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The curse of natural resources in fractionalized countries

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Abstract

This paper develops a model that can explain why natural resources are a blessing for some countries, but a curse for others. In this model, natural resources cause fighting activities between rivalling groups. Fighting reduces productive activities and weakens property rights, making productive activities even less attractive. The aggregate production decrease exceeds the natural resources' direct positive income effect if and only if the number of rivalling groups is sufficiently large. The model thus predicts that natural resources lower incomes in fractionalized countries, but increase incomes in homogenous countries. Empirical evidence supporting this prediction is provided.

JEL classification: Q32; D72

Keywords: Natural resources; Fractionalization; Rent seeking

1. Introduction

The notion that natural resources are a curse rather than a blessing has attracted considerable attention in the economic literature ever since Sachs and Warner (1995). The example of Nigeria is often mentioned. Even though Nigeria has enjoyed huge oil windfalls since the late 1960s, its per capita GDP (in purchasing power

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parity terms) is among the lowest in the world and was even lower in 2000 than it was in 1970 (Sala-i-Martin and Subramanian, 2003). However, Nigeria is not representative for the group of oil-exporting countries. Many others including Iran, Mexico, Saudi Arabia and Venezuela are considerably less poor and some small oil-rich states are even relatively wealthy. In addition, Norway, one of the world's largest oil-exporters, performs extraordinary well. It is among the very richest countries in the world and even richer than all its rich neighbors. Thus, the question arises why oil seems to be a curse in Nigeria, but a blessing in Norway.

Or consider the diamond-rich neighbors Angola and Botswana. Average incomes are more than four times higher in Botswana than in Angola and property rights are considerably stronger too. This is hardly surprising as Botswana has been one of the fastest growing countries in the last 40 years while Angola has been plagued by civil wars most of the time.[1] But why has diamond-rich Botswana performed so well while diamond-rich Angola has been a disaster even in Sub-Saharan African terms?

The goal of this paper is to explain why natural resources seem to be a curse in countries like Angola and Nigeria, but a blessing in countries like Botswana and Norway. For that purpose, we develop a theoretical model that focuses on rent seeking or, more generally, on fighting activities between rivalling groups. In this model, natural resources and other windfall gains lead to an increase in fighting activities if there are multiple rivalling groups. This intensified fighting leads to a direct decrease of productive activities and weakens property rights. Weaker property rights make productive activities even less attractive such that the aggregate production decrease exceeds the windfall gains' direct positive income effect if the number of rivalling groups is sufficiently large. Natural resources are thus a curse in countries with many rivalling groups, i.e., in fractionalized countries. This curse becomes more pronounced as fractionalization increases. In countries with few rivalling groups, on the other hand, natural resources do not cause much fighting activities such that the positive income effect dominates. Natural resources are thus a blessing in such countries.

In the empirical part, we provide evidence that supports the main predictions of our model. In particular, we show that ethnic fractionalization and resource abundance have a negative effect on property rights and that the income effect of natural resources is positive in homogenous countries, but becomes increasingly negative as ethnic fractionalization increases.

This paper relates to four broad strands of the economic literature: First and foremost, it contributes to the literature on the resource curse.[2] Most contributions in this literature focus on explaining why natural resources are a curse on average and can therefore not explain the cross-country differences mentioned above. We thus add to this literature by offering an explanation why natural resources are a curse in some countries, but a blessing in others.

[1] For more information on Botswana, see e.g. Acemoglu et al. (2003). Note that Angola is not only rich in diamonds, but in oil as well.

[2] For an overview of this literature, see Gylfason (2001) and Sachs and Warner (2001). Further contributions include Gelb (1988), Sachs and Warner (1995), Gylfason et al. (1999), Rodriguez and Sachs (1999), Sachs and Warner (1999), Leite and Weidmann (2002), Sala-i-Martin and Subramanian (2003) and those discussed below.