



Discovering the signs of Dutch disease in Russia[☆]



Valeriy V. Mironov^a, Anna V. Petronevich^b

^a “Development Center” Institute, NRU HSE, Slavyanskaya Square, 4-2, 207 ap., 109074 Moscow, Russia

^b Laboratory for Research in Inflation and Growth, NRU HSE, Paris 1 Panthéon-Sorbonne University, Paris School of Economics, 106-112 boulevard de l'Hôpital, 75013 Paris, France

ARTICLE INFO

Article history:

Received 17 March 2015
 Received in revised form
 13 September 2015
 Accepted 14 September 2015
 Available online 26 September 2015

JEL classification:

F41
 F43
 C32

Keywords:

Dutch disease
 Resource curse
 Real effective exchange rate
 Cointegration model
 Economic policy
 Russia

ABSTRACT

This paper examines the problem of Dutch disease in Russia during the oil boom of the 2000s, from both the theoretical and empirical points of view. Our analysis is based on the classical model of Dutch disease by [Corden and Neary \(1982\)](#). We examine the relationship between changes in the real effective exchange rate of the ruble and the evolution of the Russian economic structure during the period 2002–2013.

We empirically test the main effects of Dutch disease, controlling for the specific features of the Russian economy, namely the large role of state-owned organizations. We estimate the resource movement and spending effects as determined by the theoretical model and find the presence of several signs of Dutch disease: the negative impact of the real effective exchange rate on the growth in the manufacturing sector, the growth of the total income of workers, and the positive link between the real effective exchange rate and returns on capital in all three sectors. However, the shift of labor from manufacturing to services cannot be explained by the appreciation of the ruble alone.

© 2015 Elsevier Ltd. All rights reserved.

1. Introduction

With a share of 13% of the world market, Russia remains one of the major global suppliers of oil. Russian exports of goods and services currently account for approximately 30% of GDP, with exports of raw materials representing about 80% of the total value of goods exports. Four fifths of these raw materials consist of just two products: oil (together with oil products) and natural gas. The export structure has stayed remarkably stable since 2000 (see [Fig. 1](#)).

In the 2000s, the Russian economy developed under extremely favorable external conditions. Oil prices soared after the crisis of 1998, reaching the fifty-year linear trend by 2004 and they stayed high above the trend until autumn 2014 (see [Fig. 2](#)).

In spite of this, Russia's economic growth rate has been very volatile during this period. After growing by an average of 7% a year during the period 2000–2008, the economy plummeted by

7.8% in 2009 when the oil price decreased. The recovery of oil prices did not bring back the former growth rate. On the contrary, it has continued to decline: from 5.0% in the third quarter of 2011 to 1.3% in 2013 ([Fig. 3](#)). In manufacturing, the economic slowdown was even worse, with almost zero growth in 2008 and a negative –15.2% in 2009. After a rebound in growth in 2010, it started to slow down rather rapidly, practically back to zero in 2013 ([Fig. 3](#)). In 2002–2013, the share of the manufacturing sector in GDP in the current market prices has shrunk by 2.2% (see [Table A.1](#) in [Web-site-Based APPS](#)), while the share of mining in GDP has risen by 3.0%.

In literature, these stylized facts often refer to the signs of Dutch disease (see, for example, [Egert \(2012\)](#)). Dutch disease is an economic phenomenon which implies that an increase in export revenues leads to a decline in the manufacturing sector. The mechanism for this is the following: high revenues from the trade in natural resources create a balance of payments surplus due to the rising prices and/or volumes, which induces a substantial appreciation of the real effective exchange rate of the national currency. This renders local non-primary goods uncompetitive and leads to an outflow of resources from manufacturing. The loss of competitiveness in manufacturing represents the essence of Dutch disease. It is important to note that this negative impact can be extrapolated to the other tradable sectors, for example agriculture (see [Davis \(1995\)](#) for more details). However, in this study we

[☆]The article was prepared within the framework of the Fundamental Research Program at NRU HSE in 2015. The authors are thankful for the comments provided by S. Pekarsky, V. Bessonov, L. Solanko, the participants in the BOFIT seminar and Paris 1 Macro workshop, as well as the two anonymous referees. All the remaining errors are ours.

E-mail addresses: vmironov@hse.ru (V.V. Mironov), Anna.Petronevich@univ-paris1.fr (A.V. Petronevich).

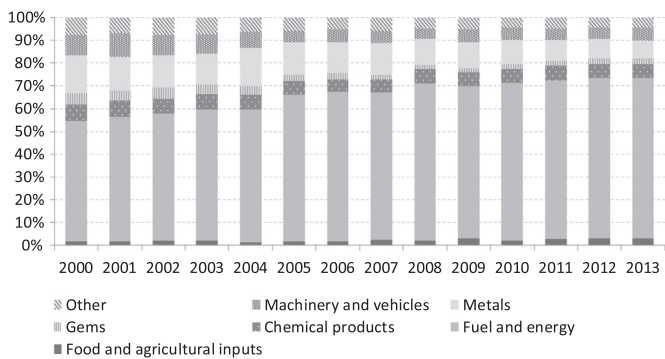


Fig. 1. Structure of Russian exports, 2000–2013, %. Source: Rosstat.

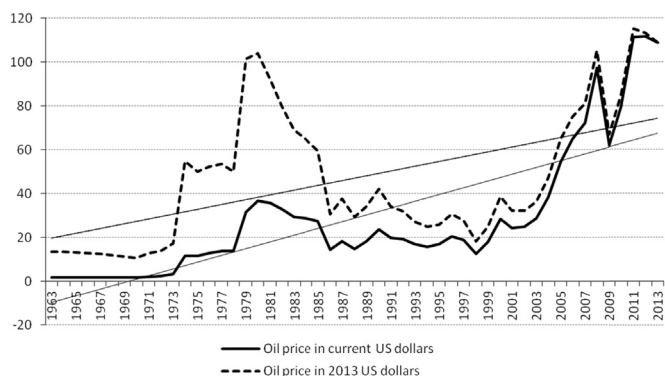


Fig. 2. Oil price (in US Dollars per barrel) and its linear trend, 1963–2013. Source: BP Statistical Review of World Energy, authors' calculation. Note: 1963–1983 Arabian Light posted at Ras Tanura. 1984–2013 Brent dated.

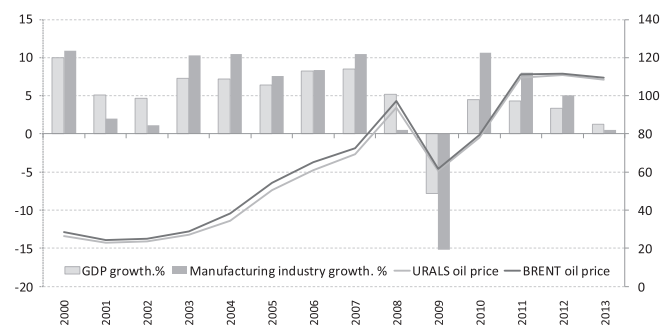


Fig. 3. GDP and manufacturing growth rates in Russia (left axis) and crude oil current price (in US dollars per barrel, right axis). Source: Rosstat, Reuters, authors' calculation.

focus primarily on manufacturing since the share of agricultural production in Russian GDP is far less than the share of manufacturing (about 3% versus 13%, see Table A.1 in Website-Based APPS).

The term “Dutch disease” is itself a paradox since its onset is marked by an inflow of wealth into an economy, followed by a rapid rise in domestic expenditures. Thus, in some sense, a change in the industrial structure cannot be considered a ‘disease’ in the direct meaning of the word. The result of the shrinking of the manufacturing sector is an optimal reaction to the growth of easy wealth (although it is certainly perceived as a disease by workers and enterprise owners in the affected industries). Davis (1995) shows that Dutch disease is just a transition of an economy from one equilibrium state to another when the boom in exports lasts for an infinitely long period of time. However, when the boom is

temporary (which is usually the case), the consequences of a shock will be more deteriorating when the resource tradable sector (that produces gas and oil) is more developed than the non-resource tradable sector (see Sheng (2011)).

For this reason, in the economic literature the term “Dutch disease” is regarded mainly as a structural problem: the deprivation of resources from the manufacturing sector reduces its capacity to generate basic innovations and the expertise favoring steady long-term economic growth.¹ Besides, the focus on the exports of raw material and the lack of output diversification renders an economy less stable vis-à-vis the external economic shocks.²

Broadly speaking, Dutch disease is one of the causes of the so-called Resource Curse.³ We will not discuss the concept of the Resource Curse in detail, but it is important to mention its manifestations. Van der Ploeg (2011b) points to three main groups of this phenomena: the over appreciation of the national currency, de-industrialization and low growth rates; rent grabbing, corruption and civil conflicts; difficulties in arranging the process of transformation of depleting resource assets to non-resource ones. Also, the distortion of economic motivations because of the struggle for raw material rents results in a high level of poverty, authoritarian rule, underinvestment in education, an undermined quality of institutions and even higher risks of a civil war (see Collier and Hoeffler (2002), Elbadawi and Sambanis (2002), Ross (2004) and Pegg (2010)). In the case of Russia these problems can be aggravated by the transformation process that it has had to go through, from planning to market economy.

Taking into account the devastating problems of the Resource Curse, it is important to identify whether one of its possible causes – Dutch disease – is present in an economy. The purpose of this paper is to study whether Russia is suffering from Dutch disease, in other words, whether the poor performance of the manufacturing sector in Russia is due to its low price competitiveness and to the abundance of export revenues that lasted for a “fat decade” in the 2000s. The decreasing share of manufacturing and the fast growth of the real effective exchange rate of the ruble (rising by approximately 60% during the period 2001–2013), as well as a persistently positive current account (see Fig. 4) are the first alarm signals. Even though the manufacturing growth rate in 2000–2014 has always been higher than GDP growth rate, except for 2008, 2009, 2013, it is likely that this visibly excellent performance is related to the rebound effect of the deep crisis of the 90's when manufacturing was declining much worse than the GDP (by 59% and 29% in 1992–1998, respectively), as well as to the intensive transformation from the state economy to the market economy.

We verify the hypothesis of Dutch disease comprehensively, comparing the theoretical results of the particular type of the widely used model by Corden and Neary (1982) to the empirical evidence. We find that the existence of Dutch disease in Russia cannot be rejected.

¹ Van der Ploeg and Venables (2012) believe that the presence of Dutch disease must be considered only if the sectors squeezed out by the resource boom have an external effect on the economy. According to van Wijnbergen (1984) and Sachs and Warner (2000), the tradable sectors are considered to have positive external effects by increasing returns to scale or “learning-by-doing”. Polterovich et al. (2010) also indicate a positive externality for the long-term growth originated by the human capital accumulation in the traded non-resource sector.

² Frankel (2012) also mentions that in the case when a resource exporting country has a significantly negative current account, the underlying international debt may be “difficult to service when the commodity boom ends”.

³ Among the other causes are, for example, a high volatility of income from external trade, the pro-cyclical pattern of macroeconomic fiscal and monetary policy (Frankel (2012)). Van der Ploeg (2011b) also mentions the high volatility as the quintessence of the negative manifestations of the resource curse, especially when the financial sector is underdeveloped.

Download English Version:

<https://daneshyari.com/en/article/10483950>

Download Persian Version:

<https://daneshyari.com/article/10483950>

[Daneshyari.com](https://daneshyari.com)