

Dutch Disease

Dutch disease, in the original sense of the term, refers to the fears of de-industrialization that gripped the Netherlands in the wake of the appreciation of the Dutch guilder following the discovery of natural gas deposits in the North Sea around 1960. The appreciation of the guilder following the gas export boom hurt the profitability of manufacturing and service exports. Total exports from the Netherlands decreased markedly relative to Gross Domestic Product (GDP) during the 1960s. The growth of petroleum exports in the 1960s hurt other exports disproportionately. Many feared dire consequences for Dutch manufacturing. The problem proved short-lived, however. From the late 1960s onward, exports of goods and services have increased from less than 40 per cent of GDP to more than 70 per cent, a high export ratio by world standards. The expected de-industrialization did not materialize, but the name stuck. It can be said that, being neither Dutch nor a disease, the Dutch disease is a double misnomer. But when a disease bears the name of the first patient diagnosed with it, it would seem a bit harsh to require the patient to remain sick for the name to stick.

Is it a disease? Some view it as matter of one sector's benefiting at the expense of others, without seeing any macroeconomic or social damage done. Others view the Dutch disease as an ailment, pointing to the potentially harmful consequences of the resulting reallocation of resources – from high-tech, high-skill intensive service industries to low-tech, low-skill intensive primary production, for example – for economic growth and diversification.

Symptoms

An overvalued currency was the first symptom associated with the Dutch disease, but later several other symptoms came to light. Figure 1 illustrates how an oil export boom lifts the equilibrium real exchange rate at which total exports of goods, services, and capital match total imports. In the figure, nonoil exports decline from A to C and hence by less than oil exports increase, so that total exports rise from A to B. For total exports to decline the import schedule would have to shift to the left (e.g., through capital inflow) by an amount that exceeds the increase in oil exports, measured by the distance between B and C.

<Figure 1>

Natural resource discoveries and dependence tend to go hand in hand with booms and busts: the prices and supplies of raw materials and related commodities fluctuate a great deal in world markets. Fish stocks, for example, are notoriously volatile. Oil wells are drilled, and then go dry, and mines are depleted. The resulting fluctuations in export earnings trigger exchange rate volatility, perhaps no less so under fixed exchange rates than under floating rates. Unstable currencies create uncertainty that tends to hurt exports and imports as well as foreign investment. Further, the Dutch disease can strike even in countries that do not have a national currency of their own (as, for instance, in Greenland that uses the Danish krone and depends on fish). In this case, the natural-resource-based industry is able to pay higher wages and also higher interest rates than other industries, thus making it difficult for the latter to stay competitive. This problem can become particularly acute in countries with centralized wage bargaining (or with oligopolistic banking systems, for that matter) where the natural-resource-intensive industries set the tone in nation-wide wage negotiations and dictate wage settlements that other industries can ill afford. In one or all of these ways, the Dutch disease tends to reduce the level of total exports or skew the composition of exports away from manufacturing and service exports that may be particularly conducive to economic growth over time. Exports of capital, including inward foreign direct investment, may also suffer.

The Netherlands recovered quickly from the Dutch disease, and have seen a persistent

upward trend in their total exports relative to GDP since the mid-1960s. On the other hand, in Norway, the world's third largest oil exporter after Saudi Arabia and Russia, total exports have risen slowly relative to GDP to a level well below that of the Netherlands (45 per cent in Norway in 2005 compared with 71 per cent in the Netherlands), even if the Dutch economy is almost three times as large as that of Norway. Also, the share of manufactured exports in merchandise exports was 68 per cent in the Netherlands in 2005 compared with 17 per cent in Norway. Exports and manufacturing are good for growth. Openness to trade invigorates imports of goods and services, capital, technology, ideas, and know-how. The Dutch disease matters mainly because of its potentially harmful consequences for economic growth.

Channels

Experience seems to suggest six main channels of transmission from heavy natural resource dependence to sluggish economic growth. At the top of the list is the Dutch disease. In second place, huge natural resource rents, especially in conjunction with ill-defined property rights, imperfect or missing markets, and lax legal structures, may lead to rent-seeking behavior that diverts resources away from more socially fruitful economic activity. The struggle for resource rents may lead to a concentration of economic and political power in the hands of elites that, once in power, use the rent to placate their political supporters and thus secure their hold on power, with stunted or weakened democracy and slow growth as a result. Extensive rent seeking – i.e., seeking to make money from market distortions – can breed corruption, thus reducing both economic efficiency and social equality. Third, natural resource abundance may imbue people with a false sense of security and lead governments to lose sight of the need for growth-friendly economic management, including free trade, foreign investment, bureaucratic efficiency, and good institutions, including democracy. Incentives to create wealth through good policies and institutions may wane because of the relatively effortless ability to extract wealth from the soil or the sea. Fourth, abundant natural resources may likewise weaken incentives to accumulate human capital, even if the rent stream from the resources may enable nations to give a high priority to education. Fifth, natural resource abundance may blunt private and public incentives to save and invest in real capital no less than in human capital and thereby weaken financial institutions and reduce economic growth. Sixth, natural resource wealth is a fixed factor of production that hampers economic growth potential by causing a growing labor force and a growing stock of capital to run into diminishing returns.

In sum, an abundance of natural capital, if not well managed, may erode or reduce the quality of human, physical, social, financial, and foreign capital, and thus stand in the way of rapid economic growth. Manna from heaven can be a mixed blessing. Consider the attitudes of individuals to their own and to other people's money. A person's respect for money tends to vary inversely with his or her distance from the effort expended to make the money. For example, loot tends to be invested with less forethought than honest wages. The same argument applies to unrequited foreign aid. An influx of aid tends to increase the real exchange rate, thereby hurting exports as in Figure 1. Import restrictions exacerbate the appreciation of the currency, hurting exports further. The figure suggests that aid needs to be accompanied by trade liberalization to avert the currency appreciation and its consequences.

Cases

The list of natural-resource-abundant countries beset by economic and political difficulties is a long one. Take Libya. Without its oil export revenues, Libya (population six million) would hardly have had the means to purchase 700 military aircraft, submarines, and helicopters to

pursue the foreign ambitions of Colonel Gaddafi, in power since 1969. In Equatorial Guinea, following oil discoveries, the purchasing power of per capita GDP increased by a factor of six or seven from 1990 to 2005 while life expectancy plunged from 46 years to 42. One child in five dies before reaching its fifth birthday. More than a half of the population of 500,000 lives on less than a dollar a day. President Mbasogo has ruled the country with an iron fist since 1979, usurping the country's oil wealth for himself and his family and cronies. The readiness of the rest of the world to import oil from Equatorial Guinea, and thus to buy stolen goods, is an integral part of the problem because a people's right to its natural resources is a human right proclaimed in primary documents of international law and enshrined in many national constitutions. Article 1 of the International Covenant on Civil and Political Rights states that "All people may, for their own ends, freely dispose of their natural wealth and resources." Neither Libya nor Equatorial Guinea exports any manufactures to speak of.

The list of countries afflicted by various symptoms of the Dutch disease could be extended to include Iran, Iraq, Mexico, Nigeria, Russia, Saudi Arabia, Sudan, and Venezuela, among several others. Some other countries have managed to avoid such afflictions. A prime example is Norway, where, before the first drop of oil emerged, the oil and gas reserves within Norwegian jurisdiction were defined by law as common property resources, thereby clearly establishing the legal rights of the Norwegian people to the resource rents. On this legal basis, the government has absorbed about 80 per cent of the resource rent over the years, having learnt the hard way in the 1970s to use a relatively small portion of the total to meet current fiscal needs. Most oil revenue is set aside in the state petroleum fund, recently renamed the pension fund to reflect its intended use. The government laid down economic as well as ethical principles (commandments) to guide the use and exploitation of the oil and gas for the benefit of current and future generations of Norwegians. The main political parties share an understanding that the national economy needs to be shielded from an excessive influx of oil money to avoid overheating and waste. The Central Bank (Norges Bank), which was granted increased independence from the government in 2001, manages the fund (currently around \$400 billion or \$85,000 per Norwegian) on behalf of the Ministry of Finance. This arrangement maintains a distance between politicians and the fund. Almost 40 years after discovering their oil, the Norwegians have a smaller central government than Denmark, Finland, and Sweden next door.

Norway's tradition of democracy since long before the advent of oil has probably helped immunize the country from the ailments that afflict most other oil-rich nations. Large-scale rent seeking has been averted in Norway, investment performance has been adequate, and the country's education record is excellent. Even so, some (weak) signs of the Dutch disease can be detected, notably sluggish exports and foreign direct investment and the absence of a large, vibrant high-tech manufacturing industry as in Sweden and Finland. Norway's lack of interest in joining the European Union can also be viewed in this light.

And then there is Botswana. Having managed its diamonds quite well and used the rents to support rapid growth, Botswana has become the richest country in Africa measured by the purchasing power of per capita GDP. Its rapid growth since 1965 has been accompanied by political stability and a steady advance of democracy. Unlike Sierra Leone's alluvial diamonds that are easy to mine by shovel and pan and easy to loot, Botswana's kimberlite diamonds lie deep in the ground and can only be mined with large hydraulic shovels and other sophisticated equipment and, therefore, are not very lootable. This difference probably helped Botswana succeed while Sierra Leone failed, and so, most likely, did South African involvement in Botswana's diamond industry.

References

Corden, W.M., and J.P. Neary 1982. Booming sector and de-industrialisation in a small open economy. *Economic Journal* 92, 825-848.

Corden, W.M. 1984. Booming sector and Dutch disease economics: Survey and consolidation. *Oxford Economic Papers* 36, 359-380.

Ross, M. 2001. Does oil hinder democracy? *World Politics* 53, 325-361.

Van Wijnbergen, S. 1984. The 'Dutch disease': A disease after all? *Economic Journal* 94, 41-45.

Wenar, L. 2008. Property rights and the resource curse. *Philosophy and Public Affairs* 36, 1-32.

Thorvaldur Gylfason.

Figure 1. How an oil export boom crowds out nonoil exports

