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Is the Norwegian model exportable to combat Dutch disease?

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ABSTRACT

In many countries, oil and gas resources have proved detrimental to economic development. Norway is often presented as a resource-abundant economy which has avoided symptoms of resource curse, such as Dutch disease. This paper analyzes the key features of the Norwegian oil and gas industry, including Statoil and the Government Pension Fund Global, and it reflects on the not exportable (specificities) and exportable aspects of Norway's experience. From this analysis, we formulate the lessons that the Norwegian experience can provide to foster the improved management of oil and gas resources in other economies.

1. Introduction

The Norwegian experience is considered to exhibit successful management of raw materials, specifically oil and gas. Normally, this case is contrasted with the cases of resource-rich economies suffering from one or more manifestations of the resource curse. Norway also stands out for having put in motion a set of cooperation projects in conjunction with developing countries, focusing on their capacity to manage their oil and gas industries.

Many such countries have approached Norway to ask for assistance in strengthening their capacity for oil management.[1] This situation invites us to consider the lessons that the Norwegian case can offer for the improvement of resource management skills in emerging economies – avoiding any mimetic application. Thus, Austvik (2012) highlights the shifting roles of the Norwegian state as landlord and entrepreneur when developing and maintaining its national oil and gas industry. Holden (2013) explains the factors by which Norway was able to avoid the resource curse and describes the key features of Norway's management of its petroleum resources, especially in the handling of profits. Larsen (2004) offers a general approach to the way in which Norway avoided the resource curse and the Dutch disease. In a later work, Larsen (2005) compares the evolution of Norway, Denmark and Sweden and concludes that Norway's better economic performance proves that the resource curse was avoided, especially between 1970 and 1996. However, he raises doubts about the Norwegian economic slowdown between 1996 and 2002.[2] For their part, Thurber et al. (2011) assess whether petroleum economies should promote for this sector administrative structures based on the separation of commercial, policy, and technical functions (according to the Norwegian model) or others, depending on each country's institutional development.

Taking into account these contributions, this article seeks to dig deeper around two issues. On the one hand, we extend the analysis of the factors that explain the Norwegian "success story", specifically in relation to Dutch disease. Therefore several analytical dimensions are included that complete the traditional explanations centered on state management. On the other hand, this work makes advances in recounting the lessons that can be drawn in order to set up oil management mechanisms in developing countries. These lessons should begin by identifying the singular factors of the Norwegian experience that are unrepeatable in other cases – an issue which is traditionally circumscribed by institutional aspects (Thurber et al., 2011). Thus, this article includes other variables that broaden the explications based merely on the institutional framework.

This work begins with a rough summary of the academic debates around several aspects of the resource curse and Dutch disease, in order to move forward with analysis of the Norwegian experience. From this study, we systematize the lessons that can be derived for improving the patterns of resource management in developing countries, and we highlight the specific handicaps from which these economies suffer.

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[1] Indeed, the Oil for Development Program (OfD) and the Petroleum Governance Initiative (PGI), coordinated between the Norwegian Agency for Development Cooperation (Norad) and the World Bank, are two initiatives through which Norway is trying to answer these requests for aid.

[2] Larsen's works from 2004 and 2005 were not continued by the author, he is currently focused on other research topics..

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2. Methods

Many resource-rich economies are subject to the implications of the so-called "resource curse", a phenomenon widely studied in economic literature. Important papers such as Ross (1999) or Sachs and Warner (2001) have sought a link between resource abundance and economic growth. Generally, countries with exports that are heavily concentrated in raw materials tend to have low income, weak industrialization, excessive productive specialization, and high levels of dependency and vulnerability regarding their external insertion. Exporters of large quantities of natural resources have lower growth rates than those that are lacking in, or that show rather insignificant exports of, these raw materials (Sachs and Warner, 1997), particularly if the resources are situated in a specific location (Isham et al., 2005). Therefore, certain evidence does exist that countries with higher provision of raw materials show worse growth rates; Sachs and Warner (1995) study 97 countries within the period 1971–1989, measuring the impact of resource exports on economic growth. Their results associate high rates of raw material exports with low levels of growth, showing that a negative relation between resource abundance and economic growth does exist.

However, this link can be nuanced in three ways. First of all, one should take into account the type of natural resource. Not all resources lead to the same manifestation intensity of the phenomenon. Sachs and Warner (2001) show results that confirm the resource curse in the case of minerals. Davis (2011) extends Sach and Warner's analysis and digs deeper into the effects of each natural resource, highlighting that minerals represent the most problematic cases.

Second, the concentration of natural resource exports -the dependence on natural resources- is more relevant than the abundance of them (Arezki and Van der Ploeg, 2010). Indeed, analysis is usually made of resource-based exports' share in terms of GDP, calculated at the beginning of the sample period in order to explain growth rates in later years. Nevertheless, by doing this, they are employing a measure of resource dependence instead of resource abundance (Brunnschweiler and Bulte, 2008). Certainly, what matters is the dependence on those raw materials, as it is related to the economic structure's limited diversification and, hence, to worse economic performance. Therefore, one should differentiate between resource abundance and dependence. Moreover, the empirical proofs of the resource curse can be weak. For some authors, the possession of numerous resources can have positive effects on growth rates, while the dependence on them might have negative effects or no effect at all (Brunnschweiler and Bulte, 2008). James (2015) states that the relationship between resource dependence and growth is associated with the evolution of the prices of natural resources, so there are periods of slow growth (with falling prices) and periods of faster growth (with increasing prices). According James (2015: 62) "these results are largely explained by average sector-growth heterogeneity, a large amount of which is created by variation in the resource price".

Third, other studies (Boyce and Emery, 2011) propose that growth rates are not clear proofs of the existence of the resource curse, due to the fact that resource abundance can be positively correlated with income levels. The authors state that the criterion to decide whether natural resources are a curse or a blessing for the economy should be the income level, and not growth rates. Alexeev and Conrad (2009) agrees with this aspect when they state that "there is little or no evidence that large endowments of oil or minerals slow long-term economic growth" (Alexeev and Conrad, 2009:595).

Forth, there are authors, such as Davis (2011), who prefer to talk about "resource drag" instead of resource curse. According to Davis (2011) the resource drag does not come from the crowding-out effect but from the fact that during the beginning of resource exploitation the GDP tends to grow faster (than it would without such resources), while when resources start to get exhausted, GDP is inclined to grow less (than it would without these resources). Thus, "The drag is not immiserizing, however, and simply reflects an overshooting of the steady-state rate of growth" (Davis, 2011: 160–161).

Despite the broad acceptance (not unanimous) of the relation between natural resources (especially exports of natural resources) and growth, although with some nuances, there is less agreement when it comes to searching for the economic causes of such ~~a~~ link. The resource curse tries to explain low economic growth paces of resource-rich nations based on several factors (Ross, 1999): (a) the damaging evolution of terms of trade; (b) volatility in international commodity markets; (c) weak spillover capacity of resource exports on other local industries; and (d) the possibility that a resource boom may cause economic stagnation (the so-called Dutch disease). Ross proposes a multidisciplinary approach to the resource curs and insists upon his confidence in governmental actions in order to combat the effects of the curse. Indeed, according to Ross, governments possess a wide range of policy measures for mitigating its difficulties. Policy in the end is important and could have consequences on the results.

Many contributions to the literature agree with this aspect, very focused on the phenomenon's institutional facets. Davis (1995) questions the merely economic explications of the curse and highlights the existence of non-economic mechanisms which affect the economic performance of each country. On the other hand, Sinnott et al. (2010) associate manifestations of the curse with institutional and governance deficiencies. For these authors, government action to confront the curse should include measures such as export diversification and, above all, responsible administration of resource-export-based income. Mehlum et al. (2006) also stress the link between resource curse and institutional weaknesses. This paper argues that poor institutional quality leads to, or exacerbates a resource curse, so the major hypothesis is that institutions are decisive in fighting against the curse. Therefore, it lays down a model which classifies institutions into two categories: institutions oriented to production activities (*production-friendly*) and institutions aimed at capturing rent (*grabber-friendly*). The abundance of raw materials can reduce income per capita in economies with a high share of *grabber-friendly* institutions, while *production-friendly* institutions tend to increase the income.[3]

As mentioned before, a specific dimension of the resource curse is Dutch disease (DD).[4] The central issue of this phenomenon is the way an export boom can trigger negative effects on other sectors and on the performance of the economy as a whole. These unfavorable outcomes are caused by two effects, according to Corden and Neary (1982). On the one hand, there is a resource movement effect (due to the reallocation of production factors, especially labor, towards the booming export sector, thus decreasing the output of other sectors); on the other hand, there is a spending effect (generated by a higher propensity to spend, associated with the resource boom,[5] which would increase the demand for non-

[3] Nevertheless, some authors diminish the importance of the institutional factor. Manzano and Rigobon (2001) find weakness in the relation between variables laid down by Sachs and Warner (1995) and argue that when this link is presented, it is not the consequence of institutional problems but of credit restrictions.

[4] This is a phenomenon which was initially observed from the Dutch experience after the discovery and exploitation of the Groningen gas field in the 1960s. The increase of Dutch gas exports created a large inflow of foreign currencies and appreciated the guilder, damaging other export industries and the entire country's competitiveness.

[5] Public expenses when the state is the owner of the fields where resources are