Handbook of Oil Politics

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Oil Rents and Political Power in Latin America

Publication details

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Published online on: 13 Dec 2011

How to cite :- Sidney Weintraub. 13 Dec 2011, Oil Rents and Political Power in Latin America from: Handbook of Oil Politics Routledge
Accessed on: 16 Nov 2023

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While not often included in discussions of major oil-producing regions, Latin America is a significant contributor to world energy supplies and a major supplier to the US market. From oil in Mexico and Venezuela to natural gas in Bolivia and Argentina, much of the region is blessed with abundant reserves. Despite these resources, policy concerning their development has perpetually been in flux. Alternating between market-friendly and nationalistic policies, the region has failed to develop any comprehensive, long-term view over the most effective way to utilize these resources. Instead, policy has often been short-sighted and geared towards increasing domestic political support. These policies often entail limiting exports to ensure a cheap domestic supply, generous subsidies to ensure cheap domestic energy, an expanded role of the state in production to increase government revenues, or some combination of the above. In short, political, not economic, decisions often determine how energy policy and revenues are handled.

This chapter will examine how current energy policy in Latin America is characterized by short-term decisions meant to increase political support. By neglecting long-term strategy, many governments have failed to maximize the benefits of their vast reserves of oil and natural gas. Colombia, however, appears to be moving against this trend and adopting a long-term view toward developing its oil reserves. The chapter will offer some thoughts on energy policy in the region and finding the balance between satisfying domestic needs and ensuring continuity in energy policy.

Mexico

Mexico is currently the second-largest oil producer in Latin America and seventh-largest in the world. However, exports have steadily dropped since reaching a high of 1.6mbpd in 2004, falling to 1.23mbpd in 2009. Much of this decline can be attributed to the rapidly declining production of Mexico’s Cantarell oil field. While discovered in the 1970s, it was not until Mexico’s state-owned oil company Petróleos Mexicanos (Pemex) began injecting nitrogen into the oil field to maintain pressure in the 1990s that Cantarell production began to take off. Since production peaked in 2004, Pemex has been unable to develop any significant oil fields. Faced with declining production, some analysts have predicted that Mexico will become a net oil-importing country by 2020–25.
This prediction ignores the likelihood that Mexico has untapped oil in the deep waters of the Gulf of Mexico. Pemex, however, lacks the experience and capital needed for deep water drilling. This is true for other countries that have sought to develop technically difficult oil reserves. Most have overcome this hurdle by bringing in international oil companies (IOCs) that have expertise in deep water drilling. This is not a realistic option under Mexican policy. Following the nationalization of Mexico’s oil sector in 1938 by President Lázaro Cárdenas, Pemex received a monopoly on oil production. Political considerations are a deep part of Pemex’s problems. Pemex currently finances roughly 40% of the Mexican government’s budget. Tax collection is at the relatively low level of between 11 and 12% of GDP, and the government is unable to enact any comprehensive tax reform. The Mexican government therefore relies on Pemex revenue to fund general government operations. Privatization is an unlikely option for Pemex. If it were private the company could act as a normal company and retain its revenues for its own investment decisions. Given the government’s dependence on oil revenues, this also seems unlikely in the short-term. With Pemex already obtaining many operating funds from borrowing, it cannot afford to take on more debt to finance its operations. This leads to the current situation, with declining production and a hope that staying the course will lead to an unforeseen discovery of oil down the road.4

Recent attempts have been made to address the shortcomings of Mexico’s energy policy. In 2008, the government under President Calderón introduced several modest reforms, including changes to the administrative structure of Pemex, changes to the regulatory framework, and opening the possibility of service contracts with private companies.5 While the legislation passed, the service contracts met with a lukewarm response and the reforms did not address the underlying causes of Pemex’s problems. Attention is now turning to the 2012 presidential election. Security issues now dominate Mexican politics and it is unlikely any further action will be taken with respect to Pemex until late 2012, at the earliest.

There is recognition that Mexico will face an energy crisis if it continues on its current path. This can particularly be seen in the adaptation of natural gas as the key fuel for power generation. Mexico is a net importer of natural gas and despite potential gas reserves in the deep waters of the Gulf of Mexico, Pemex’s inability to invest in development of these areas leaves

![Figure 13.1 Mexican total oil production, 1995–2010](image)

*Source: Energy Information Administration*
them largely untapped. Mexico now has two terminals for processing liquefied natural gas (LNG), with several more under construction. Natural gas represents an opportunity to diversify Mexico’s energy matrix. It also points to the inability of recent Mexican governments to tackle the problem of declining oil production.

Politics continue to paralyze Mexico’s ability to maximize the benefits of its natural resources. Instead of recognizing the implication of falling production for Mexico’s fiscal stability, policymakers continue to appeal to nationalistic sentiment over state control of oil production and delay much needed reforms. In the absence of any political will-power to address this problem, it appears that only a fiscal crisis, as a result of declining oil exports, will spur reform.

**Venezuela**

Venezuela is the largest oil exporter in the Western Hemisphere, and the Venezuelan economy is dominated by the oil sector. According to the US Energy Information Administration (EIA), Venezuela exported 1.89mbpd in 2008, making it the eighth largest oil exporter in the world, although production and exports have been declining over much of the past decade. Venezuela also sits on nearly 100bn barrels of proven oil reserves. In its Orinoco belt, which is in the early stages of production, Venezuela may have nearly 500bn barrels more to develop. Venezuela’s national oil company Petróleos de Venezuela, S.A (PdVSA), created with the nationalization of the oil industry in 1976, controls much of the oil sector in the country, a control that has tightened under the presidency of Hugo Chávez. While oil exports have long dominated Venezuela’s economy, according to the EIA they currently account for one-half of government revenues and three-quarters of export earnings.

The largest destination for Venezuela’s exports is the USA. This presents somewhat of a problem for Chávez’s “21st Century Socialism.” While Chávez frequently rails against US foreign policy, particularly that of the George W. Bush Administration, his government remains dependent on the US market, a reality that escapes his anti-US tirades. Chávez has made some efforts at diversifying Venezuela’s oil exports, particularly to China, where exports increased from 39,000 barrels per day in 2005 to 120,000 barrels per day in 2008. Chávez and Chinese President Hu Jintao have publicly stated their intention to increase oil exports from Venezuela,
with the goal being 1mbpd by 2013, but for the foreseeable future, Venezuela will remain dependent on US demand for its oil.9

PdVSA productive capacity has greatly diminished during the Chávez presidency. Since assuming the presidency in 1999, Chávez has systematically used PdVSA as the engine of his domestic programs as well as a tool for his foreign policy goals.10 Various legal changes have allowed the Chávez presidency to increase the government’s oil rent. In 2001, royalties on oil production nearly doubled, climbing from 16.6% to 30%.11 Nationalizations of various companies, including oil service companies in 2009, have allowed the Venezuelan government to increase its stake in the oil industry. Finally, the Chávez government has staffed PdVSA with those loyal to its agenda. Following a massive strike by PdVSA employees in 2002, where nearly half the workforce stopped working, PdVSA fired nearly 18,000 employees, losing many of its most competent workers. This firing allowed the Chávez government to staff PdVSA with staff friendlier to his agenda; PdVSA’s payroll increased from 28,000 to 75,000.12

The amount of decreased production during Chávez’s presidency is hard to verify given the reliability of PdVSA statistics. At a Woodrow Wilson Center conference on energy reform possibilities in Latin America, analyst Ana María Sanjuán of the Universidad Central de Venezuela noted that many estimates place the production decline at 25% over the last decade.13 Recognizing this decline, and the need for foreign investment to develop the heavy oil of the Orinoco belt, the Venezuelan state welcomed foreign oil companies to bid on four blocks of the Orinoco belt, with preference for other national oil companies (NOCs) from China and Russia. Despite this bleak scenario presented, little reform of this path is expected under a Chávez presidency, where oil revenues have allowed the President to finance his domestic and international goals.

This puts Venezuela in a position similar to Mexico. While Venezuela continues to allow foreign investment in its oil sector, the increasing control of the state over the oil sector has diminished the ability of PdVSA to invest in its future and develop new oil fields. The Chávez presidency has instead relied on PdVSA, with the help of high oil prices for much of the past decade, to finance his many social and political goals. While this has brought him strong support domestically and internationally, it has brought into question the future of PdVSA and the Venezuelan oil sector. Given that the Venezuelan government receives one-half of its revenues

![Figure 13.3 Venezuela oil production, 1995–2010](source: Energy Information Administration.)
from PdVSA, reform may only come after a crisis, such as a sustained drop in oil prices or continued decline of oil exports. By then, any gains made by the Venezuelan people under Chávez will likely have been erased.14

Bolivia

Bolivia has one of the largest natural gas reserves in the Western Hemisphere and the second largest reserves in South America after Venezuela.15 Much of Bolivia’s vast natural gas reserves have only recently been developed, as regulatory policies enacted in the 1990s allowed the Brazilian oil company Petrobras to join with Yacimientos Petrolíferos Fiscales Bolivianos (YPFB), the Bolivian NOC, to develop the San Alberto gas field, with exports destined for Brazil. As Bolivia continued to develop its natural gas reserves in the 1990s, it was poised to become the focal point of a natural gas hub connecting Bolivia with Brazil, Argentina, and Chile. Yet Bolivian plans to develop its natural gas industry floundered in the early 2000s as government plans to export natural gas through Chile were met with large protests, leading to the resignations of Presidents Gonzalez Sánchez de Lozada in 2003 and Carlos Mesa in 2005.16

Amidst the tumultuous gas protests in Bolivia, Evo Morales, a union leader, emerged as the head of the Movimiento al Socialismo (MAS) political party. Winning the election for president in 2005 following the resignation of Carlos Mesa, Morales embarked on a nationalistic path, reversing many of the economic and energy reforms that had been enacted in the 1990s. Most notably, Morales quickly followed through with his campaign promise to nationalize the industry, sending troops to occupy some 56 gas fields. This was followed with a decree that stated field operations must be turned over to YPFB, which was given control of setting prices. The decree also raised state taxes and royalties from 50 to 82% on most fields. The foreign companies were given 180 days to comply with the new demands or leave.17

The new Morales government justified the effective nationalization of the gas industry by pointing to the low price Bolivia was receiving for its exports. At the time of nationalization, Bolivia received $3.26 per million British thermal units (BTU) from Brazil, whereas the price for natural gas imports in Mexico was $7.65 per million BTU.18 With natural gas prices rising sharply, it was perhaps not surprising that Morales wanted to increase the government’s share of export revenue. Yet, for two reasons, the decision only proved effective in the short term.

First, the actions of the Morales government have sharply divided Bolivia. Much of Bolivia’s natural gas production is centered in the east and south, which is one of the more prosperous regions of Bolivia due to natural gas revenue. The GASBOL pipeline runs from southern Bolivia to several points in Brazil, making it Bolivia’s main avenue for gas exports. Following the nationalization of the industry, the eastern region struck back at the policies of Morales. This culminated in the May 2008 autonomy referendums held in four eastern provinces, in which these four provinces deemed themselves autonomous from the central government. While all four provinces passed the referendum, the Morales administration quickly deemed them illegal. With the resounding victory by Morales in his re-election bid in 2009, relations remain tense between the central government and the gas-producing provinces.19

Second, and more relevant to Bolivia’s future as a gas-producing nation, have been the reactions of Brazil and Argentina, Bolivia’s two largest export markets. Recognizing that Bolivia’s actions would likely affect its exports, Brazil and Argentina have moved to decrease their dependence on Bolivian natural gas. Brazil, in particular, has moved aggressively to decrease its imports. With Petrobras holdings affected by the nationalization of the industry, Brazil has sought to develop its own natural gas industry. With the discoveries of natural gas associated with the pre-salt oil fields, and construction of two LNG regasification terminals, Brazil will
increasingly become self-sufficient in producing natural gas for its domestic market, especially given the relatively low amount used in its energy consumption. Bolivia and Brazil signed a 20-year agreement on natural gas exports in 1999, but this expires at the end of the decade and it is doubtful an agreement of that sort will be renewed. This is particularly true as Bolivia has had difficulty ensuring it meets its contractual obligations, as rising domestic demand and declining production have given Bolivia decreasing supplies for exports.

If Brazil and Argentina wean themselves off Bolivian natural gas, Bolivia will have few markets to turn to. Unwilling to ship to Chile, and with other countries in South America possessing large natural gas reserves, natural gas production in Bolivia may face a crisis. This is due to the fact that, unlike oil, natural gas is a regional product, not a global one. Absent any regional demand, Bolivia could do little with its reserves. Bolivia could potentially transform its natural gas to LNG for shipment to international markets, but has not yet moved in this direction, lacking the facilities or the expertise to do so. With the Bolivian government and many of its programs dependent upon export revenues, this could prove disastrous, and reveal that the political and economic gains of the 2006 nationalization were not sustainable. Once again, Bolivia shows the recent trend in Latin America to focus on short-term political gains at the expense of a long-term vision to develop energy reserves and maximize their potential, which would ultimately prove more beneficial and sustainable to each country’s population.

Brazil

Brazil presents an example of one Latin American nation that has generally adopted a successful energy policy and where recent oil discoveries may be pushing the government to increase state control of the oil sector in the hopes of capturing future revenue. Brazil’s current energy policy largely began as a reaction to the oil shocks of the 1970s, such as the development of ethanol, and an increasing focus on self-sufficiency. With ample hydroelectric resources and its advanced ethanol industry, petroleum has traditionally played a smaller role in Brazil’s energy consumption than most other members of the OECD. This has begun to change under Lula, as vast oil

![Figure 13.4 Bolivian exports of dry natural gas, 2000–09](source: Energy Information Administration.)
discoveries and associated natural gas have increased domestic production – and consumption – of both products.

Much of the recent rise in Brazil’s oil and natural gas production can be attributed to major discoveries in 2007. These new pre-salt reserves, which are found at a depth between 5,000 to 7,000 meters and below 2,000 meters of salt, likely hold billions of barrels of oil, with the first five wells drilled having an estimated 1.5–2bn barrels of oil equivalent. With a very high success rate of 87% for the 31 wells drilled in the pre-salt area, Brazil appears poised to become a major player in international oil markets. As Brazil exports expand from current production estimates of 2.4mbpd, the pre-salt reserves will allow Brazil to greatly increase this number.

The euphoria over Brazil’s recent discoveries appears to have taken hold of the Brazilian governments, first under the popular Luiz Inácio Lula da Silva and now under his successor, President Dilma Rousseff. Recognizing the potential revenue that could be generated from these discoveries, the Brazilian government has altered the regulatory environment for their development. These can broadly be characterized as a new production-sharing agreement, where Petrobras is the sole operator with a minimum 30% stake in any consortium; the creation of a new state company, Petro-Sal, which will represent the state in the daily operations of contracts regarding exploration and production; a new sovereign wealth fund that will provide funds for various government programs, ranging from poverty alleviation projects to cultural funds; and a fourth provision that allows the state to relinquish the rights to 5bn barrels of oil in exchange for stock in Petrobras. These regulatory changes have profoundly changed how the pre-salt finds will be developed and utilized by Brazil, capturing a much greater share of income that will be generated than if Brazil had continued with the previous regulatory regime, which continues to govern previous finds in the pre-salt region.

The increased role of the Brazilian state and Petrobras in the oil sector has attracted much attention. While Petrobras is a well-respected international oil company, some question if it has the technological capacity to develop the pre-salt fields and would not have been better served to give a larger role to foreign oil companies that have more expertise in this area. The recent oil spill in the Gulf of Mexico has only heightened these concerns. Another worry is that, even with the creation of the sovereign wealth fund, future governments flush with oil revenues may
not hesitate to increase spending, leading to worries of inflation or an overreliance on the oil sector. Development of the pre-salt region is in its infancy, and it is too early to be certain whether Brazil is truly following the trend of increased resource nationalism in Latin America. But its early efforts to increase the government take of oil revenues show that it is not immune to the temptation of increased political benefits over sound development of its energy resources.

**Argentina**

Possessing reserves between 15 and 16 trillion cubic feet (Tcf), Argentina has the third largest reservoir of natural gas in South America after Venezuela and Bolivia. Beginning with the deregulation of the natural gas industry in 1989, including the privatization of the state company Yacimientos Petrolíferos del Estado (YPF) in 1993, investment into Argentina’s natural gas sector steadily increased throughout the 1990s. With production climbing, Argentina emerged as a major factor in South American natural gas markets. Recognizing neighboring Chile’s need for natural gas, the Argentine government signed a protocol on natural gas integration with Chile in 1995, with five gas pipelines constructed between the two countries since the agreement was signed. As a result of Argentina’s increasing production, natural gas emerged as Argentina’s most-used fuel source, accounting for 51% of primary energy consumption by the mid-2000s. Natural gas had become the dominant fuel in domestic consumption and an important source of revenue for the government.

Argentina’s economic collapse in 2002, when GDP shrank nearly 11%, had a profound effect on its natural gas sector, most of it detrimental. Much of the change can be found in the economic emergency law of 2002, which converted end-user rates into Argentine pesos on a one-to-one basis, when the market exchange rate was closer to 3 Argentine pesos per US dollar and froze rates at 2001 levels. This did not technically freeze the price producers could charge, but the failure to pass price increases to domestic distributors and consumers, where 90% of Argentine production is directed, meant prices were frozen in practice.

Frozen natural gas prices have dramatically altered natural gas production in Argentina. Low prices throughout the 2000s have led to stagnant investment in the sector from private companies. As production has stagnated, low prices have led to a surge in demand as the economy has boomed since 2002, with growth averaging 7.4% a year from 2003–10. Demand has occasionally outstripped supply since 2004 and Buenos Aires has witnessed several blackouts. This has caused Argentina to renege on its agreement with Chile to ensure it is able to meet its domestic needs first. It has also forced Argentina to sign a natural gas agreement with Bolivia to increase natural gas imports to ensure adequate supply.

To address Argentina’s chronic energy shortages, the answer would appear relatively straightforward: let end-user prices reflect the cost of production and shipment. Argentines, in fact, pay a mere 0.29 pesos per cubic meter, much less than neighboring Chileans, who pay 4.6 pesos, or Brazilians, who pay 8 pesos. Yet, as a result of Argentine politics, this simple remedy is often ignored.

Under former president Néstor Kirchner and current President Cristina Fernández de Kirchner, low energy prices have mainly acted as a subsidy to the middle class, one of the largest supporters of the current President. Despite the rapidly growing economy since 2003, many Argentines have also seen their purchasing power erode due to yearly inflation ranging from 20–25%. Unwilling to risk the ire of the middle class, the Kirchners instead opted to maintain current policy and import more expensive Bolivian natural gas. Although the Argentine government signalled it would decrease some energy subsidies as its summer approached in
November 2010, much more reform is needed if Argentina is fully to exploit its potential with natural gas.

This makes Argentina but another example where domestic political concerns have trumped long-term energy policy. Argentina has the option of maintaining subsidies for Argentina’s poor while removing them for the middle class. As Thomas O’Keefe has pointed out, the Argentine government purchases more expensive foreign natural gas with general tax funds while continuing to refuse passing on the cost of fuel to consumers, preferring to exercise control over the revenue flow from domestic natural gas. With presidential elections in late 2011, it remains unlikely that this situation will be altered. Instead, the current policy will prevail, and natural gas production (and the revenues that could be generated from its export) will continue to be ignored in order to maintain political support for Cristina Fernández in her probable bid to be re-elected.

Colombia: bucking the regional trend

Given the increased resource nationalism in Latin America over much of the past decade, as many governments seek to extract a greater share of rising commodity prices, there has been little good news in sound, long-term energy policy. One country that has gone against this trend is Colombia, where recent regulatory reforms have led to increased production and exports. Colombia has 1.36bn barrels of proven oil reserves, the fifth-largest in South America. Approximately one-half of Colombia’s production is used for domestic consumption, with the rest destined for export, primarily to the USA. After peaking in 1999, oil production stagnated in the early 2000s. However, several regulatory reforms enacted in 1999 have led to resurgence in production, which has quickly rebounded since 2007. These reforms focused on increasing foreign investment into Colombia’s upstream oil sector, including the allowance of foreign oil companies to own 100% of oil ventures. Longer exploration licences were introduced as well, while Colombia’s government sold many shares in the state-run oil company Ecopetrol to private investors while also forcing more competition upon Ecopetrol.
While many Colombians had feared that their country would become a net oil importer by 2010, these reforms have led to a surge in investment and production. FDI increased fivefold between 2002 and 2010, rising from $2bn to $10bn. In the oil sector, FDI flows reached $2.95bn in 2009 and were expected to increase to $3.5bn in 2010. Combined with the dramatically improving security situation, which has led to a large decrease in attacks on oil infrastructure and personnel, Colombian oil production has steadily climbed back from its nadir in the mid-2000s. Output reached roughly 670,000 barrels per day in 2009, with expectations that production will nearly double to 1.2mbpd in 2012. Due to Colombia’s rapidly expanding oil production, many within the country worry about “Dutch Disease,” as the Colombian peso has steadily appreciated amidst the recent global economic turmoil.

Thus, Colombia represents one example in Latin America where a well-planned, long-term energy policy has led to a rebirth of its oil industry. With high oil prices and demand from the USA, Colombia has developed a regulatory framework that has attracted the needed investment to exploit its resources. Under this framework, Colombia can now adopt a long-term vision towards how best to spend its oil revenues in such areas as reducing poverty and improving infrastructure. It is worth noting that it took a near crisis (the threat of once again becoming a net oil-importing nation and its fiscal implications) to spur change in Colombia’s oil sector. In many of the countries previously discussed, it will likely take something similar to spur reforms similar in nature to Colombia’s.

**Conclusion**

Latin America is not unique in how short-term political gains often trump sound energy policies that emphasize a long-term viewpoint. In the USA, for instance, the recent debate over corn ethanol has shown the importance of politics over policy. US-produced ethanol is mainly corn-based, while in many other countries ethanol is derived from sugar cane, a much more efficient process. Despite the lower costs of sugar ethanol and the fact that it is more environmentally sustainable, the USA maintains a 54 cent tariff on ethanol imports, mostly as a favor to the Corn Belt. Numerous other examples could be given, but are not needed to show that many countries, whether developing or developed, often fall prey to policies enacted for maximum political benefit. Wealthier countries such as the USA, however, can more easily afford the resource waste created by these policies. In Latin America, this is not the case. Bolivia, the poorest country in...
Latin America with a per capita GDP of approximately $4,800, could benefit from the increased revenue a robust natural gas sector would likely bring. It could also build a sovereign wealth fund, similar to what Chile did with record copper revenues, allowing the Bolivian government leeway to operate during economic downturns. Instead, the Bolivian government, like many other oil and natural gas exporters in Latin America, has chosen to increase the role of the state in these sectors to satisfy domestic constituents. And these actions have brought short-term gains, political and economic. Many of the presidents that have presided over these recent state expansions have been re-elected and benefit from high public support, stemming from Latin America’s robust growth rate for much of the last decade. These policies will ultimately backfire, as the statist energy policies from the 1950s-1980s did, and their successors will be left with the clean-up. In Venezuela, there are signs that this may be happening, as the country’s economy remains mired in recession while the rest of the region records vigorous economic growth. Only when these countries are once again driven by crisis to reform their oil and natural gas policies will their populations benefit from the sustainable practices that bring long-term economic benefits, not the short-term vision that characterizes the region today.

Notes

1 Canada is the top oil supplier to the US market, with Mexico and Venezuela typically among the top five exporters. In 2009 the top five exporters, in order, were Canada, Mexico, Venezuela, Saudi Arabia, and Nigeria.
7 A recent US geological survey estimated the amount of recoverable oil from the Orinoco belt to be 513bn barrels. If this estimate proves accurate, it would give Venezuela more oil reserves than Saudi Arabia.
8 EIA, Venezuela I, pp. 1–2.
9 Eric Watkins, “China, Venezuela Agree to Speed up Increased Oil Shipments,” Oil and Gas Journal, Vol. 107, Iss. 15; p. 27.
11 Ibid.
12 Ibid.
13 Ibid.
14 While this section focused on Venezuela’s oil production, Venezuela also has the second-largest natural gas reserves in the hemisphere, although the most recent EIA report states that 70% of natural gas production is consumed by the oil industry.
15 Although admittedly much smaller. The 2007 EIA Bolivia Country Analysis Brief placed Bolivia’s reserves at 24 trillion cubic feet, compared to Venezuela’s 152.4 trillion cubic feet.
16 The decision to use a Chilean seaport was met with strong resistance due to historical animosity between Chile and Bolivia. This animosity stems from the War of the Pacific, fought from 1878–84, in which Chile annexed Bolivian land rich in sulfur and nitrates. The subsequent boom in nitrates production, and the copper boom in northern Chile in the 20th century, still factors in Chilean-Bolivian relations, as well as Bolivia’s loss of access to the Pacific Ocean.
18 Ibid.
19 The tensions between the regions are based on much more than the nationalization of the gas industry, but the nationalization played a prominent role in the 2008 referendums.


22 Ibid.


24 EIA, *Brazil*, p. 3. Brazil’s rapidly rising oil production allowed the nation to become a net oil exporter in 2009.


30 Based on IMF figures, October 2010.


32 In fact, the Argentine government did allow for partial price increases for larger industrial and commercial users in 2004, but has largely been unwilling to follow suit with other consumers.

33 O’Keefe, “Argentina,” p. 221.


35 Ibid.

36 Ibid.


38 EIA, *Colombia*, p. 2.


40 In truth, most Brazilian-produced ethanol is also consumed domestically, but the tariff has been a point of contention between the two countries.