

Bolivia's Economic Success and Sustainability in the 21st Century Amid  
Nationalization and a Commodity Boom

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## Introduction

In the last 15 years, Bolivia, one of the economically poorest countries in Latin America, has seen large success in economic and social measures. The government, which has been under the control of the same political party during this period, attributes this to the nationalization of natural resources (natural gas and mining) and the various social programs funded with the revenue incurred. Many in opposition to the government's economic policies attribute growth to an increase in the prices of key commodities in the earlier years of the government's reign, and continuously predict a fall in economic growth after the end of the respective commodity booms. In this paper I will analyze the validity of such claims to determine if Bolivia's economic growth can be attributed to increased prices of commodities. Working off of these results, I will further analyze the government's current functionality under its economic model as well as the individual companies and industries that have been nationalized, looking specifically at their performance post nationalization. Finally, I will discuss the barriers to further growth and examine what action needs to take place for Bolivia to continue its economic success.

## Literature

### *Political and Economic Background:*

Bolivia has always had strong social organizations centered around various industries. In 2005, Evo Morales, a coca union worker, overwhelmingly won the presidential election under the Movement Towards Socialism (MAS) political party with 54% of the vote, surpassing the second-place candidate by 25% [1]. MAS came into power with a bold agenda to transform the economy, reduce poverty, and protect workers' rights through nationalization of natural resources and the implementation of social safety nets. As of 2022, Bolivia is still governed by MAS, and the country is very different than it was in 2005.

The economic progress made under the MAS government is clear. As seen in Figure 1, the country has seen vast growth with a real average of 4.9% from 2006-2018, outperforming Latin America as a region on average by over 2% since 2006. After only 4 years of MAS government, the World Bank changed Bolivia's categorization from a low-income country to a low-mid income country due to increased per capita income which grew from 3,930 in 2005 to 8,910 in 2019 [3]. These metrics alongside other economic indicators such as a stable currency, controlled inflation, and an increase in formal sector employment has positioned Bolivia as a success story in economic development.

The social measures taken that aim to benefit the poor, working class, and indigenous people in the country, however, have received even more international attention than the country's macroeconomic growth. According to the World Bank and shown in Figure 2, poverty in Bolivia

fell from 51.9% in 2005 to 19.9% by 2019. Inequality also fell dramatically with Bolivia's Gini coefficient falling from 58.5 to 41.6 during the same time period. Those most affected by MAS policies were poor, rural, indigenous people; they saw increased access to education, telecommunication services, healthcare, and even political representation. In a government historically dominated by white and mestizo men, since 2014, the legislature and senate are composed of nearly 50% women, many of them indigenous [4].

It is clear that Bolivia has seen large economic and social improvements. This analysis seeks to shed light on the specific mechanisms of such changes and their sustainability. MAS officials and most Bolivian economists, point to government management of natural resources through nationalization and the social programs funded by the revenue from nationalized companies. Western politicians and economists, however, will point to the commodity boom that dramatically increased the prices of natural resources, and will describe such growth and social welfare as unsustainable. The differences in these positions lead to the main questions this paper seeks to answer: how has the commodity boom of natural resources affected Bolivia's macroeconomy, has the MAS government succeeded in managing their bold economic and social agenda, and what does the future look like beyond this boom?

#### *Natural Resource dependency:*

Bolivia, like many other countries in the region, is said to have been plagued by an abundance-of-resource curse. This theory states that economies with vast natural resource wealth become complacent with cheap extraction, and fail to innovate and grow other sectors of their economies [5]. Dependency on natural resources causes the country's economy to be reliant on fluctuations in international demand and domestic supply of the respective resource, both of which are unreliable in the long run. Bolivia has had a long history of resource exploitation and dependency dating back to colonization when the Spanish administered one of the most historic silver mines in Potosi in 1545. By the early 1600s Potosi became one of the most important cities in the world with a population well over 160,000, comparable to London and larger than other modern cities at the time such as Madrid, Boston, or Paris. As silver was depleted from the mines, Potosi's economy crashed, and by the early 1800s there were fewer than 10,000 people residing in the city [6]. Potosi is a dramatic example of what has been occurring at a macro level in Bolivia with fluctuations and economic crises dependent on natural resources and their industries. Further, those who manage these resources have historically had little interest in the wellbeing and sustainability of the country itself, failing to build economic systems that are able to survive beyond periods of commodity success.

Today, Bolivia's resource dependency lies primarily with natural gas and mining of tin, zinc, silver, and gold. Shown in Figure 3, natural gas and the three major state-dominated minerals (silver, tin, and zinc) account for well over 50% of total exports since 2005, peaking at 72% in

2011. It is also important to understand the political context of these resources and what led to the strong mandate of nationalization given to the MAS government leading up to the 2005 elections. For this reason, it is important to understand the history of the economic and political landscape behind these two major sectors.

### *Mining:*

As mentioned, mining has been vital for Bolivia's economy since colonization. As the world's silver market began to fall in the 1880s, much of the mining in Bolivia began to focus on tin which dominated the mining industry for much of the 20th century. After 1975, mining production began to fall, and by 1987, only accounted for 4% of GDP, 36% of national exports, and 2% of government revenue compared to 8%, 65%, and 27% respectively in 1977 [7].

Mining has three important sectors in Bolivia: the nationalized Mining Corporation of Bolivia (COMIBOL), private mining companies, and the cooperatives. COMIBOL's presence in Bolivia has fluctuated over the years depending on the government's political and economic ideology towards nationalization. The company was created when Bolivia nationalized tin in 1952, but was quickly criticized as it took over 15 years after nationalization to reach pre-nationalization production levels. Many industry experts credit this to a lack of investment in mining technology and the mismanagement of existing plants themselves. Private mining companies took advantage of the decreased revenue of COMIBOL and flourished during the neoliberal era in Bolivia from 1985-2004. Private companies, many international, are praised for bringing technology to the country and increasing foreign investment. They are, however, heavily criticized by many Bolivians for taking profits internationally and for the many workers' rights violations during the decades before MAS, leading to some of Bolivia's largest mobilizations. It is mainly through mining and other privatization efforts that Bolivia's social organizing and political structures are built throughout the mid to late 1900s. The cooperatives are small-scale producers who are exempt from most taxes paying fewer than 3% of royalties to the state.[13] Because there are so many and they are prolifically organized and unified, the cooperatives have immense political power and ability to mobilize and shut down the country - something they've done many times when the government has challenged them.

### *Natural Gas:*

Natural gas in Bolivia is a more recent and more straightforward industry, becoming more and more important as mining lost relevancy. With large reserves discovered in the 1900s, mostly under international companies, it quickly became Bolivia's largest export and continued to flourish in the 2000s as the price of natural gas increased [8]. Although the industry saw massive gains, the people of Bolivia felt little of the economic impact. The liberal and military governments of the time were strongly supportive of the private gas companies, leading to

conflicts with protestors calling for an end to privatization of gas across Bolivia in 2003. These protests were dubbed the “Gas Wars” which involved heavy police and military pushback resulting in over 60 civilian deaths and 400 injuries.

The nature of these two sectors, in combination with the U.S. push to end coca production in Bolivia, led to overwhelming support for MAS in the 2005 elections and a mandate to broadly nationalize the country's natural resources. The politics surrounding these resources are vital to understanding Bolivia's economic situation, because even if the industries themselves flourish, the effects are many times not seen by the majority of Bolivians. Further, Bolivians, social organizations, and the cooperatives have significant political and thus economic power.

### *Explanations for Bolivia's Success:*

As mentioned, Bolivia's success and improvements since MAS are widely apparent. The reason for such success and its sustainability, however, has caused much contention between economists that support liberal markets and those who believe state ownership can be successful. Most western economists believe Bolivia's success is due to the established industries by private companies in the 1990s and 2000s and the increase in mining and natural gas prices. In 2005, zinc, tin, and silver were Bolivia's largest mining commodity exported. All three experienced high increases in prices in the initial years of MAS's government. As it pertains to natural gas, there is a relatively smaller but substantial increase beginning in 2002, and a spike in 2005, around the same time MAS came to power. Therefore, the question is: did the Bolivian government manage this new revenue in an efficient way, and if it sees significant economic reversals or lack of progress in accordance with the respective falls and stabilizing of these commodities.

### **Data and Methodology**

Because of the political and economic implications of answering the questions of this subject, the methodology will incorporate both an analysis and theoretical component.

I will first analyze the claims that the Bolivian economy is performing well due solely or mostly to a commodity boom. I will analyze trends and data from 2000 to 2018 coming from a variety of sources. This analysis doesn't include recent years because in 2019, there was a coup against the MAS government where the opposition took control for a year and rolled back many MAS policies. Further, the COVID pandemic presents many complications irrelevant to the focus of this paper. For yearly data on prices of tin, zinc, and silver, I will use the Trading Economics's Dataset. For yearly data on natural gas prices, I will use Macro Trend's Dataset for Precious Metals & Oil and Gas. For yearly GDP growth in Bolivia, I will use data from the World Bank's dataset.

Theoretically, I will use a variety of macroeconomic and microeconomic theories to both further analyze the results of the analysis, as well as make predictions for the future of the Bolivian economy under MAS's economic model. This will include looking at the various sectors of the Bolivian economy beyond natural resources, a closer analysis on the nationalized industries, and industries on the horizon that will give an indication of Bolivia's future trajectory. For this portion, I will use 2000-2020 data on Bolivian exports from the Bolivian National Institute of Statistics.

### *MAS's Economic Model*

As mandated by their overwhelming win, MAS had bold plans going into their government. One of the main issues in enacting many of the policies was the neo-liberal structure of the economy, especially in terms of natural resources. Pressured by the strong social movements who are largely credited for MAS's win, the government had to quickly transform the nation through nationalization and social safety nets. To do this, the government put out an economic model titled, "The New Economic Social Communitarian and Productive Model," designed by then Minister of Finance, Luis Arce. The following section is designed to understand the economic model to later analyze if it is working, or if the progress seen is temporary and due to the various commodity booms. Much of this plan discussed is adapted from Luis Arce's book, *The Bolivian Economic Social Communitarian Productive Model*, and other documents released by the Bolivian Ministry of Economics and Public Finance [12] .

Evo Morales has described his government as one that centers the "well-being" of the people. MAS's economic goals are essentially to nationalize and exploit natural resources, as has been done for decades in the private sector, and use this revenue to fund large social programs and, more importantly, develop new industries to move away from resource-dependency. Many of the policies are comparable to import substitution policies enacted in the mid to late 20th century across Latin America.

Figure 4: Bolivian Economic Model Under MAS

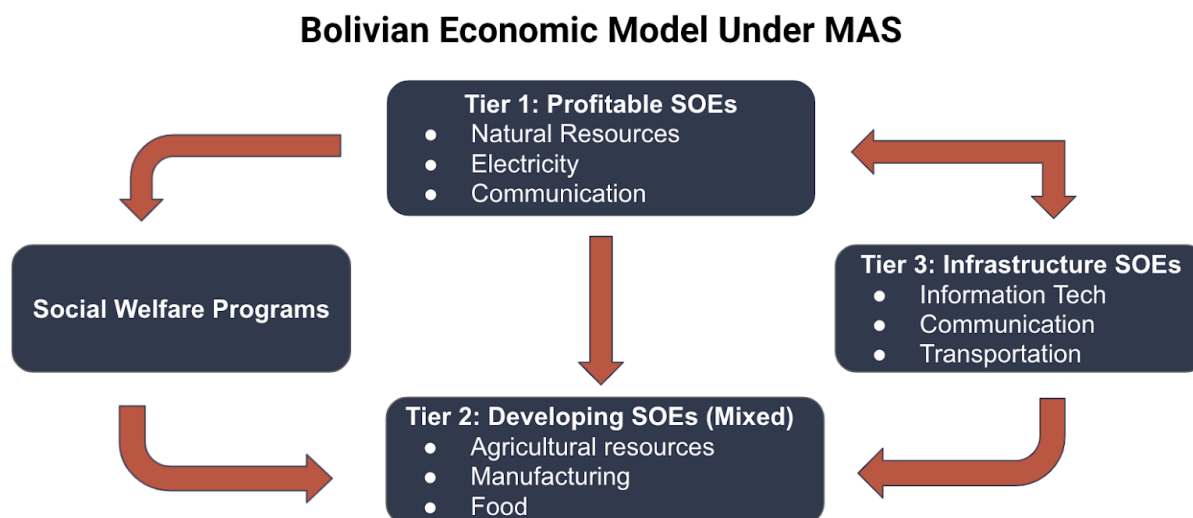


Figure 4 breaks down this model a bit more using tiers of state-owned enterprises (SOEs) that fall into different categories.

Tier 1 represents the most profitable SOEs which immediately began to produce revenue for the Bolivian government in 2006 and have continued to incur large profits. These consist of the natural gas companies, specific mining companies that were nationalized, electricity, and a large communication company. The most notable companies in these sectors are YPFB, the largest hydrocarbon company, COMIBOL, the mining company discussed earlier, VINTO, a tin-specific mining company, and ENTEL, the largest tele-communication company in Bolivia. The revenue produced from this tier is used to fund government projects, specifically social welfare programs, Tier 2 developing industries, and to a lesser extent, Tier 3, infrastructure.

The social welfare programs are a key part of the economic model, and are credited for the overwhelming decrease in poverty in Bolivia. Throughout MAS's government, it has implemented hundreds of programs, many functioning at different levels in respect to their impact on Bolivians. The most prominent and most discussed in development are, the Bono Juancito Pinto, which gives cash transfers to K-12 students who attend school regularly, Renta Dignidad, which similarly gives cash transfers to the elderly, and the Bono Juana Azurduy, which gives pregnant women cash transfers for every regular prenatal check-up in addition to supplies after the child is born. These are the most touted programs by the government, the most expensive social programs, and those that have the most visibility by all Bolivians. All programs are designed to fight poverty, infant mortality, and other issues; however, they are also an effort to increase internal demand for basic goods. This will be a vital component when discussing the developing industries, many of which produce products everyday people would consume. For transparency and perhaps political influence, the Bolivian government attributes specific

revenues from Tier 1 companies for specific social projects. For example, the Bono Juancito Pinto is cited to be funded through YPFB revenue.

Tier 3 represents infrastructure SOEs that support both Tier 1 and Tier 2 and are composed of mixed-subsidized status companies. These include BOA, an aviation company founded by the government, ground and cableway transportation companies, communication companies, QUIPUS, an education technology company, and others that support the infrastructural development of Bolivia [9].

Tier 4 is composed of SOEs in key industries the government is looking to develop. These companies are those that Bolivia will hope to fall back on in hopes to move away from resource dependency. These industries include agriculture, food production, manufacturing at large, and hydrocarbon industrialization. As mentioned, these companies receive different levels of financial support from revenue from Tier 1 companies. Further, they are supported by the infrastructure of Tier 3 companies, along with the increased demand created by the social welfare programs. It is also important to note that many of the companies in this sector are not fully owned by the government, and some are even majority-privately owned. The government, however, does have significant influence and is able to steer the companies in a direction beneficial to their policy.

## **Analysis**

As discussed, the claims on commodity booms are centered around natural gas and mining specifically. Because of this, I will analyze the price of natural gas and the top three minerals exported which are also those cited by western economists as ones that would account for most economic growth. In this analysis, I will exclude gold because it is owned primarily by the cooperatives. As it pertains to the mineral analysis, the top three non-gold minerals exported from 2005-2019 were zinc, tin, and silver. It is also important to note that over the course of the time analyzed (2005-2018), natural gas accounts for an average of 40.2% of total Bolivian exports, while mining of these three minerals accounts for 23.6% as shown in Figure 3.

The first step is to analyze natural gas and mining prices shown in Figures 5 & 6 and select key years the commodities rise and fall.

- Natural Gas: price begins to increase in 2002 and sustains relative growth with fluctuations leading to an initial decrease in 2008, reaching its lowest point in the decade in 2009. The price fell again and reached a new low for the century in 2012. Since, it has remained relatively stable.
- Mining: there are certainly points where minerals differ, but relatively, they fluctuate together. Collectively, we see an initial increase in 2005, with a dramatic decrease in



2008, reaching lows in 2009, which are still higher than pre-2005 prices. We then see a gradual increase with a collective fall again from 2014-2016.

In accordance with the claim that commodity prices are driving growth, we should see vast fluctuations in the Bolivian economy in accordance with these price fluctuations. For this, I first look at fluctuations in GDP shown in Figure 1. Bolivia has had positive growth throughout this period, so even the lowest fluctuations discussed will be periods of growth. The first comes in accordance with the first price fall in both natural gas and mining in 2008. Growth falls from a peak of 6.1% in 2008 to 3.4% in 2009, however, it is notably well above the average for all Latin American and Caribbean nations which fluctuated from 4.0% in 2008 to -1.8% in 2009. The small fall in natural gas prices in 2012 seemed to have little effect on the overall change in GDP. Finally, the fall in mining prices from 2014-2016 is reflected in the fall in GDP from 5.5% to 4.3%, which again isn't relatively as much as the fall in growth of Latin America as a whole during this period which fell from 1.1% to -1.2%.

Similar analyses were performed with other economic indicators such as unemployment, investment, inflation, and poverty rates and no fluctuations that were consistent with these were found. Granted, these measurements are less directly correlated with mining prices, however, they are presented in response to the claim that mining prices are driving the overall economy and can explain the increases in these specific measurements.

It is visually clear that the Bolivian economy is affected by prices in mining and natural gas, however, it is to a minimal extent, and one much less than the rest of Latin America. This minimal extent is reasonable as natural gas and mining of silver, tin, and zinc make up between 55%-74% of total exports in Bolivia during the time analyzed.

The analysis performed in this paper was from 2005-2018. In 2019, Bolivia experienced the global COVID-19 pandemic in addition to a military and police coup which saw an end to Evo Morales's 14-year government and the controversial appointment of a right-wing leader as president. In 2020, after nation-wide protests to force a new election, MAS is voted into office again this time with Luis Arce who wins with over 55% of the vote, more than 26 points higher than the second-place candidate [10]. Having voted in the same government for the last 15 years, it is possible the MAS reign could last well beyond Luis Arce's first term. It is important then to evaluate what continued economic development under the current model looks like based on this analysis. Further, what are areas where MAS can perform better and what are some concerns moving forward?

### **Performance and Outlook for the Future**

In terms of performance, the MAS government dramatically increased revenues from natural resources. Taking advantage of the commodity boom, Bolivia was able to rapidly increase

production at dramatic levels, especially in natural gas. Shown in Figure 7, combined Bolivian exports of silver, tin, and zinc in 2005 were \$419M, however, from 2006-2019, \$1.97B was exported on average each year. Similarly, shown in Figure 8, Bolivian exports of natural gas in 2005 were \$1.09B, however, from 2006-2019, Bolivia exported an average of \$3.37B each year. Similar results appear upon observing the major gas and mining state-owned companies.

### *Natural Gas and YPFB Performance*

YPFB, the largest hydrocarbon company in Bolivia and the government's main source of revenue, had a revenue of \$674M in 2005 increasing to an average of \$2.74B every year between 2006-2019.[14] That being said, YPFB has served as a massive source of revenue for the Bolivian government, where most investment is geared towards the exploitation of existing reserves at the expense of exploration. This was further incentivized by the high prices in natural gas which began to fall in 2009. The lack of investment in exploration has been a major problem for the industry as much of the exploration done was by private foreign firms prior to nationalization.[8] Not only has Bolivia not invested enough into exploration of new natural gas reserves, but its barriers of entry for foreign firms limit the amount of foreign investment in the country. In recent years, Bolivia has been forced to renegotiate its contracts with Argentina and Brazil as it failed to meet the ambitious figures, forcing Brazil to invest in its own natural gas; a source of revenue that will likely not come back even if Bolivia returns to its earlier levels of production.[15]

Nevertheless, Bolivia has invested more into gas exploration, and these efforts are finally showing results. In February of 2022, YPFB found a well that would likely add \$260M in income annually.[16] Even so, current investment in exploration is nowhere near enough to uncover reserves that will return Bolivia to 2013 profits. The lack of investment, however, isn't a selfish choice. MAS's Economic Model relies on large profits from natural gas to fuel other sectors forcing its investment to go into gas exploitation to produce revenue. The only other solution is to ease restrictions and make foreign investment more attractive, however, for a government that was voted in with a strong anti-foreign and anti-privatization mandate, such actions are nearly impossible.

### *Management of the Existing Mining Industry*

Although the government doesn't have as much control on mining as they do in natural gas, the mining of silver, tin, and zinc under state-owned firms still produces significant revenue for the Bolivian government. Shown in Figure 7, exports of all these minerals increased dramatically since 2005. When MAS came to power, it nationalized some of the largest mines in the country. Similar to what happened with natural gas, production increased, however investment stayed stagnant. For context in 2016, investment in mining in Bolivia amounted to 3.6% and 4.9% of investment in Chile and Peru's mining, respectively.[17] There have also been several incidents

of mismanagement of mines and projects that have taken years beyond projections to begin extraction.[18]

In recent years, gold has become one of Bolivia's major exports. As shown in Figure 9, its production has steadily increased, and in 2021 made up 23% of Bolivia's total exports surpassing natural gas for the first time since 1999. Although this sounds great, it has had little impact on the government's revenue and thus, the country's economic model. Almost all of gold production is operated by the cooperatives who pay little royalties to the Bolivian government. The obvious solution to this problem is to either nationalize the gold production or begin to collect higher royalties. The cooperatives, however, employ a large amount of the population and, along with the social movements, are the main reason MAS is in power.

### *Resource Dependency and Tier 2 Industries*

Although Bolivia has experienced massive gains in both natural gas and mining, the question of resource independence looks less favorable to the MAS government. Mineral and natural gas composition of total exports has only grown under MAS, however, GDP also grew 422% from 9.55 Billion USD to 40.29 billion USD, which means the vast majority of sectors in the Bolivian economy grew during this period [10]. For this analysis, it's important to look at some of the sectors in Tier 2 that have been the target of MAS's growth. Figures 10-12 show that agriculture, manufacturing and tourism have all grown substantially under the MAS government, indicating strong growth in the industries targeted under the economic plan. A report by the Bolivian Institute of Statistics shows Bolivia's "non traditional" exports (essentially everything but minerals and hydrocarbons) grew from \$879M in 2005 to \$2.7B in 2020 with roughly 50% of these exports coming from soy alone.

Although there is clearly growth in Tier 2 industries, these levels of growth are significantly smaller than those in mining and natural gas: opposite of MAS's economic plan for the country. Figure 12 demonstrates manufacturing's substantial growth, however, it has actually fallen from 11% of total exports in 2005, to 7% in 2018. This is representative of the larger picture and shortcomings in the MAS government in their mission to move away from resource dependency and grow Tier 2 industries.

### *Lithium and Industries for the Future*

As Bolivia looks to the future, the country is not yet in a place to lean off of resource dependency. Bolivia has grown its social programs to extents that demand exploitation of natural gas and mining. Right now, the MAS government is and should be most concerned with continuing its economic model rather than weaning off natural gas and mineral dependence. With significant challenges in natural gas production and mining, Bolivia has a much more promising,

budding industry that could sustain and even grow government spending in the coming years: lithium.

Lithium is possibly the most vital and sought mineral for the world's future.[19] It's used to produce lithium batteries to power electric cars; in a world looking to move away from fossil fuels, it is on the minds of superpowers across the globe. According to the United Nations, the lithium-ion battery market is projected to increase from 41.1 billion in 2021 to 116.6 billion in 2030.[20] Luckily for Bolivia, they have the largest lithium deposit in the world with over 21 million tons, over 25% of known world reserves.[21] Knowing this, the Bolivian government nationalized Lithium in 2008 and began to invest early in Lithium exploration and extraction under the state owned company Bolivian Lithium Deposits or YLB.[ 22]

Even though the focus and intent was present early on, after 14 years of nationalization, Bolivia has yet to be a competitor in the global lithium market. Evo Morales's government projected to produce lithium batteries by 2010 and electric cars by 2015, both which have yet to take off commercially. Although billions of dollars have been invested since 2008 in YBL, the company has had several missteps from lack of appropriate technology to a lack of capital to prepare for large scale production once extraction is feasible. Overall, the MAS government vastly underestimated lithium extraction and their own technological and labor capacity. These issues are much different than those presented for other mining and natural gas. Lithium is a budding commodity with little research inside Bolivia, and, therefore, a case for international and private cooperation is much more reasonable and necessary for the country to become a global player in production. Similar to other types of extraction, however, lithium extraction is damaging to the environment and the surrounding communities, resulting in numerous protests especially in regards to international participation.

Under Luis Arce (2020), the MAS government has made much more promising, yet still limiting advancements. Bolivia finally opened up to test international private technologies, allowing 4 companies from the US, China, and Russia to conduct small-scale pilot extractions in 2022. This, however, would only grant Bolivia the technology to extract lithium, with little infrastructure for scalable extraction, let alone the production of batteries and electric vehicles. While countries across the world race to ramp up their lithium production, Bolivia has to act now to ensure its early place as an established lithium producing country. There is a chance here not only to export lithium, but to develop industries around it such as the production of lithium batteries and eventually electrical vehicles, something not present in the extraction of other natural resources and vital to moving away from resource dependency.

## Results

First, it is clear MAS's success extends well beyond a commodity boom. It has survived the fall in mineral prices and that of natural gas. Management of large state owned companies and their industries has proved successful, increasing production and revenue dramatically even taking into account price hikes. Further, it has developed other sectors using the MAS Economic Model protecting and funding developing industries. Bolivia has outperformed most Latin American countries in the last 15 years and provided vast improvements for the Bolivian people.

Bolivia's main problem, however, is its lack of investment on several fronts. The country is trapped in a cycle where it needs to invest to produce for the future, but if it invests rather than use those funds for further extraction, it won't be able to sustain the various government programs and growing industries that have been vital to economic and social success. Further, Bolivia is and has been dominated by social organizations. Bolivian mobilizations will shut down roads, businesses, and the country to achieve their goals. In past injustices, especially in dictatorships and the neo-liberal era, they have been instrumental for securing human rights and improving their own lives through protests. These very mobilizations, however, are unattractive to foreign investment, and the people's hold on the government isn't something international companies want to bet on.

Alternatively, lithium, as an emerging resource, presents an opportunity to build new industries and sociocultural relationships between the MAS government, the Bolivian people, and international entities. In terms of lithium specifically, Bolivia should continue to cooperate with international companies to advance lithium extraction and battery production. Structurally, Bolivia should allow international firms to produce in the country to a minimal degree, ensuring transfer of technology to be less dependent in the long run. Socially, the Bolivian government should interact and involve the local community in decisions and ensure they are large recipients of revenue even before production begins. Further, the country needs to continue investing in professional education surrounding lithium and build a national campaign to engage the people in supporting extraction, assuring them that international players will only be allowed in under Bolivian terms. Lastly, Bolivia needs to look beyond its borders to Chile and Argentina to form coalitions around technology and production to create a lithium battery and subsequently eclectic vehicle hub for American markets. With similar political ideologies among leaders of these countries and the broader region, the time is ideal to create sustainable industries beyond resource extraction.

## Conclusion

Whether it is natural gas, state-owned mining companies, cooperatives ownership of gold, or the exploration of lithium, one thing remains constant: the people are the barrier to increased

investment, and therefore government revenue and larger economic growth. Those very people, however, are the same people who placed MAS in government with the mandate to nationalize such industries, lifting millions out of poverty and pushing Bolivia into economic success. In 2019, when Evo Morales was ousted by a coup, indigenous groups, social movements, and cooperatives fought against the coup government and forced elections in the middle of the COVID-19 pandemic, returning MAS to government under Luis Arce.

Luis Arce, the current president of Bolivia and the creator of the MAS's Economic Model, now faces tough decisions. It is clear the economic model is working in terms of social progress, development of key industries, and consistent economic growth. However, without continued revenue, the social programs and development could be at risk or, at a minimum, won't continue to grow at the same rate. The people and the government need to come to a consensus where international investment is encouraged to some degree without the possibility of returning to the pre-2005 era. Although the cooperatives and social organizations have immense political control, the MAS government shouldn't avoid smart and strategic partnerships that retain the sovereignty that has taken so long to build.

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**Data:**

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**Figures:**

Figure 1:

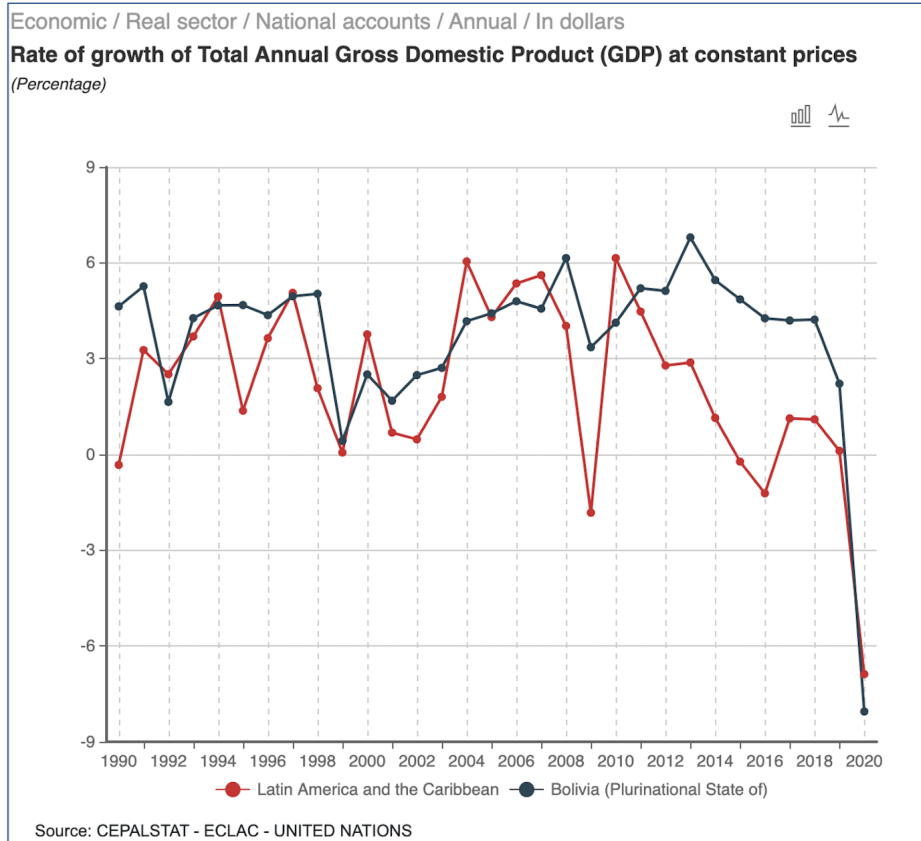


Figure 2:

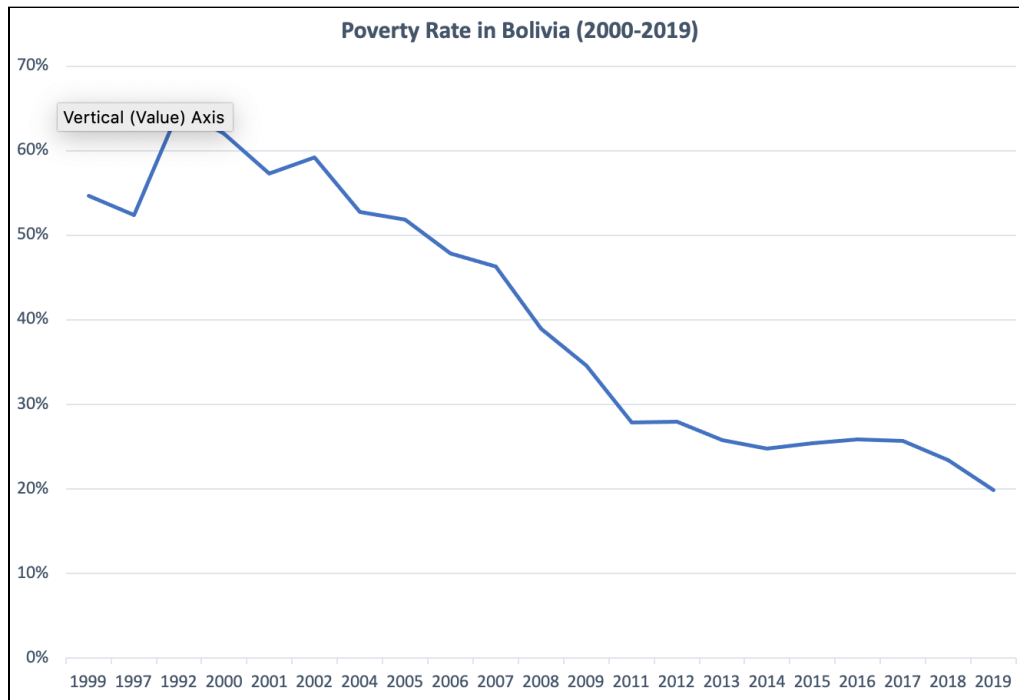


Figure 3:

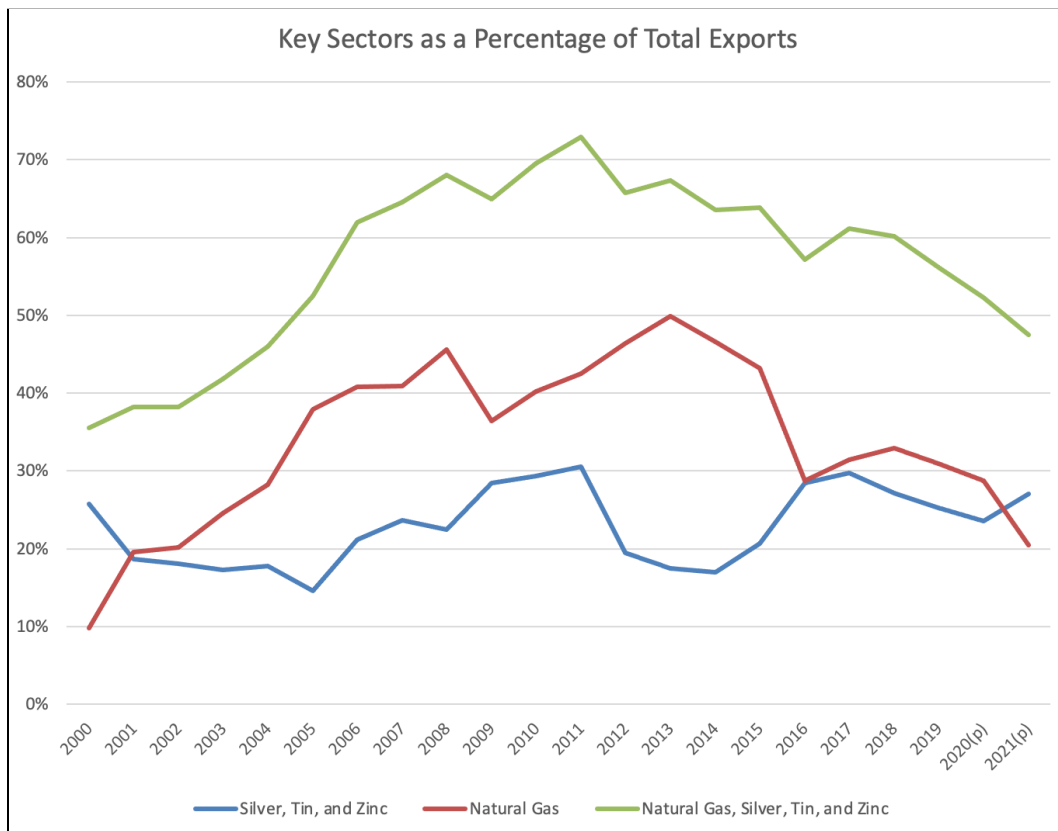


Figure 5: Price of Tin, Zinc, and Silver from 1998 - 2022

- Tin and Zinc measured in (USD/T)
- Silver measure in (USD/oz)



Figure 6: Price of Natural Gas from 1998 – 2022 measured in (USD/MMBTU)

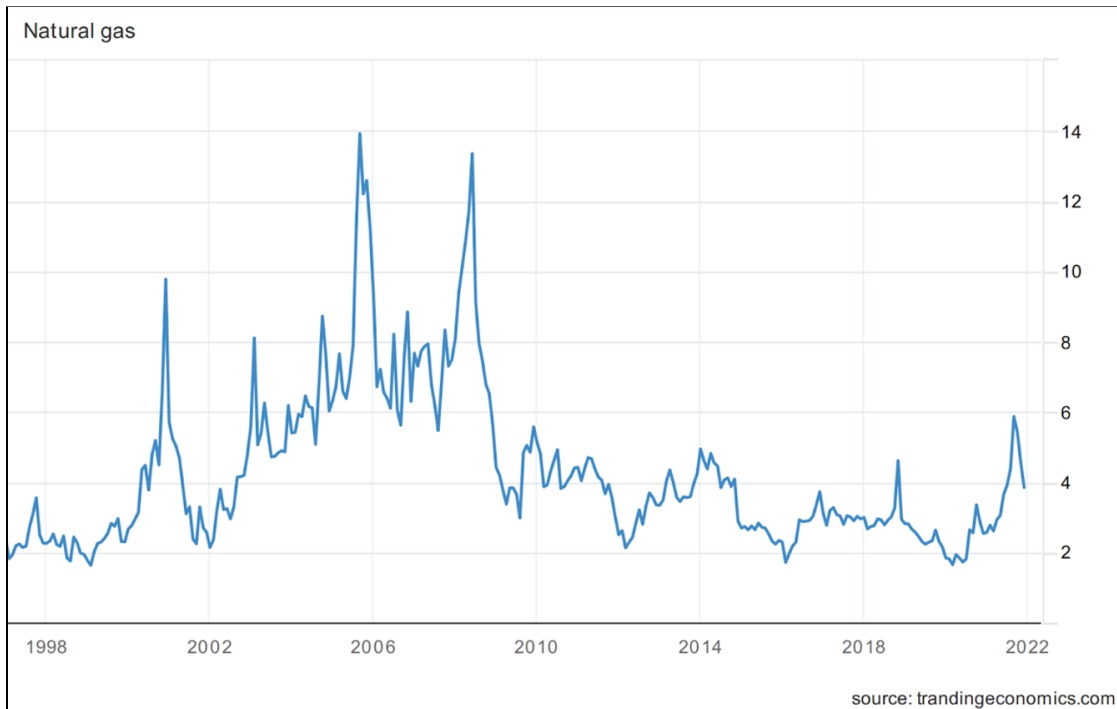


Figure 7:

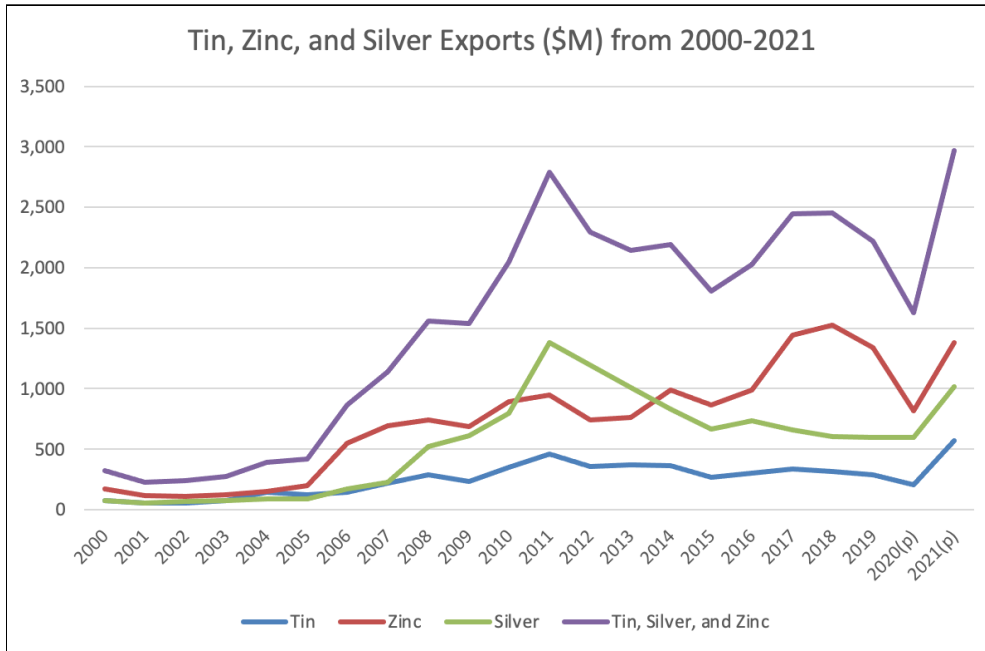


Figure 8:

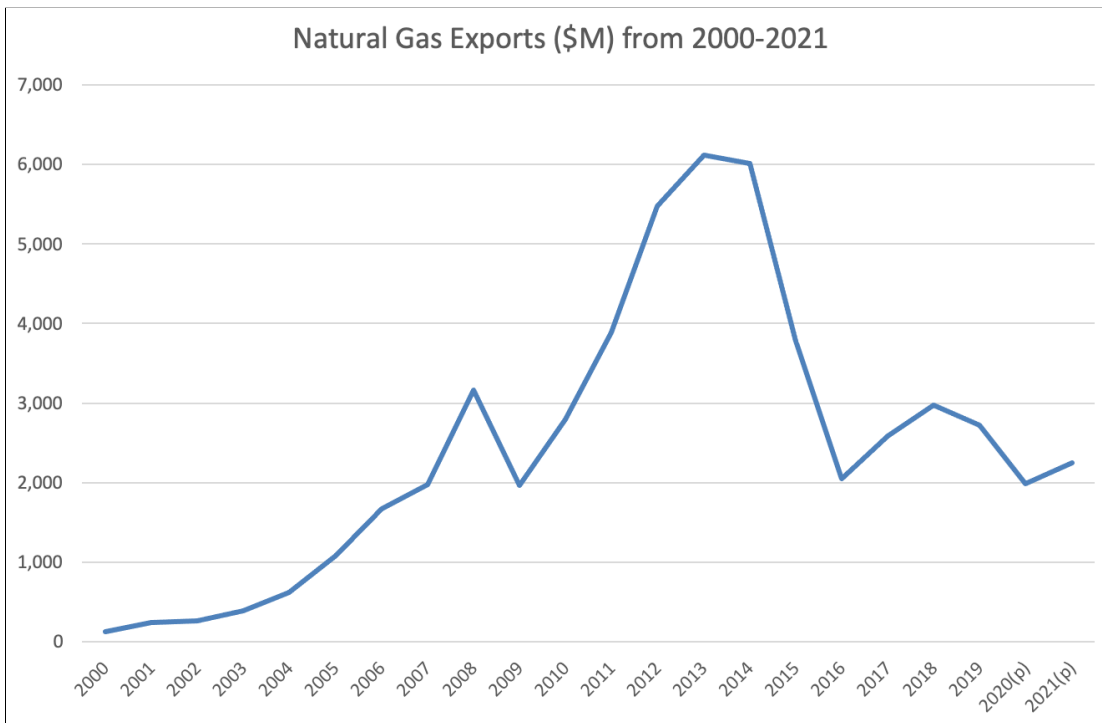


Figure 9:



Figure 10:



Figure 11:

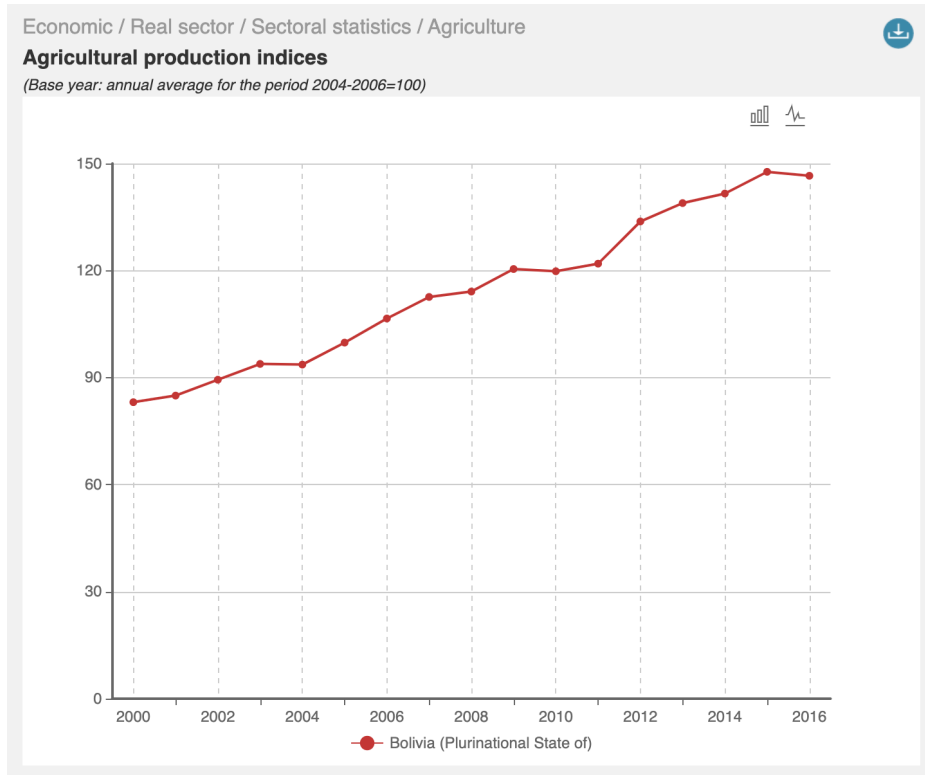


Figure 12:

