



Dutch disease and the Azerbaijan economy



Fakhri Hasanov^{a,b,c,*}

^a Center for Socio-Economic Research, Qafqaz University, Hasan Aliyev street 120, Khirdalan AZ0101, Azerbaijan

^b Department of Socio-Economic Modeling Institute of Cybernetics, F.Agayev street 9, Baku, AZ1141 Azerbaijan

^c Department of Economics, George Washington University, 2115 G Street NW, Washington D.C. 20052, USA

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ABSTRACT

The novelty of this study is that it empirically tests four hypotheses of the Dutch Disease in the Azerbaijan economy while systematically controls for other possible explanations of the observed processes over the period 2000–2007. The study concludes that an “absolute de-industrialization” has not taken place in Azerbaijan, rather the country suffers from a “relative de-industrialization” in the non-oil tradable sector. Additionally, the paper shows that the non-tradable sector has substantially expanded during the 2000–2007 period. Analysis also presents that the government expenditures have created a “spending effect”, which is more crucial than the “resource movement effect”. Furthermore, it was found that rapid increases in the wages and the non-tradable prices have led to appreciation of the real exchange rate in Azerbaijan. Finally, the study reveals that foreign direct investments inflow to the oil sector is harmful for non-oil exports and therefore, it contributes to deepening of resource, or oil, dependence. Findings in this paper support the view that to obtain a diversified economy with a long-term balanced growth development of the non-oil tradable sector should be of the major focus for the policymakers.

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1. Introduction

Azerbaijan has experienced substantial economic growth due to its vibrant oil sector over the last several years. The oil extraction and oil export have been growing substantially and thus turning into a leading sector of the economy. The share of the oil sector in the overall GDP has increased from 31.7% to 61.8% during the period 2000–2007. Huge oil revenues, driven by the high oil prices and an expansion of the oil production, have been the major sources of the tremendous surge in the government expenditures. A major part of these expenditures oriented to the non-tradable sector of the economy in the forms of infrastructure and social projects, which are useful for the socio-economic development.

However, the boom in the oil sector in parallel with the above-mentioned noble infrastructure and social development intentions have been accompanied by some negative trends in the economy. According to the calculations based on the official statistics, the real volume of the non-oil export has decreased by about 26.5% during 2004–2008. Moreover, the share of the non-oil export in the total export has decreased from 52.5% in 2004 to 4.7% in 2008 ([Azerbaijan Republic and The National Bank, 2008](#)). Moreover, it appears that mining sector has a greater share in Azerbaijani GDP than in other Oil-Exporting Countries (OEC) of Commonwealth Independent States (CIS). For instance, the share of mining in GDP was 66% in Azerbaijan, while it was 18% in Kazakhstan and 8% in Turkmenistan and 7% in Russia respectively in 2006 ([Egert, 2009](#)). Moreover, comparison with other OEC of CIS such as Kazakhstan and Russia, Azerbaijan has the worst position in terms of

* Center for Socio-Economic Research, Qafqaz University, Hasan Aliyev street 120, AZ0101 Khirdalan, Azerbaijan.

spending of the oil revenues, the share of the oil revenues in the government revenues and the non-oil deficit (See [Figs. A.1–A.3](#) and [Table A.1 in the Appendix](#)). The oil revenues are engine for growth in the non-tradable sector, while the non-oil tradable sector has been slowly vanishing on the year-by-year basis.

Another critical issue is an appreciation of the real effective exchange rate of manat, which has appreciated by 75% during 2004–2008 ([International Monetary Fund, 2012b](#)). The main outcome of this appreciation was deterioration of the competitiveness of the non-oil tradable sectors.

Several seminal studies such as [Sachs and Warner \(1997\)](#), [Auty \(2001\)](#), [Gylfason \(2001\)](#), [Gylfason and Zoega \(2002\)](#) have shown that most resource-rich countries tend to grow more slowly than countries without natural resources. These resource-rich countries suffer from a number of macroeconomic challenges, which are tightly related to the natural resource sector. The “resource curse” phenomena point to resource abundance as a curse rather than a blessing for some resource-rich developing countries. There are four main explanations of the resource curse, but the traditional approach in explaining the resource curse was the Dutch Disease concept ([Sturm et al., 2009](#)). According to [Corden \(1984\)](#) and [Corden and Neary \(1982\)](#), the Dutch Disease is due to appreciation of a country’s real exchange rate, caused by the sharp rise in exports, and the tendency of a booming resource sector to draw capital and labor away from a country’s manufacturing and agricultural sectors. The subsequent dynamic leads to a decline in exports of agricultural and manufactured goods and inflate the cost of non-tradable goods.

Since Azerbaijan is resource-abundant country with negative trends caused by its booming oil sector, it is important that the economy to be analyzed from the Dutch Disease perspective. Therefore, the objective of this study is to investigate whether there are significant symptoms of the Dutch Disease in the Azerbaijani economy.

Unlike other resource-rich countries, the Azerbaijan economy has not been investigated systematically in terms of the Dutch Disease. However, [Rosenberg and Saavalainen \(1998\)](#), [Gahramanov and Fan \(2005\)](#), [Singh and Laurila \(1999\)](#) and recently [Kronenberg \(2004\)](#) and [Egert \(2009\)](#), explored mainly economic aspects of the Dutch Disease symptoms in Azerbaijan. These studies focused on the main symptom of the Dutch Disease, which is an appreciation of the real exchange rate due to the booming sector (or run growth equation by including booming sector’s factor). These studies concluded that the Azerbaijan economy either had contracted or potentially will contract to the Dutch Disease. Based on testing only one symptom without checking other possible explanations of observed processes, it is however not quite convincing to conclude that an economy has contracted to Dutch Disease. This can be considered as the main shortcoming of the above-mentioned studies.

Consequently, moving away from the above-mentioned investigations this study systematically examines the Dutch Disease symptoms by means of testable hypotheses. At the same time, in order to avoid misleading results, the study carefully controls for other hypotheses that may be reasonable for explaining observed phenomena in the Azerbaijani economy. For instance, appreciation of real effective exchange rate is one of the symptoms of the Dutch Disease ([Corden and Neary, 1982](#) *inter alia*). At the same time, this evidence might be sourced from increased relative productivity in the (non-resource) tradable sector ([Balassa, 1964](#); [Samuelson, 1964](#)).

The study examines the Azerbaijani economy by dividing it into the three sectors, namely the Oil, Non-oil tradable and Non-tradable sectors. It concludes that over the period 2000–2007 there has not been “absolute de-industrialization”, but “relative de-industrialization” of the non-oil tradable sector, as well as substantial expansion in the non-tradable sector. Moreover, the government expenditures have created the “spending effect” which has been more significant than the “resource movement effect”. Furthermore, evidence was found for rapid increases of wages and the non-tradable prices and therefore an appreciation of the real exchange rate. Finally, the study reveals that foreign direct investments in the oil sector are harmful for non-oil exports and therefore, it deepens resource dependence of the economy.

The policy implication of the study is that a development of the non-oil tradable sector should be the major focus of the policymakers in order to obtain the diversified economy and therefore long-term balanced and sustainable growth.

This study contributes to the existing Dutch Disease literature by using a novel approach to investigate this issue in Azerbaijan, one of the natural resource-rich countries.

The remainder of this paper proceeds as follows: Section 2 is devoted to a literature review. Section 3 examines whether the Azerbaijani economy has some symptoms of the Dutch Disease. Concluding remarks are given in Section 4.

2. Literature review

The studies that investigate the theoretical mechanism of the Dutch Disease are mainly [Corden and Neary \(1982\)](#), [Buiter and Purvis \(1983\)](#), [Bruno and Sachs \(1982\)](#), [Corden \(1984\)](#), [Edwards \(1985\)](#). [Corden and Neary \(1982\)](#) present the core model of Dutch Disease economies. The model assumes that there are three sectors in an economy, namely the Booming Sector (which experiences high export revenues, for example, the oil sector.), the Lagging Sector (which consists of the non-booming tradable sector, such as agriculture and manufacturing.) and the Non-tradable Sector. The first two sectors produce tradable goods at given world prices, while the third sector produces only non-tradable goods, which do not depend on world prices. Authors generally analyze three static models, which are characterized by different assumptions about the factor mobility between sectors.¹ They show that a boom impacts the economy through two channels: the resource movement effect and the

¹ The assumptions are: (1) labor is mobile between all sectors, while capital is immobile; (2) labor is mobile between all sectors, while capital is mobile only between the Lagging and the Non-tradable sectors; and (3) labor and capital are mobile between all sectors.

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