

China's Infrastructure for Resources Model: Case Studies of Bolivia and Argentina

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ABSTRACT

China's Infrastructure-for-Resources (IFR) model is a framework for capital allocation in African infrastructure whereby the loans used to finance projects are repaid through natural resources. The model is designed to combat the resource curse, which is a situation in which a resource-rich country underperforms economically having valuable resources. China has used the IFR model to finance projects throughout Africa, but never in other countries or regions. This research combats this gap by identifying the feasibility of an expansion of the IFR model to Bolivia and Argentina, following the research goal of identifying how much Bolivia and Argentina would benefit from China's IFR model of foreign direct investment. Case study analysis of Bolivia and Argentina was conducted, including quantitative analysis of economic indicators and qualitative analysis of the country's geopolitical environment. The model was demonstrated to be minimally beneficial at combating the resource curse in Argentina because while it would provide a much-needed inflation-free alternative to traditional forms of investment, the model would not affect most aspects of the resource curse. In Bolivia, the model was demonstrated to be sufficiently beneficial because of Bolivia's widespread corruption, which the model combats by transferring the funds to the construction company rather than the corrupt government. For this reason, China should consider expanding the model to Bolivia, and potentially to other countries with similar economic conditions. Looking forward, this research highlights a potential expansion of the IFR model and the possibility for the expansion of models of foreign direct investment in general.

Introduction

Across the world, developing countries waste 53% of their capital spent on infrastructure due to inefficiencies (Schwartz et al., 2020). As a result, infrastructure needs around the world are massive, with estimates anywhere from \$3.3 to \$7.9 trillion (Bhattacharya et al., 2016; Woetzel et al., 2016). Financing infrastructure can be difficult, as the costs of the assets are front-loaded, while the benefits are spread over an economic lifetime (Gomez-Ibanez & Liu, 2022). These difficulties cause developing countries to miss out on many of the benefits of participating in the global supply chain, which is a major factor in economic growth (Guei & Choga, 2022). To combat this, China has stepped up and played a major role in global infrastructure financing. China is commercially savvy and has used many innovative models of foreign direct investment and capital allocation to successfully provide loans to high-risk countries (Gelpern et al., 2021). This paper will focus on one of these models of foreign direct investment, China's Infrastructure for Resources model, as the paper seeks to discover the extent to which Bolivia and Argentina would benefit from China's Infrastructure for Resources model. The next segment of the introduction will define the Infrastructure for Resources model, and explain the model's relation to the resource curse. Following this, to establish whether or not the model represents an attractive opportunity for the recipient country, the literature review will provide an overview of opinions from the research community about past implementations of the Infrastructure for Resources model. After this is established, the remainder of the paper will focus on whether or not Bolivia and Argentina, which are the case studies for this research, would stand to gain from the model based on case study analyses of the country's economies.

The Resource Curse and The Infrastructure for Resources Model

A resource curse is an economic term used to describe a paradoxical situation in which a country underperforms economically, despite being home to valuable natural resources (Mailey, 2015). There are a variety of reasons why resource curses occur, but they can generally be grouped into three characteristics: Dutch disease, vulnerability due to commodity dependence, and adverse effects on the governance of a country. Dutch disease is an economic term that refers to a situation where the income generated from the export of natural resources causes an appreciation in a country's currency. This causes the exports to be uncompetitive, which decreases international demand and domestic manufacturing (Durovic, 2016). Vulnerability due to commodity dependence refers to how the inability to create competitive manufacturing exports prevents countries from achieving long-term sustainable economic development. This causes resource-rich countries to become vulnerable to oscillations of commodity prices on the global market (Durovic, 2016; Kelley, 2012). Adverse effects on the governance of a country occur when the resources of a resource-rich country allow the government to not have to tax its citizens. This leaves citizens to not consider how the government spends federal money and causes democratic malfunction (Durovic, 2016; Kelley, 2012). Resource curses hinder the development of a country's economy, and serve as a significant challenge to the worldwide promotion of economic development.

To combat this, China created a model of foreign direct investment known as the Infrastructure for Resources model, which is abbreviated as IFR. The IFR model is a framework in which the repayment of loans utilized for resources projects is done through natural resources (Durovic, 2016). For this to work, China reaches an agreement with the beneficiary country whereby China, through China's Export-Import Bank, sends Chinese workers and equipment to the beneficiary country to build infrastructure. In return, China is promised a portion of the resources the infrastructure helps extract. Common IFR projects include power plants and hydroelectric dams. The significance of the IFR model is that it allows countries to convert their resource wealth into infrastructural development improvements, helping them escape from the resource curse (Durovic, 2016). For this reason, the model has received widespread popularity throughout Africa. The next section of this paper will focus on perceptions from the research community of past implementations of the IFR model.

Literature Review

Western Challenges to the IFR Model

To consider how beneficial the IFR model would be for Bolivia and Argentina, it is necessary to review the perceptions of previous enactments of the model. Past implementations of the IFR model have received predominantly negative reactions from Western researchers. Regarding the resource curse, Jeremy Kelley, a researcher from the American University College of Law, concluded that China's involvement in Africa could potentially exacerbate the resource curse rather than subduing it (Kelley, 2012). Building upon these concerns, Harvard Halland and fellow researchers at the World Bank conducted a comprehensive case study of different foreign direct investment models and identified a limitation of the IFR model as the burden on African public officials to delineate between favorable and unfavorable deals, which is difficult considering the complex nature of the IFR model (Halland et al., 2014). Additionally, British researchers Giles Mohan and Marcus Power expressed concerns about the possibility of China utilizing the model as a form of neo-imperialism (Mohan & Power, 2008).

Positive and Non-Western Perceptions of the IFR Model

In contrast, non-Western researchers tend to examine the IFR model more holistically, comparing the IFR model to alternative solutions countries are offered, and therefore have come to much more positive conclusions. In a foundational IFR case study of Uganda, Tom Ogwang and Frank Vanclay concluded that China presents a better opportunity for African countries than traditional lenders (Ogwang & Vanclay, 2021). This viewpoint is shared by Ana Alves, a South African researcher writing for the *South African Journal of International Affairs*. Alves conducted a comprehensive case study of Chinese involvement in Africa through the IFR model using a similar type of case study analysis as Ogwang and Vanclay, and found that the provision of infrastructure from the IFR model is improving the lives of millions of people. Alves also found that many of the IFR's shortcomings reflect broader institutional constraints in African countries (Alves, 2013). The IFR model is also supported by researchers Lebogang Legodi and Makhura Rapanyane from the University of Limpopo in South Africa, who demonstrated that the IFR model has been ideal in responding to Uganda and Angola's respective needs to establish infrastructure (Legodi & Rapanyane, 2022). In addition, Peter Konijn and Rob van Tulder conducted a case study analysis similar to Alves's case study, and demonstrated the IFR model to be effective at limiting corruption (Konijn & Tulder, 2013). These views are shared by the expert advisor for this research, Craig S. O'Connor, who is a professor at Georgetown University and Director at the U.S. Export-Import Bank. Regarding the IFR model, O'Connor suggests that it is important to consider that the deal is facilitated consensually between China and the recipient country, and if Western countries fail to offer a better alternative, recipient countries will have little option other than continuing to abide by China's terms. Therefore, it is reasonable to conclude that the IFR model presents a beneficial opportunity for developing countries.

Foundational Source

In 2016, Luka Durovic, a postgraduate student at Nanyang Technological University, conducted a case study of the IFR model in Angola, and his research was the major inspiration and alignment for this research. Durovic outlined the three main characteristics of the resource curse, the theoretical effect of the IFR model on the characteristics, and the indicators that can be used to determine the actual effect of the model on each characteristic. To determine the actual effect of the model on each characteristic of the resource curse in Angola, Durovic gathered secondary qualitative and quantitative data from international organizations and government sources. Durovic concluded that the model represents an enticing alternative to other forms of foreign direct investment and that the model has at least partially subdued Angola's resource curse (Durovic, 2016).

The Gap in the Research

Despite the relative successes of the IFR model, the implementation of the model has never left the continent of Africa. In fact, major IFR projects have been confined to only a few African countries (Konijn, 2014). Past research has never examined a possible application of the IFR model to South America, nor the application of the IFR model to any non-IFR-receiving country. Therefore, this research serves to identify the feasibility of an intercontinental expansion of the IFR model. For this research, the model will be applied to Argentina and Bolivia. One reason for this is that according to the International Monetary Fund, which is abbreviated as IMF, both Argentina and Bolivia are considered to have emerging economies, with Argentina considered upper-middle-income and Bolivia considered lower-middle-income (Toscani, 2017). The slight differences in their levels of economic development will generate sub-findings about the feasibility of the IFR model depending on the level of economic development, as Argentina is classified as slightly higher developed than Bolivia. Bolivia and Argentina were also chosen because they are both countries in the lithium triangle, which helps justify why China would be interested in their resources. Lastly, according to publications by the IMF, Argentina and Bolivia are currently facing a resource curse, which allows the IFR model to be applicable

(Toscani, 2017). This led to the research question, to what extent would Bolivia and Argentina benefit from China's Infrastructure for Resources model of foreign direct investment? Considering how the IFR model targets low-developed countries that need an economic boost, it is reasonable to hypothesize that the model will be more beneficial in Bolivia than in Argentina, as Bolivia is less developed than Argentina. However, as the countries are not vastly apart in economic development, it is reasonable to hypothesize that the model will not be significantly more beneficial to one country than the other.

Methodology

Case Study Analysis

For the methodology, holistic case studies of the Argentine and Bolivian economies for each aspect of the resource curse were conducted with both secondary qualitative and secondary quantitative data. Case study research involves the studying of an individual, program, or event (Leedy & Ormrod, 2016). Quantitative data was collected from Durovic's indicators of each aspect of the resource curse. Indicators relating to a score were compared both to the respective country's previous scores and to the scores of other countries around the world, to further reveal the direction the country is headed. The quantitative indicators were found from government sources and international organizational reports published between 2014 to 2021. The data collected from the indicators were put in data tables to map the indicator over time, and all the tables are provided in the Results section. In addition, while secondary quantitative data was the major driver for the case studies, secondary qualitative data was also analyzed to help situate the quantitative data in the context of the economic and political environments within the countries. The qualitative results are included as justifications for each aspect of the resource curse, located in the actual results section above each data table. Qualitative results are especially important for the third aspect of the resource curse, which relates to the country's governance, as modern politics plays a significant role in shaping the scores associated with the aspect's indicators.

Method Alignment

This research will conduct and analyze the case studies in the same holistic manner as Durovic, and just like Durovic's research, both the theoretical and actual effect of the IFR model on each aspect of the resource curse in the case study will be discussed. However, this research will differ in that it will be analyzing two separate case studies simultaneously, and comparing the results of the two, while Durovic's research solely analyzed one case study. Another major difference is that Durovic analyzed the implementation of the IFR model in a country where it has been utilized. On the contrary, this research is applying the infrastructural model to two countries where it has never been used, and analyzing whether or not it would be beneficial to those countries. While Argentina and Bolivia have already been identified as having a resource curse, this alone is not enough to conclude that the IFR model would be beneficial for two major reasons. First, if Bolivia and Argentina are found to be already effectively tackling the different aspects of the resource curse with current policy, the model would not be necessary. Second, as will be discussed in the Theoretical Results section, the IFR model tackles only two of the three aspects of the resource curse. Therefore, if the case studies find that Bolivia and Argentina are struggling in the aspect that the IFR model does not affect, the IFR model would be of no benefit to Argentina and Bolivia. For these reasons, the fact that the countries are facing resource curses is not enough alone to conclude that the IFR model would be beneficiary, and further analysis through case study analysis is required. This process could be replicated for case studies of other countries by accessing the same data sheets as those cited in this paper.

Rationale

Case study research was selected for this project because this research represents a niche segment of the field, and case study research tends to lend toward topics with very limited previous research. As stated in the Literature Review section, the majority of past studies of the IFR model have utilized case studies, with a similar design and structure to this research. In addition, the selection of the years 2014 to 2021 was designed to create an 8-year range of data that mimics Durovic's experiment. Reports for the year 2022 are not finalized yet for most government publications, so 2021 was selected as the stopping point. The decision to align the case study closely and structurally similar to a past case study is typical in the field of infrastructure studies. The case studies are designed to see if the areas of the resource curse that the IFR model targets are significant problems in Bolivia and Argentina, which would indicate that the model would be beneficial. These areas of the resource curse that the IFR model targets are identified in the Theoretical Results section.

Results and Discussion

Theoretical Results

As aforementioned, there are three major characteristics of the resource curse: Dutch disease, vulnerability due to commodity dependence, and adverse effects on the governance of the country. This section presents the theoretical effects of the IFR model on each aspect of the resource curse, stemming from Durovic's 2016 work.

Dutch Disease - Positive Effect

The IFR model positively affects the recipient country by successfully combating Dutch disease. By financing infrastructure, the IFR model allows for an expansion of the manufacturing sector. The model would not cause inflation because the funding for the project is not transferred to the recipient country, but is rather transferred to the companies that are constructing the infrastructure (Durovic, 2016).

Vulnerability due to commodity dependence - No Effect

The IFR model does not affect vulnerability due to commodity dependence. The nature of the commodity price calculations leaves resource-rich countries vulnerable to commodity dependence. This is because the price of the resources that back the loans are not predetermined, and are instead calculated on the day they are sold (Brautigam, 2009; Durovic, 2016). This is the aspect of the resource curse that the IFR model does not affect.

Adverse effects on the governance of the country - Positive Effect

The IFR model positively affects the recipient country by successfully combating adverse governance effects. Since the lender administers the loan, it is ensured that the capital is not used for other purposes (Brautigam, 2009; Durovic, 2016). This model functions differently than loans from the IMF or World Bank, which transfer directly into the recipient country's account, allowing the funds to be misused. Revenues from the selling of natural resources in international markets are also vulnerable to these risks. However, with the IFR model, the funds are never transferred to the recipient country's governments and are instead kept in China, which reduces the chance of funding misuse.

Significance of Theoretical Results

Concerning this research, the theoretical results serve as a marker for which aspects of the resource curse the IFR is designed to combat. Since Dutch disease and adverse governance effects are the two characteristics of the resource curse that the IFR targets, if Argentina and Bolivia are found to be struggling in these two areas, the IFR would likely

be beneficial. However, if Bolivia and Argentina are found to be struggling in the other characteristic of the resource curse, which is vulnerability due to commodity dependence, or are found to be not struggling at all, the IFR would not be beneficial. Argentina and Bolivia have already been identified as having a resource curse, but a more in-depth look at the areas of the resource curse in which the two countries are struggling is necessary to determine how beneficial the IFR would be.

Actual Results - Argentina Case Study

A case study of Argentina will be conducted to determine the effect of the IFR model on each aspect of the resource curse. According to Farah Jan, an International Relations Lecturer at the University of Pennsylvania, in the 1980s, Argentina ended its long-term rivalry with Brazil, and began to search for new foreign partners to cover domestic economic weaknesses (Jan, 2018). Since this time, China has become increasingly economically involved in Argentina, as Argentina has grown into a major trading partner for China. Importantly, Argentina just recently joined China's Belt and Road Initiative, which is setting the stage for a further increase in economic cooperation (Chatzky & McBride, 2023). Argentina is a very resource-rich developing country, containing the fourth largest shale-oil reserves, second largest shale-gas reserves, and third largest lithium reserves (Argentinian Ministry of Foreign Affairs and Trade, 2023). This has allowed Carol Wise, a researcher and professor at the University of Southern California, to classify Argentina as facing a resource curse, which grants Argentina eligibility for the IFR model (Wise, 2020).

Dutch Disease - Slightly Positive Effect

The IFR model was found to be slightly positive at combating Dutch disease in Argentina. As displayed in Table 1, Argentina has recently experienced hyperinflation, leading many across the country to abandon the Argentinian peso in exchange for the U.S. Dollar. However, Argentina already has a well-established manufacturing sector, and although the GDP from manufacturing has been on a slight decline, it remained at over 100 billion ARS annually from 2014-2021. In regards to Dutch disease, the IFR model would be effective in Argentina at providing an inflation-risk alternative to traditional forms of foreign direct investment, which would go a long way considering the current inflationary crisis Argentina faces. As is the case for many of the indicators, data is not available for every year, so if data was unavailable, a dash was added as a placeholder.

Table 1. Argentinian Dutch Disease Related Indicators.

Indicators	Year							
	2014	2015	2016	2017	2018	2019	2020	2021
Electricity Generation*	123	138	139	138	140	133	139	147
GDP from Manufacturing†	126.7	121	129	112	121.5	106.5	104	110.5
Percent Inflation of Consumer Prices	-	-	-	25.7%	34.3%	53.6%	42.0%	48.4%

*in billions of kilowatts

†in billions of Argentine Pesos

Vulnerability due to commodity dependence - No Effect

The IFR model was found to not affect vulnerability due to commodity dependence in Argentina. Argentina is one of the three lithium triangle countries, which together account for two-thirds of all lithium reserves (Hernandez, n.d.). Therefore, as seen in Table 2, oil rents have only made up between 0.5-2.1% of Argentina’s economy from 2014-2021, which is an economy that relies on a variety of natural resources. As nothing in this aspect of the Argentina case study indicates differently, it can be concluded that the IFR model would not affect this aspect, as the IFR model does not affect vulnerability due to commodity dependence.

Table 2. Argentinian Commodity Dependence Related Indicators.

Indicators	Year							
	2014	2015	2016	2017	2018	2019	2020	2021
GDP Per Capita*	12,335	13,789	12,790	14,613	11,795.	9,964	8,496	10,636
Oil Rents as a Percent of GDP	2.1	0.7	0.5	0.7	1.4	1.5	1.1	-

*in United States Dollar

Adverse effects on the governance of the country - Slightly Positive Effect

The IFR model was found to be slightly positive at combating adverse governance in Argentina. Argentina is headed in the right direction, however, corruption remains a significant problem, as Table 3 demonstrates how Corruption Perceptions Index scores ranged from 32-45 over the period 2014-2021. Although Argentina has recently scored higher in the Corruptions Perception Index, the country remains below average in the world and is currently ranked 96th among 180 countries (Transparency International, n.d.). Argentina’s elite remains in great control over the country’s economy, with Forbes estimating that public-private corruption rings allowed wealthy businessmen in Argentina to siphon nearly \$36 billion in 2018 alone (Fontevicchia, 2019). Argentina’s justice system fails to force accountability for corruption, and only recently have political corruption cases been brought into the spotlight. For example, Cristina Kirchner, the Vice President of Argentina, was recently found guilty of corruption after she stole nearly \$1 billion by creating fake contracts and construction plans for 51 public works projects during her administration (Kahn, 2022). Argentina must continue to crack down on cases like this, but in the meantime, the country would benefit by removing the access to infrastructural capital that the powerful Argentinian elites have by adopting the IFR model.

Table 3. Argentinian Governance Indicators.

Indicators	Year							
	2014	2015	2016	2017	2018	2019	2020	2021
Country Policy and Institutional Assessments	-	-	-	-	-	-	-	-
Corruption Perceptions Index*	34	32	36	39	40	45	42	38

Governance Index†	-	-	-	-	6	-	6.1	-
Control of Corruption‡	-0.55	-0.56	-0.27	-0.28	-0.07	-0.08	-0.14	-0.4
Government Effectiveness‡	-0.11	-0.02	0.25	0.16	0.05	-0.1	-0.22	-0.36

*measured from 0 (most corruption) to 100 (least corruption)

†measured from 0 (worst governance) to 10 (best governance)

‡measured from -2.5 (worst) to 2.5 (best)

Table 4. Results of the Argentina Case Study.

Aspect of the Resource Curse	Potential Effects of the Model: Argentina
Dutch Disease	Slightly Positive
Vulnerability due to commodity dependence	No Effect
Adverse effects on the governance of the country	Slightly Positive

Actual Results - Bolivia Case Study

A case study of Bolivia will be conducted to determine the effect of the IFR model on each aspect of the resource curse. Bolivia has a long history of economic dependence on natural resources. According to Jann Lay and fellow researchers from the Kiel Institute for the World Economy, Bolivia experienced a gas boom in the 1990s, which caused minerals and hydrocarbons to account for about half of all Bolivian exports (Lay et al., 2006). After studying the effects of this boom in-depth, Lay concluded that this boom cursed rather than helped the Bolivia economy (Lay et al., 2006). Bolivia has seen a similar resurgence lately, as it is one of the three countries in the lithium triangle, and global demand for lithium has skyrocketed in recent years.

Dutch Disease - No Effect

The IFR model was found to not affect Dutch disease in Bolivia. Bolivia is doing a phenomenal job transforming its economy by creating a strong manufacturing sector, which went from 151 to 230 billion BOB from 2014 to 2021, as shown in Table 5. This has led to strong growth in Bolivian manufacturing output, and in doing so, unlike Argentina, Bolivia has been able to keep inflation at a very low level. Electricity generation has also continued to steadily increase. For these reasons, the IFR model is not necessary to help Bolivia combat the Dutch disease component of the resource curse, as the indicators suggest that current policies are doing an effective job.

Table 5. Bolivian Dutch Disease Related Indicators.

Indicators	Year							
	2014	2015	2016	2017	2018	2019	2020	2021
Electricity Generation*	8.2	8.6	8.8	9.2	9.4	10	9.8	11
GDP from Manufacturing†	151	159	171	175	187	176	178	230
Percent Inflation of Consumer Prices	5.76%	4.06%	3.62%	2.82%	2.27%	1.84%	0.94%	0.74%

*in billions of kilowatts

†in billions of Bolivian Bolivianos

Vulnerability due to commodity dependence - No Effect

The IFR model was found to not affect vulnerability due to commodity dependence in Bolivia. Similarly to the situation with Argentina, oil rents only make up a fraction of the Bolivian Economy, which, as shown in Table 6, is an economy that relies on a variety of natural resources. One of these natural resources is lithium, and Bolivia is one of the three lithium triangle countries, which together account for two-thirds of all lithium reserves (Hernandez, n.d.). Similar to the situation with Argentina, as nothing from the Bolivia case study indicates otherwise, it can be concluded that the IFR model would not affect this aspect, as the IFR model does not affect vulnerability due to commodity dependence.

Table 6. Bolivian Commodity Dependence Related Indicators.

Indicators	Year							
	2014	2015	2016	2017	2018	2019	2020	2021
GDP Per Capita*	3,023	2,976	3,014	3,280	3,471	3,472	3,069	3,345
Oil Rents as a Percentage of GDP	3.20%	1.30%	1%	1.10%	1.50%	1.20%	0.80%	-

*in United States Dollar

Adverse effects on the governance of the country - Highly Positive

The IFR model was found to be highly positive at combating adverse governance in Bolivia. Corruption remains a major problem scaring Bolivia's potential for growth. Table 7 exhibits how the Corruption Perception Index ranks Bolivia at 128th of 180 countries, and corruption in Bolivia has gotten worse in recent years, not better (Transparency International, n.d.). Over the period 2014 to 2021, Bolivian Control of Corruption fell from -.63 to -.86. Corruption is particularly high for those working in extractive industries and is extremely widespread among officials (Heritage

Foundation, n.d.). These officials are rarely held accountable, and most citizens have no idea of the scale of the problem. However, recently a former minister of the Bolivian Government pled guilty to conspiring to launder multiple millions of dollars through a bribery scheme (U.S. Department of Justice, n.d.). Considering how widespread the problem is, the IFR model would be of great benefit to Bolivia because it would not put the capital in the hands of the corrupt government.

Table 7. Bolivian Governance Indicators.

Indicators	Year							
	2014	2015	2016	2017	2018	2019	2020	2021
Country Policy and Institutional Assessments*	3.2	3.1	-	-	-	-	-	-
Corruption Perceptions Index†	35	34	33	33	29	31	31	30
Governance Index‡	5.34	-	5.63	-	5.66	-	5.45	-
Control of Corruption§	-0.63	-0.69	-0.75	-0.68	-0.67	-0.76	-0.82	-0.86
Government Effectiveness§	-0.59	-0.65	-0.58	-0.37	-0.3	-0.77	-0.7	-0.73

*measured from 0 (lowest) to 6 (highest)

†measured from 0 (most corruption) to 100 (least corruption)

‡measured from 0 (worst governance) to 10 (best governance)

§measured from -2.5 (worst) to 2.5 (best)

Table 8. Results of the Bolivia Case Study.

Aspect of the Resource Curse	Potential Effects of the Model: Bolivia
Dutch Disease	No Effect
Vulnerability due to commodity dependence	No Effect
Adverse effects on the governance of the country	Highly Positive

Discussion of Significant Results

Although results for neither country produced a glaring need for the IFR model, the model would help tackle some of the problems each country faces. With Argentina, the most obvious example is inflation. Inflation continues to be through the roof in Argentina and shows no sign of slowing down. In 2021, Argentina's consumer inflation rate peaked at 48.4%, which is one of the highest inflation rates in the world. Since the IFR model does not cause inflation, the model would allow Argentina a source of foreign direct investment that would not exacerbate the inflationary crisis. However, considering how other indicators did not produce concretely positive results, it is unlikely that the IFR model would be exceptionally beneficial in Argentina overall. To answer the research question, these results indicate that Argentina would benefit very minimally from the IFR model.

As for Bolivia, the potential implementation of the IFR model seems more promising. The case study of Bolivia produced concretely positive results in characteristic three, which is due to the high presence of corruption. Not only is corruption rampant in Bolivia, but the problem is getting worse, not better. In particular, Bolivian Government Effectiveness has been on a sharp decline since spiking at -.3 in 2018. Therefore, considering how the IFR model keeps the capital out of the hands of the recipient country's government, the model would effectively limit government corruption in Bolivia. To draw back to the research question, the results regarding the prevalence of corruption are sufficient enough to conclude that Bolivia would stand to benefit from the IFR model. This confirms the hypothesis that the model would be more beneficial to Bolivia than Argentina. However, it diverges from the hypothesis in that the difference between how beneficial the model would be in Bolivia versus Argentina is greater than anticipated.

Sub-findings

The decision to conduct two case studies was designed to allow for comparisons between the two case studies. While Bolivia and Argentina are similar in many aspects, the two countries differ in their level of economic development. Argentina is classified by the World Bank as upper-middle developed, while Bolivia is classified as lower-middle developed (World Bank, n.d.). This research concluded that the IFR model would be sufficiently beneficial to Bolivia, which is lower-middle developed, and only minimally beneficial to Argentina, which is upper-middle developed. When aligned with Durovic's conclusion that the IFR model is very beneficial to low-developed Angola, a clear correlation is formed between a lack of economic development and the effectiveness of the IFR model. This correlation makes sense given that the design of the model is to target underdeveloped countries that need an economic jumpstart. This serves to verify both the original hypothesis of the research and the conclusions made about the IFR model's potential applicability in Bolivia and Argentina.

Conclusion

This research conducted case studies of the IFR model's feasibility in Bolivia and Argentina, and found that the IFR model would be minimally beneficial in Argentina to combat inflation, and would be sufficiently beneficial in Bolivia to minimize corruption. In addition, this research generated a greater understanding of when in a country's economic development the model becomes obsolete, which seems to generally fall somewhere in the upper-middle developing range. Considering how this research serves as the first study of the IFR model outside of Africa, the results suggest that the IFR model may be successful on a much broader scope than China originally anticipated.

Limitations

Although this study was designed and conducted to maximize accuracy, there were some limitations. Primarily, Chinese secrecy among infrastructural projects made it difficult to gain information about past case studies. China does not participate in the OECD's Credit Reporting System, and 43% of China Exim Bank contracts include confidentiality clauses, so government secrecy hindered the review of past projects (Gelpern et al., 2021). In addition to secrecy, the data collection process was hampered by a lack of available data for some of the indicators. Oftentimes the reports used to gather data about the indicators are published biennially or triennially, meaning some years are skipped by the reporting organizations. With less data to work with, conclusions drawn from the case studies are less accurate, which limits the quality of the research. Additionally, the application of a development model to a country in which the model has never been used creates a variety of challenges. In this project, universal indicators were used to combat this, but some modifications had to be made. For example, Durovic used the African Governance Index for his research, but since Bolivia and Argentina are not in Africa, this indicator was inapplicable to this project. The indicator was swapped for the broader Governance Index, but modifications detract from the alignment of the research, and therefore hinder the quality.

Implications

Despite the niche scope of this research, this study produces many implications. This research emphasizes the impossibility of seeking perfection when analyzing the implementation of a model of foreign direct investment. Since a lack of action is a poor alternative for developing countries, adapting solid yet imperfect models of foreign direct investment can help raise the quality of lives of millions of individuals (Brautigam, 2011). This research also underlines the flexibility of models of foreign direct investment that target developing countries. While every country is different, the same economic plagues are prevalent throughout the world, such as resource curses, so adapting models to fight these plagues can allow for solutions that transcend the borders of an individual country. Another major implication of this research is the need for the West to offer a more attractive alternative than the IFR model. If Western countries fail to offer a more attractive alternative, Western criticisms of the model are unfounded because they have no capital in the game. For the future, this research also emphasizes the necessity for follow-up research on foreign direct investment models, to create efficient solutions to maximize the infrastructural quality around the world.

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