

4-12-2013

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## Recommended Citation

Afandiyev, Emin, "Causes of Dutch Disease and Ways to Deal with It: Literature Overview" (2013). *2013 IPFW Student Research and Creative Endeavor Symposium*. Book 2.

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# Causes of Dutch Disease and Ways to Deal with It: Literature Review

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## Abstract

The term Dutch Disease was originally used in 1982 in “Economics” Journal to describe poor management in natural gas sector in the Netherlands. Later, this term was used to describe events similar to one in the Netherlands: specifically, the boom in natural resource sector and the shrinkage of manufacturing sector. Corden and Neary, in 1982, were the first who put the Dutch Disease theory in economic model. In their original paper, they described the consequences of having a booming industry within a country on other industries of the country.

Initially it was assumed that the Dutch Disease can be caused only by the boom in the natural resource sector. However, evidence suggests that Dutch Disease can be caused by poor management in other sectors of industry as well. In this paper, I analyze different publications about Dutch Disease. The analysis shows the possible causes and consequences of Dutch Disease and the ways to deal with it. This paper also shows an example of country who successfully dealt with it. The paper particularly focuses on countries where Dutch Disease has occurred.

The countries from South Pacific region are currently experiencing Dutch Disease because of massive international aid from developed countries. Spanish islands, the Balearics and Canary, have possibility of facing the Dutch Disease in near future. And Botswana is the only country which successfully dealt with Dutch Disease.

## Introduction

The term “Dutch Disease” first was used in 1977 in the journal “The Economist”. This term originally was used to describe the poor management in natural gas sector, which led to economic difficulties within country. Later this term became generic and was used by scientists to describe similar events.

The theory of Dutch Disease was firstly described by W. Max Colden and J. Peter Neary in 1982 in the article “Booming Sector and De-industrialization in a Small Open Economy”. The basic assumption was that boom in the natural resource sector of a small country leads to real exchange appreciation which in its turn leads to deindustrialization and unemployment.

## Mechanics of Dutch Disease

The original model by Colden and Neary was based on the following assumptions. They assumed that the small open economy consists of traded (energy and manufacturing sector) and non-traded goods (service sector). The price of traded goods is determined in the world market, while the price of non-traded goods depends in a domestic market. The boom in an energy sector causes an inflow of foreign currency. This influx of foreign monetary units leads to appreciation of national currency. Appreciation makes a cost of domestically produced tradable goods higher. Because the price of manufacturing goods determined in the world market, and since the price of domestically made goods becomes higher, there is decrease in demand for tradable goods. As the law of supply and demand states increased supply of any product or service (in this case it is foreign cash) will decrease its relative price. In another word, increased supply of foreign cash increases value of national currency causing national exchange rate appreciation.

Domestic exchange rate appreciation means that products produced domestically cost more in the world market than products produced in other countries. The domestic price appreciation decreases country’s competitiveness in the world market. Decrease in competitiveness mainly hurts manufacturing sector; because of high price of domestically produced goods, a country cannot sell these goods on the world market. Decreased demand for produced goods causes a decline in a manufacturing sector. Manufacturing companies in response to decreased demand cut production by massive layoffs. Massive layoffs lead to high unemployment. Decrease in production within country causes decrease in Gross Domestic Product.

However income from natural resource sector continues to inflow. High income causes salary increase in valuable mineral resources sector. In its turn high salary causes high taxes. In most cases high taxes increase governmental spending, which leads to inflation. The inflation mostly is observed in non-tradable sector. The evidence shows that countries with booming sector benefit only in the short term. However, in the long term decrease in the overall productivity and GDP is observed. This leads to de-industrialization of a country.

## Other Causes of Dutch Disease and Possible Solution to the Problem

Recently it was found that besides discovery of natural resources, some other factors like international aid from developed countries to least developed countries might cause Dutch Disease in the latter. The economics theory suggests that influx of foreign currency from any sources is likely to cause Dutch Disease (Corden). The effect of influx of foreign currency can be illustrated in an example of South Pacific region. The South Pacific region mainly consists of small islands. An absence of natural resources, a bad geographic location and undeveloped human factors are the main obstacles in economic development.

At almost zero percent growth of economy these countries heavily rely on international aid from developed countries. The amount of received aid varies vastly from country to country. For example the amount of aid for the last 3 years ranges from 3 percent of GDP in Fiji to 80 of GDP in Tuvalu (CIA World Factbook). The impact of the aid on economy differed from country to country. In Cook Islands, where aid amounted for 26.7 percent of GDP, more than 10 percent decline in GDP and more than 10 percent appreciation in real exchange rate was observed. While in Tuvalu, where aid amounts for 80 percent of GDP, results were less severe: 3 percent decrease in GDP and more than 2 percent increase in real exchange rate.

Moreover it was found that boom in a tourism sector might have the similar impact on economy as a boom in natural sector, causing by that Dutch Disease. The economy of countries with recreational resources (sunny weather, beautiful nature, beaches, etc.) consists of 3 sectors. Tradable sector represents manufacturing, non-tradable sector represents service and production, and booming sector represents tourism. High profits in tourism sector increase average salary level in this sector. While in others sectors salary level remains the same. It causes shift of work force from tradable and non-tradable sectors to tourism sector, thus reducing productivity in a manufacturing sector. This makes country completely dependable on a tourism sector. For example, because of boom in tourism sector, in Spain, other sectors like agriculture and manufacturing heavily declined. It also caused a decrease in investments into research and development (R&D). As researches show tourism companies are less likely to investment in R&D. There is also evidence that hotel and catering businesses spend 0.715 percent of their profit on employee trainings and innovations, while this number equals to 6.8 in most businesses. The economic theory suggests that the worst scenario is when recreational resources will be depreciated. Recreational resources are nonrenewable type of resources; relying on them will not benefit a country in the long term. For the long time the idea was that resource abundance and sustained economic growth has negative correlation (Amy R. Poteete). However regulatory actions made by government of Botswana to prevent negative effects of Dutch Disease showed otherwise. When diamond mining began Botswana had not had either strong political legitimacy or strong state institutions. Politicians in Botswana wisely used macroeconomic tools to prevent development of Dutch Disease. One of these applications was keeping some money from investments abroad. Botswana kept some portion of money in foreign banks and invested the rest portion. By this action politicians could restrict inflow of foreign currency.

Moreover politicians wisely used income from diamonds sector within the country. A lot of public schools, hospitals were built during the economic boom. In 2005, the World Bank named Botswana as the country with highest average growth of GDP over the last 40 years. Botswana was ahead of countries like South Korea, China and oil-rich Oman. Also the World Bank named Botswana as “best in class” among mining industry for its economic performance (World Bank).

Other countries try to cope with overvaluation of national currency in different ways. Brazil, for example, in order to prevent inflow of foreign currency imposed 6 percent tax on foreign investments. However this policy did not give expecting results. In August 2010, trade and industry minister of Brazil Fernando Pimentel announced tax breaks. This was the first indication that instead of trying to weaken national currency, Brazil will try to cope with it. In the public announcement he said “We will have a strong currency for a long period of time... Businessmen will have to get used to that.” (The Economist). The reason why Brazil seems optimistic about implemented policies is the similar policies in Switzerland. In order to cope with high exchange rate, Swiss watchmakers increased price of export by 20 percent. The idea was that customers will prefer quality over price.

## Conclusion

An influx of foreign currency from any sources is more likely to cause Dutch Disease. Even though windfall of foreign cash and subsequent real exchange rate appreciation benefits a country, these benefits occur only in the short term. In the long term decrease in employment rate, shrinkage of manufacturing sector, decrease in country’s overall productivity and inflation happen. However researches indicate that by implementations of wise state policies negative effects of the Dutch Disease can be prevented.

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