as the implications of resource exportation more broadly.

2. An overview of Niger's uranium sector

Uranium was first discovered in Niger in 1957 by French surveyors while still a French colony. Today, Niger has four primary uranium mines, of which two are actually functioning. The biggest and oldest is the SOMAIR (Société des Mines de l'Air) mine, established in 1968. The second is the COMINAK (Compagnie Minière d'Akokan) mine, established in 1974. Both of these mines were created as joint ventures between the Nigerien government and its former colonizer, France, in addition to sundry smaller investors. Today, both mines are operated by the majority French state-owned nuclear company Areva. A third mine, at Imouraren, is also under development by Areva. When opened, Imouraren is expected to be one of the most productive in the world (with estimated reserves of 109.1 million tons of ore grading 0.06 percent uranium), but its opening has been delayed by sustained low global prices of uranium. The fourth of Niger's mines, Azelik, is run by the Chinese, and operates as part of a joint-venture called SOMINA. To date, it is not operational and has been mired by numerous problems (Volberding and Warner, 2017).

Today, Niger is an important actor in the global uranium market. As of 2016, Niger was the largest producer of uranium Africa, and the fourth largest in the world. At 409,000 tU (tons Uranium), Niger possess 7% of all proven global uranium reserves (World Nuclear Association, 2016a). Given its extensive reserves, uranium remains an essential—if not profoundly lucrative—cog in Niger's economy. While only accounting for 5.8% of total GDP in 2010, uranium comprised 70.8% of total exports, and serves as the main source of foreign exchange for the country (Simpere, 2013), though this declined to 46% of total exports in 2015 on account of the precipitous drop in global uranium prices (World Bank, 2017). Most of the proceeds are generated via royalties. The variable royalty rate, which is based upon a formula first promulgated in the 1999 revision of the Mining Law, establishes a range between 5.5% and 12% that depends on the corporate profitability (Republic of Niger, 2007).[2] Indeed, though the Nigerien economy has begun to attempt diversify to production of other commodity exports to oil and gold, uranium is perceived many as the best vehicle to break its low-development cycle.

3. Two explanations: the resource curse and asymmetric power

There are two prominent explanations for why Niger has failed to profit from its natural resources. First is the resource curse explanation, which, through a variety of mechanisms, has limited Niger's ability to benefit from its uranium exports. Second, many civil society actors have highlighted the asymmetric relationship between Niger and Areva that has resulted in inequitable long-term contracts. Both, however, result in persistent underdevelopment.

3.1. Uranium and the resource curse

The challenges of relying on natural resources as a tool for economic development are well documented. In the early 1950s, Prebisch (1950) and Singer (1950) argued that a country's dependence on the exportation of primary commodities would eventually cause a decline in a country's terms of trade. In 1993, the term "resource curse" was created to describe the persistent underperformance of many resource-rich developing countries (Auty, 1993). Since then, an extensive resource curse literature has largely corroborated the finding that primary commodity exporters often suffer from worse development outcomes (Barma et al., 2012; Sachs and Warner, 1999). Yet despite the general evidence, there is substantial disagreement on the degree to which the resource curse is valid (Brunnschweiler and Bulte, 2008; van der Ploeg and Poelhekke, 2009). More importantly, there is little agreement on what the precise causal mechanisms of the resource curse are (Frankel, 2012; Ross, 1999), the conditions under which the resource curse applies (Van der Ploeg, 2011), or the ways to mitigate its pernicious effects (Venables, 2016).

The specific mechanisms through which the resource curse operates are varied. For instance, the dependence on primary commodity export markets leaves exporting countries highly susceptible to global market price fluctuations, and periods of sustained low prices can wreak havoc on government revenues (Deaton, 1999). The procyclicality of investments in resource extraction only serve to compound these economic problems. In addition, reliance on primary commodity exports can create an overvalued exchange rate, known as Dutch disease, which crowd out investment in more sustainable long-term investments, such as manufacturing, and prevent the diversification of the economy (Sachs and Warner, 1999). Moreover, as will be highlighted later, resource-exporters frequently face asymmetric power dynamics when negotiating with foreign enterprises. Not only do so-called "legacy investments" frequently tip the scales in favor of foreign companies, these foreign investors also employ extensive teams with valuable knowledge on extraction, regulation, and global supply chains. The surplus value accrues to the foreign multinational rather than the exporting country, and these countries are rarely compensated for the negative externalities associated with the commodity production. Finally, there are a host of political economy explanations including political corruption, myopic economic planning, unrealistic expectations, weak institutions, and the empowerment of segments of the society that oppose export diversification (Arezki and Gylfason, 2013; Mehlum et al., 2006; Robinson et al., 2006; Ross, 1999). This desire on the part of officials to rent seek manifests in poor management of revenues and a diversion of financial benefits to a select few. Rent seeking can also engender higher investment risk with incoherent or inconsistent policies, weak legal systems, unclear tax structures, and resource nationalization, all of

[2] While the uranium royalty rate is substantially lower than official rates in Kazakhstan (18.5%) and Canada (13%), it is higher than most Australian states (2% to 5%), Namibia (3%), and Malawi (1.5%) (Government of Western Australia, 2015; ten Kate and Wilde-Ramsing, 2011).