The Risks of Fiscal Policy in Countries Rich in Natural Resources[1]

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Moscow 2013

[1] The original version of this article was published in Russian in the journal Ekonomicheskaya Politika. 2013, №6

Abstract

The article addresses the issue of fiscal policy risks in countries with an abundance of natural resources, including Russia. It is demonstrated which consequences Russia's federal budget may be faced with as a result of declining oil prices. In the context of phenomena typical of resource-dependent economies, it is shown that they have a tendency toward a lower rate of long-term economic growth. The macroeconomic and institutional aspects of the resource curse and the role of sovereign funds in shaping up the budget policy are discussed, with a special emphasis being made on their institutional importance.

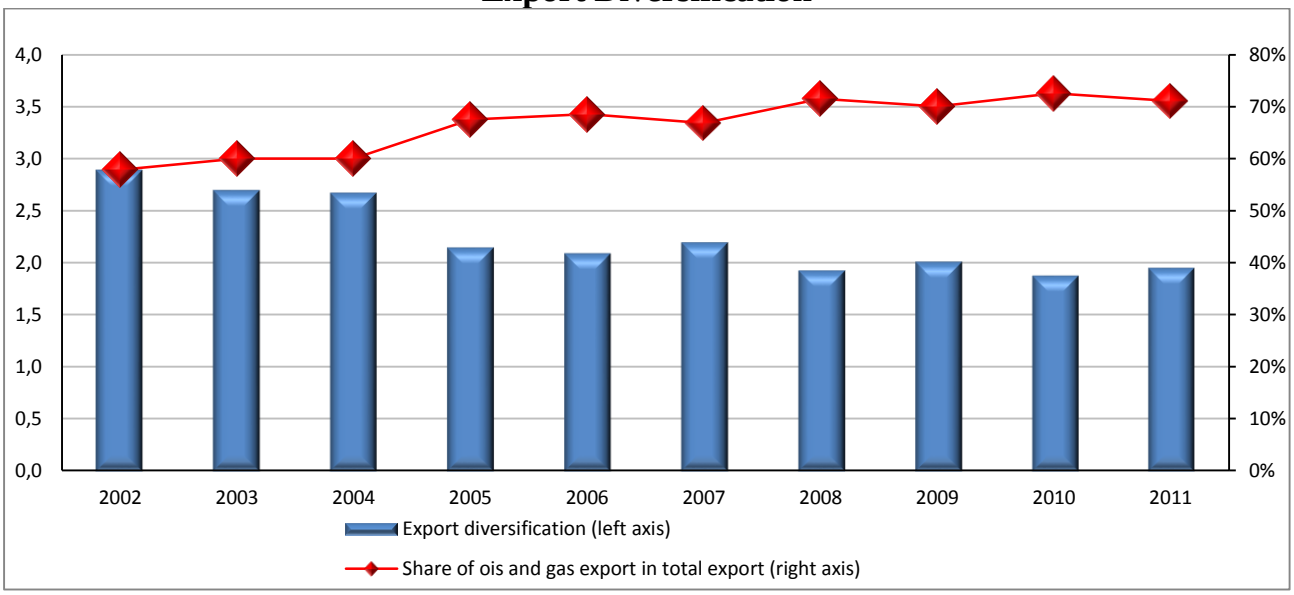
Keywords: resource curse, budget policy, institutions, economic growth, sovereign funds

JEL codes: H61, O11, Q32,

Introduction

Since 2004, Russia has experienced a significant change in the oil extraction trend — its growth rate has been declining from 9–10% per annum to 1–2% per annum, with very probable prospects of stagnation later on. Given that the price of oil is currently rather high, it is unlikely that it may significantly increase in the future; likewise, it is unrealistic to expect that revenues from oil and gas exports will remain continually on the rise. Over the past 10–12 years, the share of raw materials in Russia's total exports has been increasing alongside a downward movement of export diversification index (see *Fig. 1*).

Fig. 1 — Movement of the Share of Oil and Gas Exports in Russia's Total Exports and Export Diversification



Source: calculations based on data released by the World Integrated Trade Solution http://comtrade.un.org/db

According to the Federal Treasury's data[2], in 2012 the taxes levied on extraction of hydrocarbons and export duties on crude oil, natural gas and petroleum products amounted to a total of Rb 6.435 trillion, or approximately 50.2% of federal budget revenue or 10.3% of GDP. In such conditions, a twofold drop in the price of oil may entail a direct loss of government revenue amounting to 5 pp. of GDP, which will be very dangerous in view of the situation when the federal budget, the currently high world hydrocarbon prices notwithstanding, has been drawn up practically without any surplus. Thus, considering the existing

[2] See http://www.roskazna.ru/federalnogo-byudzheta-rf/yi/

instability of the foreign trade conjuncture, Russia as a country with abundant natural resources must deal with the issue of risks in the budget policy sphere and look for possible ways of their minimization and diversification. In order to provide an answer to the question as to which risk diversification measures may be most appropriate for economies with a strong reliance on natural resources, one should, first of all, identify the problems that such economies may be actually faced with.

The Resource Curse

The countries with natural resource abundance typically display certain phenomena, the most important among these being their slower rate of long-term economic growth by comparison with countries deprived of natural resources. It is this particular phenomenon, and not the greater shares of raw materials in their GDP or total exports, or the low levels of diversification of their economies and export structures, that is described by the term *resource curse* (Auty, 1993). In a number of studies (Sachs, Warner, 1995, 1997) it is noted that countries with substantial natural resource wealth are characterized by lower rates of economic growth than countries not endowed with abundant natural resources. Later on, similar results for economic growth determinants were obtained in one well-known empirical study (Sala-i-Martin, 1997), as well as in some other works (Gylfason, 2007; Mehlum, Moene, Torvik, 2006).

It has also been noticed that economic growth rates may vary not only in countries with different levels of natural resources, but also in different regions within one and the same country, which may develop alongside different trajectories depending on whether or not they are endowed with abundant natural resources. According to the results achieved in the studies by Papyrakis and Gerlagh (2007), and Cooke, Aadland and Coupal (2007), it is evident that, in the USA, the resource-rich states are growing at a slower pace than those without natural resources.

Table 1 presents average annual rates of economic growth in some of the countries rich in natural resources.

Table 1 — Average Annual Rates of Long-term Economic Growth in Some Countries with Natural Resource Abundance

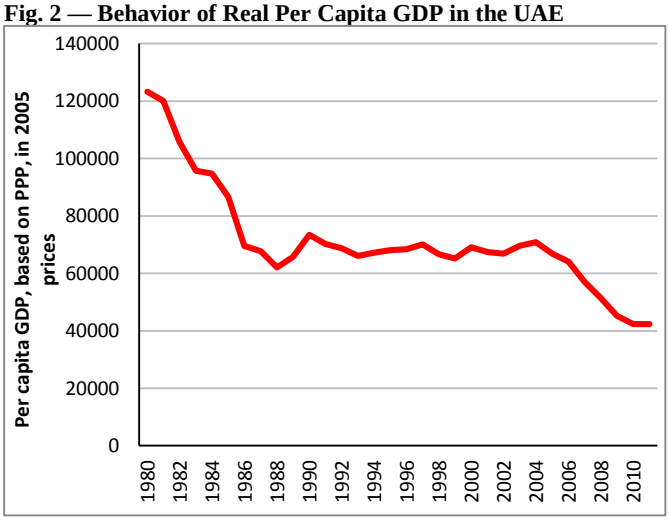
	Average annual rate of economic growth	Period under consideration
UAE	–3.5%	1980–2010 (30 years)
Saudi Arabia	–1.7%	1980–2010 (30 years)
Venezuela	–0.1%	1970–2010 (40 years)
Iran	0.3%	1970–2010 (40 years)
Libya	0.6%	1985–2010 (25 years)

Qatar	0.7%	1980–2010 (30 years)
Algeria	1.0%	1970–2010 (40 years)
Iraq	1.2%	1970–2010 (40 years)
Mexico	1.4%	1970–2010 (40 years)
Kuwait	1.5%	1985–2010 (25 years)
Ecuador	1.9%	1970–2010 (40 years)
Norway	2.6%	1970–2010 (40 years)

Source: World Bank, World Development Indicators http://databank.worldbank.org/data

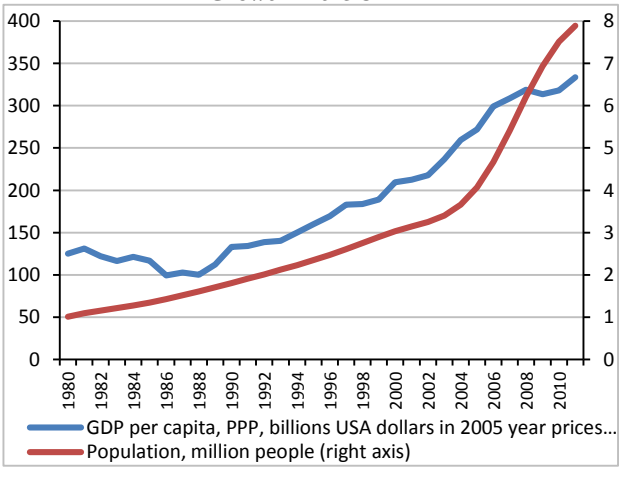
Some of the factual data shown in Table 1 vividly illustrate how, in the long-term perspective, resource-rich economies may demonstrate a negative rate of per capita GDP growth. Take, for example, the approximately threefold drop of per capita GDP in real terms in the UAE over the last three decades (from $ 120,000 to about $ 40,000, recalculated in 2005 prices, see *Fig. 2*). In fact, real GDP in absolute terms rose over that period by 2.8–3 times, which roughly corresponds to the growth rate of oil production, but at the same time that country's population (including workforce) increased nearly eightfold (from 1 to 8 million) – an indicator of a very low cost-effectiveness of the use of available labor resources (see Fig. 3). Labor migrants, on their arrival in the UAE, were either employed in the oil-extracting sector on terms that were much worse than those offered to native workers, so that production remained highly profitable even while labor productivity was declining, or were absorbed by industries belonging to the sector of non-tradable goods, where productivity cannot grow at the same fast rate as can be achievable in the sector of tradable goods unrelated to raw materials, whose development was not so successful.

Fig. 2 — Behavior of Real Per Capita GDP in the UAE



Source: World Bank, World Development Indicators http://databank.worldbank.org/data

Fig. 3 — Behavior of Real Per Capita GDP and Population Growth in the UAE



Source: World Bank, World Development Indicators http://databank.worldbank.org/data

These considerations have given rise to the hypothesis that natural resources may 'hinder' economic development. From this it follows that, if resources are an obstacle to development, it becomes necessary to understand how to preserve the positive effects created by the availability of natural resources and at the same time promote economic growth at its highest potential rate, and how the national budget policies should be shaped in countries rich in natural resources.

Two Aspects of the Resource Issue

The question as to why readily available resources can produce negative consequences is by no means trivial because, when taken in more simplistic terms, the availability of a resource or the emergence of a new resource within an economic system, if the resource is rationally used, can expand that system's potential. In this connection, two principal aspects of this issue are distinguished in literature: macroeconomic and institutional.

From the *macroeconomic* point of view, the presence of a resource in combination with a high price for that resource are conducive to the Dutch disease: when prices for raw materials are on the rise, countries with an abundance of such resources experience a concentration of their labor resources in the relevant extracting industries alongside an outflow of labor resources from the sector of tradable goods into the services sector (Bruno, Sachs, 1982). If world prices for mineral resources increase, the inflow of revenues from exports strengthens the nominal or real exchange rate of the ruble, thus suppressing the sector of tradable goods (with the exception of raw materials). Revenue growth, in its turn, pushes up prices in the non-tradable sector, thus causing redistribution of resources away from the sector of tradable goods unrelated to raw materials, where output begins to decline. This problem has been studied sufficiently well in international macroeconomics, the principal recommendation in such a situation being the introduction of measures designed to impose constraints on the strengthening of the national currency's real exchange rate in the short-term perspective (a goal that is evidently not achievable in the long run) and on the shifts of production factors[3]. Over the past 10–15 years, Russia has been dealing with this problem more or less successfully. Importantly, Russia's economy has managed to avoid the principal symptom of the Dutch disease — stagnation in the processing industry: the rate of

[3] It should be noted that we cannot discard the hypothesis as to the absence of any cause-and-effect interdependence between revenues generated by oil exports and industrial production decline. According to Hutchison (1994), stagnation in Norway, The Netherlands and the UK in 1970–1980 could also be explained by some other causes.

growth in that industry has not fallen behind that in the services sector (Ahrend, de Rosa, Tompson, 2007; Guriev, Sonin, 2008; Zubarev, Trunin, 2012)

The *institutional* aspect of the problem is that, firstly, the availability of a natural resource may spoil the quality of institutions functioning within a given economic system (Ross, 2001, 2008; Treisman, 2009), and secondly, growth of price for a natural resource leads to the most dangerous consequences when existing institutions are underdeveloped[4] (Gylfason, 1999, 2001; Mehlum, Moene, Torvik, 2006).

Generally speaking, macroeconomic policy is endogenous and actually depends, among other things, on the specific national conditions of each individual country. If an economic and political system is taken as a system where politicians are aiming at deriving the highest possible amount of rent, the inevitable outcome will be that the politicians operating in a country deprived of a resource that can be distributed or utilized, will try to do their utmost in order to satisfy the demands presented to them by various groups of influence. However, the presence of distributable resources will create negative incentives discouraging the politicians from making a lot of active efforts in their work, as well as false administrative incentives. At the same time, the presence of well-developed institutions may help the system to 'digest' the emerging additional resources most advantageously.

Thus, the higher the resource rent, the fewer the incentives for the government to develop the institutional environment (Mau et al., 2007). Whenever a country obtains a source of resource rent, its policy-makers become inclined to dismantle those institutions that have formerly been making the politicians to work diligently or act honestly, because in the new situation they can ensure their access to power by means of distributing rent, instead of hard work. Later on, in order to stay in power for a longer period, they may find it feasible to abolish many of the currently existing public institutions. Thus, in particular, some countries responded to rising prices for mineral resources by abolishing institutions like the freedom of the press or free elections (Mexico, Venezuela). In Ross (2001) and Brollo et al. (2010), it is demonstrated that in countries rich in oil, an upsurge of oil prices may even result in a total abolition of democracy. It should be noted that some researchers explain on the basis of their data that what happens, in reality, may be called 'an arbitrary curse': if a country has well-developed economic and political institutions, an abundance of resources usually boosts growth, or at least does not influence its rate in any way; as for immature democra-

[4] One of the possible mechanisms through which resource abundance may negatively influence the rate of economic development is the potential conflict arising from attempts to gain access to this source of wealth (Olsson, 2006). As a result, instead of boosting productivity, available resources are spent by groups of influence on their struggle for rent. Two examples of such damaging effects are the civil wars in Nigeria and Sudan, in the course of which their processing industries were largely destroyed.

cies, these experience a negative effect; moreover, oil abundance in such countries causes delay in reforming and is conducive to further deterioration of institutions (Polterovich, Popov, Tonis, 2007). One example of how the emergence of a new revenue source caused a delay in the long overdue and necessary transformation is the fate of the Kosygin reform, launched in the mid-1960s, shortly after the new team of Soviet leaders came to power, in response to declining living standards of the population. However, towards the end of that decade, new big oil and gas fields were discovered in Western Siberia, and 'oil dollars' flooded the economy. From then on, the reform was first effectively suspended, and then altogether abandoned (Gaidar, 2007).

Conclusion

As for practical conclusions, on the basis of analysis of the experiences of different countries it can be said that the negative effects of an abundance of natural resources can be minimized in the long run only if a ban is imposed at the institutional level on an unlimited use of a given resource. This can be achieved both through effectively functioning sovereign funds where the super income from exports is accumulated[5] and through imposing strict budget discipline consolidated at a legislative level[6].

The most illustrative and well-known example of successful development in a country rich in natural resources is Norway, which is presently the fastest-growing resource-dependent economy in the world – although, being a developed country, it has difficulties in maintaining a high rate of economic growth. In Norway, the monies held by the Government Pension Fund already amount to more than 100% of GDP, and legislation forbids any use of these reserves, with the exception of interest on the fund (approximately 4% of GDP), which does not depend on the world economic conjuncture.

We may regard our prospects with some optimism especially considering the fact that Norway very closely resembles Russia from the point of view of the role of the oil and gas sector in its national economy. Both in Russia and in Norway, the share of earnings from export deliveries of oil and natural gas in total export volume amounts to about 70%. In both countries, the share in GDP of rent derived from fuel and mineral resources amounts to approximately 15%. Russia's export diversification coefficient was 1.95 as of 2012, that of Norway — 2.00. One very significant difference is the relative size of sovereign funds: while in Norway it constitutes 105–107% of GDP, in Russia — only about 8.5%. Speaking

[5] See the study on the prospects of sovereign funds in Russia (Zolotareva et al., 2001)
[6] See also Drobyshevsky, Sinelnikov-Murylev, Sokolov (2011) and Knobel, Sokolov (2012)

in general, it can be stated that Russia, considering the current high dependence on mineral resources, has accumulated very modest funds by comparison with the other resource-dependent countries (see Table 2).

Table 2 — The Size of Sovereign Funds in Some Countries Rich in Natural Resources

Country	Fund name	Fund size (as % of GDP)	Note
United Arab Emirates	Abu Dhabi Investment Authority	174%	As of 2012
Kuwait	Budget Reserve Fund and Reserve Fund for Future Generations	170%	As of 2012
Norway	Government Pension Fund Global (GPFG)	106%	As of 2012
Saudi Arabia	Sovereign Wealth Fund	75%	As of 2012
Azerbaijan	State **Oil Fund** of the Republic of **Azerbaijan** (SOFAZ)	58%	As of 2012
Qatar	Qatar Investment Fund	50%	As of 2012
Kazakhstan	National Oil Fund of the Republic of Kazakhstan	33%	As of 2012
Chile	Copper Stabilization Fund	9.3%	As of 2012
Russia	Reserve Fund and National Welfare Fund	8.3%	As of 2012
Venezuela	Fund for Macroeconomic Stabilization (FMS)	3.2%	As of 2003; however, Hugo Chavez's government soon ran out of the money, and at present the Fund is effectively dysfunctional

Source: Sovereign Wealth Funds Institute http://www.swfinstitute.org/fund-rankings/

Thus, in countries with an abundance of natural resources (which also include Russia), the role of sovereign funds is not reduced only to accumulating government saving, restricting and strengthening the national currency's real exchange rate, and smoothing the consequences of the Dutch disease. In modern conditions, sovereign funds, in addition to ensuring compliance with the budget rule (setting the cap for federal budget expenditure no higher than the size of budget revenue if price benchmarks exceed gross domestic product by more than 1%; setting total planned expenditure volume against total expenditure less conditionally approved expenditures), perform an important institutional function: declining resource rent makes politicians seek ways to improve their performance instead of 'bribing' the population to put up with inadequate institutions and delaying reform. The political leaders, in their turn, in the presence of well-developed institutions can create the right incentives for bureaucrats. However, for Russia, with its high dependence on raw materials, these funds are evidently grossly undersized.

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