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Funds from non-renewable energy resources: Policy lessons from Alaska and Alberta

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HIGHLIGHTS

- We document the optimal intergenerational energy resource management using funds.
- We use Alaskan and Albertan experiences to provide policy lessons for future implementation of such funds.
- We emphasize the role of a public dividend policy

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ABSTRACT

We document the use of energy natural resource funds in Alaska and Alberta and analyze theirs characteristics for further implementation in resource-rich countries. Such funds allow dealing theoretically with intergenerational equity issues, corruption, and more general institutional problems. The performance of both funds is very different, depending on the management and composition choices but some policy lessons can be drawn from these two examples. Importantly, the role of a public dividend policy is highlighted as a way to bypass corrupted institutions and to enhance quality of life for poorest people. We also emphasize the need to deal with inflation to make the fund sustainable.

1. Introduction

This paper critically assesses the performance of funds to manage wealth created by the exploitation of natural (energy) resources relying on the Alaskan and Albertan oil experiences as case studies. While both these funds have been created around the same period and involve developed countries, in practice they have functioned quite differently. The paper argues that the analysis of these two cases provides important policy lessons for the implementation and management of resources funds and that these experiences may help resource-rich countries to create such mechanisms.

In what at first sight looks like a paradox, countries blessed with large quantities of natural resources are thought to perform worse economically than poorly endowed ones (see Rodrik, 1997). Poor economic development has then been associated with the large exploitation of a natural resource. This phenomenon is often referred to as the *resource curse*. It has been popularized in a number of newspaper articles[1] and investigated in academic literature.[2] The latter is very inconclusive on the topic. Indeed, as developed in the recent survey by van der Ploeg (2011), numerous contributions have reached opposite conclusions as to whether abundance in natural resources may be linked to slow economic development. Nevertheless, as various governments in resource-rich countries are seeking to redefine the management of their oil sector, there is a pressing need to revisit

[1] 'Tackling the oil curse', 'The $300 billion bonanza'. *The Economist*, September 25–October 1, 2004; 'All the world's trouble in one word-oil'. *Financial Times* June 5, 2004; 'Do natural resources have to be a curse'. *New York Times*, February 29–March 1, 2004; 'The Devil's Excrement: Is Oil Wealth a Blessing or Curse', *The Economist*, May 22, 2003. The Center on Globalization and Sustainable Development (CGGC) at Columbia University hosted a one-day workshop on the theme "Escaping the Resource Curse: Managing Natural-Resource Revenues in Low-Income Countries" on February 26, 2004.

[2] See Brunnschweiler and Bulte (2008a, 2008b) for a condensed presentation. While empirical evidence of a resource curse phenomenon was found in early contributions (Gelb et al., 1988; Auty, 1990; Sala-i-Martin and Subramanian, 2003; Papyrakis and Gerlagh, 2004; Sachs and Warner, 1995, 1999; Sachs, 2001), recent papers have cast doubt on these results (see Stijns, 2005, Wright and Czelusta, 2004, Brunnschweiler and Bulte (2008a,n 2008b), Collier and Goderis (2009), Alexeev and Conrad (2009), Kolstad and Wiig (2009b)).

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the different policy instruments aimed at curbing the possible negative effects of the resource curse. One of these instruments is the adoption of resource funds to isolate windfall revenues and to turn resource wealth into financial wealth for future generations.[3]

By keeping windfall revenues in a separate entity regulated by strict and clear management guidelines, funds could lessen the negative impact of directly investing in the domestic economy, while securing sustainable development options.[4] By analyzing the experiences of the Canadian province of Alberta and the US state of Alaska in the management of resource funds, this paper contributes to the renewal of the discussion about the remedies to the resource curse. Most oil producing countries have suffered, at various times and levels of intensity, from the resource curse. Among economic sectors, oil is perhaps the one whose development impacts the domestic economy more dramatically (Tsui, 2009). The experience of Alberta and Alaska is highly valuable to countries that are at present grappling with the idea of setting up similar institutional arrangements to minimize the effects associated with the resource curse.

In this paper, we try to uncover interesting properties of Albertan and Alaskan funds and show that the main debate is about the implementation of a public dividend policy. The redistribution of wealth generated by natural resources is precisely what Birdsall and Subramanian (2004) appeal for about the Iraqi case: "Can Iraq avoid the pitfalls that other oil-rich countries have fallen into? The answer is yes, but only if it is willing to implement a novel arrangement for managing its oil wealth with the help of the international community. [...] This arrangement should not mimic the much maligned oil-for-food program set up in the aftermath of the Persian Gulf War, under which Iraq's oil income was directly controlled and administered by foreigners. Instead, the Iraqi people should embed in their new constitution an arrangement for the direct distribution of oil revenues to all Iraqi households—an arrangement that would be supervised by the international community" (p. 78). Sala-i-Martin and Subramanian (2003) have a similar claim about Nigeria and go further in explaining that such a policy measure cannot be circumvented if one hope to fight against both corruption and consequent rent-dissipation (see also Kolstad and Wiig, 2009a, b and Kolstad and Søreide, 2009 on related topics). We discuss the advantage of the Alaskan fund over the Albertan fund in this field and also explain how topical redistribution attempts can in fact be detrimental to citizens' understanding of government policy.

Wrong policies have usually accompanied the reception of windfall revenues.[5] Many countries decide to invest heavily in the non-tradable sectors which offer low investment returns (Collier et al., 2009). Investments in the public sector and in infrastructure are usually lavish, encouraging rent-seeking and regime entrenchment (see Sarraf and Jiwanji, 2001 among others). As windfall revenues diminish, governments turn to foreign markets for further sources of revenues, acquiring as a result an unsustainable level of debt (Manzano and Rigobón, 2001). Moreover, responses to windfalls are asymmetric[6] (see Gelb et al., 1988) necessitating careful public investment policies in periods of price booms to avoid future public pressure in 'rainy days'. The challenge for policy makers is how to turn the resource curse into a resource blessing.

In the economic literature, the resource curse has been associated with the Dutch Disease (DD), a set of anomalies afflicting resource-rich countries whose most conspicuous symptoms are currency appreciation, shrinking of the non-tradable sector, and subsequent absence of economic diversification (Corden and Neary, 1982, 1984; Corden 1984).[7] Exploitation of natural resources tends to cause currency appreciation, exerting pressure away from the manufacturing sector and, thus, affecting the learning-by-doing process necessary for maintaining productivity and competitiveness levels (see Bjørnland, 1998 and references therein). Furthermore, many resource-rich countries have engendered predatory states which, embedded in rent-seeking practices, have hindered economic development. This is basically the resource curse phenomenon (Auty, 2001a, 2001b). As the Dutch Disease has been analyzed over time, its consequences have been enlarged to include crowding out effects, leap frog movement, and absence of learning by doing (Stevens, 2003); by and large, these features often account for the absence of economic development and diversification. Too often resources revenues have "enabled" complacency in public economic policy decision making.

Some countries have, nevertheless, managed to reduce effectively the negative impact of the resource curse. In the literature these countries are usually referred to as the "usual suspects".[8] Despite having the conditions to contract DD, they have managed to avoid its effects through the implementation of effective policy decisions. In fact, it is not the exploitation of a natural resource *per se* that causes DD, but rather the lack of a set of policy decisions aimed at easing its negative impact. Adequate institutional arrangements and wise policy decisions account for the difference (Torvik, 2001; Gylfason, 2001; Davis, 1995). Wright and Czelusta (2003) have argued that possessing a large mineral sector is not in itself a liability. Contrary to authors who blame all ills on the exploitation of a large mineral resource (Ross, 2001), Wright and Czelusta (2003, 2004) consider the mineral sector as a real source of competitive advantage and refute the assumption that resource development is a curse at all.

Most countries that have managed to minimize the resource curse have done so by building upon the comparative advantages around the exploitation of mineral resources (Hannesson, 2001). Norway –with its Government Petroleum Fund (NGPF)–, Australia, and the US are illustrations of countries that have developed a knowledge high-technology economy based on their comparative advantages around their large mineral resources.[9] Coherent institutional arrangements have fostered the development of mineral-related technology. For instance, in the case of Norway it is now common to speak of a "'Norwegian school of thought" concerning oil exploration technology (Wright and Czelusta, 2003, p. 15). Similar technological advancements have sprung in the US and Australia against a background of sound policy decisions such as the creation of educational and research centers connected to the energy sector. These arrangements have increased the competitive edge of energy exploitation in these countries.

[3] A related question is the existence of petroleum-related aid (see Kolstad et al., 2009) which may also help in addressing the resource curse but, because this aid comes from donors, they cannot be directly compared to the implementation of funds.

[4] We refer the reader to the nice survey of Fasano (2000).

[5] Note that windfall revenues generally come from concentrated commodity revenue (such as fossil fuels or minerals) rather than diffusive sources. Bevan et al. (1987) and more recently Isham et al. (2005) have shown that rents that are diffused across many economic agents tend to be saved and consumed more responsibly than rents that are concentrated on a handful of economic agents, notably governments. We thank a referee for pointing out this difference.

[6] Windfall profits are often accompanied by large increases in public spending while budget cuts are more difficult to implement in period of downswings.

[7] According to Corden (1984), the first reference to the Dutch Disease was found in *The Economist* (November 26, 1977, pp. 82–83) to explain the impact on the Dutch economy of the offshore exploitation of large amounts of natural gas in the Groningen area during the 60s. As a result, the appreciation of the money affected the manufacturing sector and the use of windfall revenues on social services proved, in the long run, unsustainable.

[8] This list not only includes industrialized countries such as Norway, the US, the UK, Australia and Canada, but also emerging ones such as Indonesia, Malaysia, Botswana and Chile (Stevens, 2003).

[9] Noreng (2002) studies the Norwegian case.