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Avoiding the "Dutch Disease" and "Resource Curse" Maladies through Strategically Deployed Infrastructure and Business-to-Business Economic Development Projects

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Abstract

Recent critiques of countries that have entered into massive amounts of debt for large infrastructure projects, even when they did not seem to have any need for projects of that scale, have alarmed economists and conspiracy theorists alike. In accepting such loans, the vulnerable poor countries seemed to totally disregard E. F. Schumacher's now-classic notions of "appropriate technology" and "small is beautiful" in the realm of economic development, especially of African economies. Although it may seem unprofitable to invest in infrastructure that is not directly related to the main export product (usually a mineral or oil), it is actually quite dangerous to limit the investment in the primary industry. By not investing in infrastructure that benefits multiple industries and communities, energy and mineral-rich countries will be unable to transform their resources in a way that uniformly benefits their country. Critics questioned the motives of the donors and raised questions of the ultimate sovereignty of the borrower nations. Apologists of the loans pointed out that the countries needed the infrastructure as a foundational first step toward diversification and improved international trade. Few solutions or next steps have been proposed, however. This essay proposes solutions and next steps toward developing a balanced approach that strategically leverages existing infrastructure for a diversified economy and sustainable growth.

INTRODUCTION

Companion Maladies: The Resource Curse and Dutch Disease

The resource curse, also known as the paradox of plenty, refers to the observation that countries that are blessed with abundant natural resources, seem to have that blessing erode as they experience lower levels of economic growth, higher levels of government corruption, and worse development outcomes than countries with fewer natural resources.

The concept has been explored in depth by Richard M. Auty (1993), who evaluated the impact of resources such as copper, tin, silver, and bauxite on mining economies, including Peru, Bolivia, Chile, and Jamaica.

In addition to the fact that mining tended to disproportionately attract investment, leading to outflows of capital and labor in non-dominant resources, there were, in almost all cases, increases in "rent-seeking" behaviors and corruption on the part of the countries' leaders.

The "Dutch Disease" refers to the negative economic and social consequences of the resources curse. They include

* non-dominant industries become non-competitive
* decline in manufacturing and agriculture
* no investment in non-dominant industry
* increase in demand for labor in dominant industry drives wages higher
* increase inflation which affects costs in all other sectors
* increase of money supply due to influx of dollars, etc. causes inflation
* increase in imported goods, increasing competition with locally produced goods
* persistent and intractable rent-seeking and corruption

Responses to the "Dutch Disease" involve trying to find a way to neutralize or inoculate the money coming into the economy. Remedies include

* creating a rainy day fund
* investing in education and infrastructure to diversify and make the non-dominant industry competitive

Unfortunately, there are relatively few examples of successful neutralization or inoculation of the passive income that flows in as a result of mining or petroleum production, or other resource exploitation (hydroelectric energy or other mono-products).

Successful Inoculation of Rent or Resource Revenue

Norway is perhaps the best example (Sleire, 2018) of a country that has . In addition to saving money in a rainy day fund, they also use the funds for energy diversification and non-oil and gas related infrastructure development. Norway's institutions have also used oil revenues for social welfare programs, such as medicine and education. Ironically, simply distributing oil revenues in terms of a head right or social welfare payment may not help avoid Dutch Disease because it creates a great disincentive to invest in risky start-ups or to be entrepreneurial. Instead, it tends to create demotivated populations and also bloated and inefficient state governments that employ political patrons. Simply funneling revenue into social welfare systems also often results in waste or even diversion of funds, which leads to corruption and income inequality.

One might argue that a country such as Norway already possesses a history of socialism and a culture that encourages a more equal distribution of wealth. Such conditions make it more palatable for the governing class to distribute the revenue so that it benefits the society as a whole. It is often much more difficult to establish a rainy day fund in a country that is known to have had some corruption issues and its processes are not transparent. Such was the case of Azerbaijan in the late 1990s and early 2000s. But, after experiencing a very painful downturn when the price of oil dropped in 1998, coupled with the collapse of the Russian ruble, Azerbaijan was persuaded to work with the World Bank, the IMF, and other entities to establish a rainy day fund and to follow the example of Norway.

Despite the importance of oil to the Norwegian economy, Norway has successfully avoided "Dutch Disease" primarily by trying to diversify the economy, and during the times of high prices, quarantine the revenues by putting them in a rainy day fund, rather than having them enter the economy and have an inflationary effect. Norway has invested its surpluses in a "wealth fund" which is now worth $1 trillion US dollars. While countries and states such as Libya, Alaska, and Venezuela tended to give money in the form of headright payments, Norway has decided that it would like to use the money in a different way.

In Libya, Venezuela, and Alaska, headright payments stimulated the economy, especially in terms of consumer goods, because the money went into the hands of people with a high marginal propensity to consume. However, Norway uses the "wealth fund" for entrepreneurial purposes, hoping for a multiplier effect, rather than using the funds for social programs.

As a prosperous nation even before the discovery of oil, Norway had develop ways to fund its social welfare programs. It was not dealing with the issue of abject poverty, complete lack of infrastructure, and a political structure that created a small group of privileged elites.

Norway was able to create a "wealth fund" because those funds were not urgently needed to provide basic services. Norway had already developed a sustainable economy and already had the institutions in place to allow a healthy middle class to thrive. Further, Norway already had infrastructure in place.

Investigation: When Infrastructure Can Cause Dutch Disease

While infrastructure projects seem to be, on the face of it, a very positive investment, it is possible that infrastructure projects that are not well planned and integrated into the economy as a whole will actually destabilize the economy.

Here are the top examples of how and when poorly planned and executed infrastructure projects can contribute to and even cause Dutch Disease:

- *"Orphan" Infrastructure:* Infrastructure that is not integrated into existing or planned infrastructure, resulting in "orphan" infrastructure. Examples include airports that do not have all the complementary elements required to make them fully functional, and ports without warehouses, dock equipment, electricity supply, or sufficient digital support (wifi, bandwidth, etc.).
- *"Make Work" Infrastructure:* Infrastructure that has been designed as a Keynesian economic stimulus plan–and thus is a "white elephant" which results in short-term employment, short-term "shock" demand for inputs, but then is not sustainable. Examples include extremely expensive conference centers, stadiums, and walls between countries. These also tend to have a high degree of corruption, with many of the construction projects going to family members, political allies, the despot's wife, etc.
- *"Afterthought" Infrastructure:* Infrastructure should be designed with security as an integral part, rather than an afterthought in order to avoid losses of products, loss of control, and sabotage, as well as for optimized operations. Security should be physical and digital.
- *Mono-industry Infrastructure:* Massive infrastructure projects that are concentrated in the dominant industry (tourism, mining, petroleum, for example) but which leave other industries without sufficient infrastructure or affordable, reliable services. Deleterious effect on other industries by draining them of skilled labor, driving costs up (labor, materials).

To be effective, infrastructure should be multi-purpose (even if it does not seem so at first). It should benefit at least two industries, and also communities. Industries can include

- Agriculture
- Transportation
- Manufacturing
- Tourism (unless that is the main industry)
- High-tech
- Chemicals
- Security (includes cyber-security)

Infrastructure should stimulate investment at all levels of society - large investments, medium-sized, family-owned, and services. Infrastructure can be planned with the businesses envisioned, and a structure for optimizing investment by attracting business-to-business partnerships.

Loans for Infrastructure

A country that is dependent on the resources for their country's value chain such as manufacturing, or for general functioning of the economy (energy, etc.), may be willing to extend capital in the form of loans for infrastructure to make the extraction and transportation of the resource more efficient. Although the loan may seem to follow the recommendations to invest in infrastructure, such an investment will not neutralize the influx of foreign capital. In fact, it may exacerbate the situation if the country extending the loan also requires exclusive access to the resource being produced.

However, the loan may be perceived to be a self-serving loan. The loan may arouse suspicion for being potentially harmful to the country that is the source of the needed natural resources, while clearly serving to maintain the lender / customer country's access to the resource.

Further, if the new infrastructure is used only in the production and transport of the primary product, it exacerbates the dependency of the country's economy on a mono-export and can either trigger or deepen Dutch Disease.

Such a situation is precisely what has occurred in Zambia, where at least $30 billion in loans from China has been secured (Hurley, et al., 2018), with Zambia's cobalt and other scarce resources committed to China. If Zambia defaults on their loans, according to critics, China will have the option to take over operations of the mines and the infrastructure.

In the extremely strategic tip of the Horn of Africa, the Djibouti government turned over in 2018 its new deepwater port and naval base after defaulting on its $1.5 billion loan. Such negative experiences have led to suspicion of China's motives, although they are clearly laid out in the Belt and Road Initiative (World Bank, BRI, 2018).

Leveraging the Infrastructure from China's Belt and Road Initiative

The Belt and Road Initiative was launched in 2013 as a way to recreate and update the traditional Silk Road trade routes. It is envisioned with new shipping lanes to set up a Maritime 21st Century Silk Road, to obviate the need for U.S. Navy protection in current shipping lanes. The terrestrial Silk Road Economic Belt connects China to Central Asia, South Africa, the Middle East, and Europe. The goal of the trillion-dollar project to create more robust links to markets, strengthen trade, open land and ocean shipping lanes, and to develop markets along the way.

The goal is a laudable one, but the countries who accepted loans have a responsibility to use the infrastructure as a point of departure and a part of a long-term plan. Sustained growth is not feasible if the poorest countries do not use the access to markets to raise their per capita GDP, develop human capital, and develop an environment that fosters innovation. If there is not a true partnership of capacity growth, human capital development, and trade, the relationship will look like a resource grab by China, whereby the resources return back to the country in the form of domestic-market destroying cheap manufactured goods (Yamada & Palma, 2018).

Where countries have not integrated the infrastructure into a larger plan, there has been pushback. For example, critics such as those in the Philippines accused the BRI of charging 2–3% interest instead of the 0.25–0.75% from Japan, as well as a cost of projects being 1,100% more than those from Japan (Chan, 2018). What the Philippine critics did not take into consideration is that the Philippines had a terrible credit rating and no one (including Japan) would lend them money for infrastructure projects.

Here are some of the most vulnerable-to-default countries and their Belt and Road Initiative projects, according to the Center for Global Development (2018). In theory, such projects would dramatically bolster the economies of the countries and allow non-dominant industries to emerge and flourish.

In reality, however, many of the countries are in the throes of Dutch Disease, and their governments may be run by dictators or cabals of cronies, who may invest in flashy vanity projects, after having neatly tucked away a portion in an offshore account. Further, according to the World Bank's "Ease of Doing Business" index for 2018, some of the countries with the most ambitions BRI projects are also some of the most difficult places to do business (World Bank, Doing Business, 2018).

That said, without infrastructure transportation, water, and energy projects, the countries have little chance of effectively diversifying. But to optimize economy and to create products with multiplier effects, it makes sense to invest in complementary industries. For example, many people think of tourism as the perfect antidote.

Country	Infrastructure	Bri Debt
Sri Lanka	Port	$ 1.0 billion
Djibouti	Port / Naval Base	$ 1.5 billion
Kyrgyzstan	Railroad	$ 4.5 billion
Pakistan	Energy / pipeline	$ 40.0 billion
Maldives	Airport	$ 1.0 billion
Laos	Railroad	$ 6.0 billion
South Africa	Infrastructure	$ 14.7 billion
Montenegro	Highway	$ 1.5 billion
Mongolia	Hydropower/highway	$ 2.5 billion
Tajikistan	Pipeline	$ 2.8 billion (Hurley, et al., 2018)

There is not a central repository or register of One Belt One Road (or Belt and Road Initiative) projects. Instead, it is necessary to compile information from different sources, which makes it more difficult to create models for coordination and planning of how to strategically invest and how to optimize supply chain networks. Here is a list of Belt and Road projects that were completed as of March 2018 (Yamada & Palma, 2018):

The BRI projects located in Asia have been developed with long-term trade in mind, and not necessarily tourism. Some of the projects that have been completed have not yet attracted the the kinds of investment in order to achieve a diversified economy. Infrastructure is a long-term proposition, but that said, it is important to start attracting productive and diversified investment in order to allow countries to achieve their growth targets and thus repay the loans. Cynics suggest that China's long-term desire is to repossess the assets, but that assumption seems highly unlikely, given the level of exposure of the various Chinese banks and also the need to keep China's economy growing in order to sustain employment.

For countries that have a mono-export economy and that run the risk of Dutch Disease, it is tempting substitute one mono-economy for another, since mono-economies tend to be efficient (populated by oligopolies) and they benefit the decision-makers. Tourism is a typical diversification strategies. It is certainly what Jamaica did to diversify away from bauxite. However, Jamaica suffers from income inequality and an industry that it vulnerable to macro-shocks. For example, if prosperous nations experience a drop in revenue, then the impact on the tourism industry will be severe. Some of the more desirable industries would be small manufacturing, for example, of packaging used in food preservation, which could then be exported to neighboring trading partners, as well as used domestically.

CONCLUSION

The next steps should be to identify opportunities in the countries at most risk of falling into a debt trap, and to do a

Completed Projects		
Hungary	Huawei logistics center	$ 1.5 billion
Iran	RudbarLorestan hydropower dam	$ 578 million
Kazakhstan	Khorgos dry port	$ 245 million
Pakistan	Gwadar Port construction of breakwaters	$ 123 million
Sri Lanka	Hambantota deep sea port Phase I, II	$ 1.3 billion
Cambodia	Natl. Road No. 214, Stung Treng-Mekong Bridge	$ 117 million
Indonesia	Sumsel-5 power plant	$ 318 million
North Korea	New Yalu Bridge	$ 350 billion
Under construction		
Bangladesh	Payra power plant	$ 1.65 billion
Laos	China-Laos railway	$ 5.8 billion
Pakistan	Peshawar-Karachi motorway	$ 2.84 billion
Israel	Haifa Bay Port	$ 1.16 billion
Announced		
Mongolia	TavanTolgoi rail project	$ 1 billion
Turkey	Third nuclear power plant	$ 25 billion
Pakistan	Kohala hydropower plant	$ 2.4 billion

close evaluation of resources, competitive advantages, financial institutions, transportation, warehousing, potential markets and marketing. Then, strategic investment plans could be made.

Business-to-business relationships that develop products that leverage domestic capacity and infrastructure could have multiplier effects and turn what is in essence a dormant investment into a very sustainable one. Supply chains of high-consumption products in the country can be evaluated to see where local companies could supply both products and services. Although import-substitution is not the overall goal in this case; in essence economic participation is the goal, along with benefits that avoid income inequality.

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