Mexico

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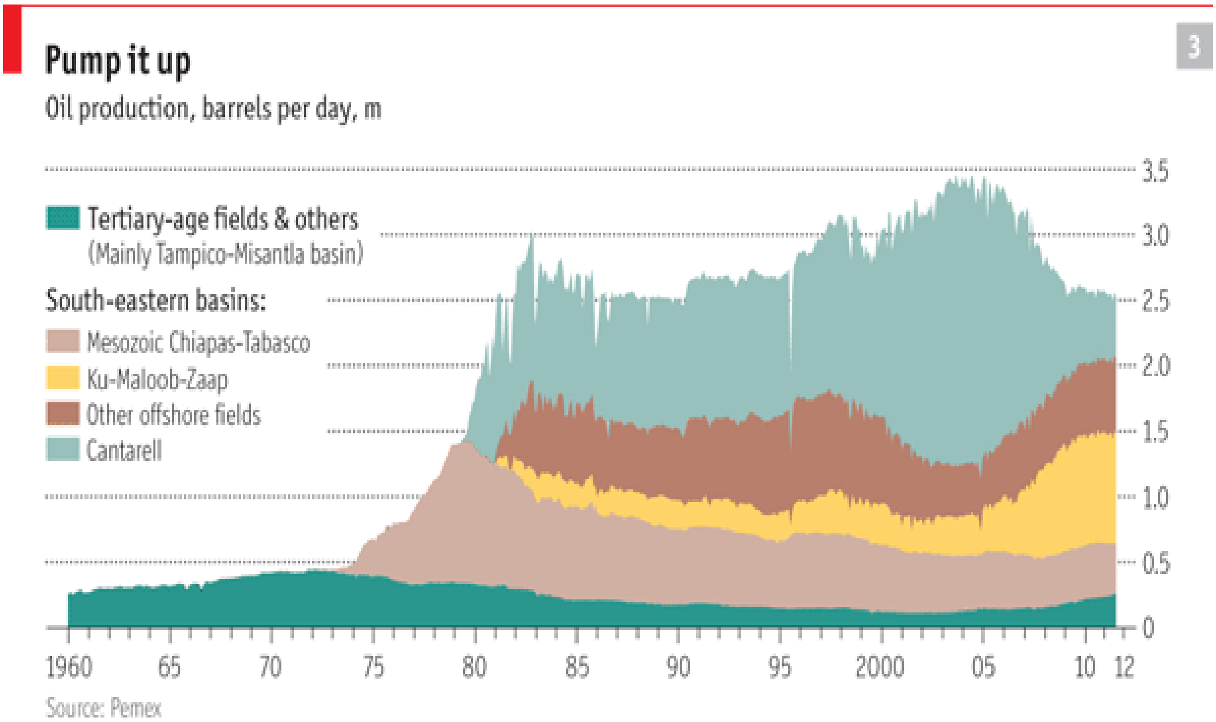
Oil and gas production in Mexico suffers from entrenched resource nationalism[1]

By Philipp Müller

This article is first in a series, which will explore the restrictions that governments around the world put on the exploration and production of fossil fuels, either by design or accidentally. These restrictions include corruption, armed conflicts, social unrest, the nationalisation of energy companies and the inefficiency of publicly owned energy companies compared to privately owned companies. These restrictions limit –in some countries severely – the production of fossil fuels. Without them, global fossil fuel production would be much higher and prices lower. This article will focus on oil and gas production in Mexico.

Since the 1970s, Mexico has been one of the world's ten biggest oil producers. Mexico's oil production peaked at approximately 3.4 million barrels per day (b/d) in 2004 (others estimate the peak of production at 3.9 million b/d). Since then, Mexico's output has fallen by 25 percent and production has slipped to 2.5 million b/d (see graph).[2]



This development, however, is not due to lack of new resources. Vast oil fields lie unexploited. The Chicontepec basin near the Gulf coast has large deposits of heavy oil and the deep sea of the Gulf of Mexico contains large subsalt reservoirs of oil that are promising. Mexico's national oil company, Pemex, reckons that there could be nearly 30 billion barrels under the Gulf of Mexico, more than half of the country's prospective resources. But the company has been slow to exploit it. Between 2006 and 2011, it drilled only 18 wells in deep waters;

1 Romero, Simon, "New Fields May Propel Americas to Top of Oil Companies' List", *The New York Times*, 19 September 2011, http://www.nytimes.com/2011/09/20/world/americas/recent-discoveries-put-americas-back-in-oil-companies-sights.html?_r=1

2 *The Economist*, "Senores, start your engines" Special Report Mexico, 24 November 2012, http://www.economist.com/news/special-report/21566782-cheaper-china-and-credit-and-oil-about-start-flowing-mexico-becoming

in comparison, Petrobas, its partly-privatised counterpart in Brazil, drilled 101 wells during the same period. Furthermore, shale gas and shale oil are also opportunities waiting to be exploited.[3] Mexico had about 10.2 billion barrels of proven oil reserves and about 17.3 trillion cubic feet (tcf) of proven natural gas reserves at the end of 2011. It is believed to possess considerable hydrocarbon resources in the deepwater Gulf of Mexico, which have not yet been commercially developed. Pemex has been drilling deepwater exploratory wells since 2006 and made its first significant find in 2012. Onshore, the Chicontepec deposits may contain more than 11 billion barrels of oil. According to a study by the U.S. Energy Information Administration (EIA), Mexico has also an estimated 681 tcf of technically recoverable shale gas resources – the fourth largest of any country assessed in the study.[4]

Oil and gas production in Mexico could be hugely increased. However, Pemex, the government-owned energy company, faces constitutional, fiscal and managerial constraints and suffers from corruption, inefficiency and lack of expertise and technology. These constraints limit production.

Constitutional constraints

The existing constitutional and regulatory framework in Mexico is among the most restrictive in the world. The Mexican constitution defines oil as the property of the nation. In 1938, the Mexican government nationalised foreign oil companies and created Petroleos Mexicanos (Pemex), its national oil company, which has a monopoly over the industry.[5] Plenty of foreign energy companies are keen to start drilling in Mexico, but Mexican governments and the public have been wary of dealing with foreign energy companies.[6] It is well-established that fully or partially privatised firms are more efficient than fully government owned ones. Still, because Pemex has become a symbol of national identity and powerful vested interests – like the oil workers' union - will defend their privileges, a privatisation of Pemex or an opening of the oil sector to foreign companies looks unlikely.

Fiscal constraints

Mexico's fiscal situation constitutes a second major constraint on Pemex. The Mexican government relies on the oil industry for around 35 percent of total government revenues, including taxes and direct payments from Pemex.[7] For years, governments have been siphoning revenue from Pemex, leaving it without sufficient capital to develop new oil fields. A lack of funding for new drilling and exploration is beginning to show in the rapid decline in production.[8] Despite its huge gross revenues, Pemex has been recording annual losses

3 *The Economist*, "Senores, start your engines" Special Report Mexico, 24 November 2012, http://www.economist.com/news/special-report/21566782-cheaper-china-and-credit-and-oil-about-start-flowing-mexico-becoming

4 *U.S. Energy Information Administration*, "Mexico", 17 October 2012, http://www.eia.gov/countries/analysisbriefs/Mexico/Mexico.pdf

5 Mares, David R., "Oil Policy Reform in Resource Nationalist States: Lessons for Mexico", *James A. Baker III Institute for Public Policy, Rice University*, 29 April 2011, http://www.bakerinstitute.org/publications/EF-pub-MaresLessons-04292011.pdf, p. 9

6 *The Economist*, "Senores, start your engines" Special Report Mexico, 24 November 2012, http://www.economist.com/news/special-report/21566782-cheaper-china-and-credit-and-oil-about-start-flowing-mexico-becoming

7 Mares, David R., "Oil Policy Reform in Resource Nationalist States: Lessons for Mexico", *James A. Baker III Institute for Public Policy, Rice University*, 29 April 2011, http://www.bakerinstitute.org/publications/EF-pub-MaresLessons-04292011.pdf, p. 5

8 Myers Jaffe, Amy, Medlock III, Kenneth B and Soligo, Roland, "The Status of World Oil Reserves: Conventional and Unconventional Resources in the Future Supply Mix", *James A. Baker III Institute for Public Policy, Rice University,* October 2011, http://www.bakerinstitute.org/publications/EF-pub-WorldOilReserves-101911.pdf, pp. 21-22

for most of the past decade, and has accumulated foreign debts on a scale comparable to Mexican sovereign debt. Although waste and inefficiency are partly responsible, the main reason is the extremely heavy tax burden borne by Pemex, which effectively has to transfer all its profits to the federal authorities. This hampers the oil company's ability to finance investment out of its revenues. In 2008, an energy reform law was passed by Mexico's parliament, which made some effort to ease this constraint by freeing up about 2% per year of GDP for investment purposes. However, despite this reform and the high oil prices in recent years, the management of Pemex is still unable to plan for and finance long-term investment projects, both in Chicontepece basin and in the deep water of the Gulf of Mexico.[9] Due to the heavy taxation and a spending plan still focused on probing deeper into the Gulf of Mexico's conventional oil fields, Pemex has little money left to exploit onshore shale oil resources. The company plans to spend around $2.36 billion on shale exploration over the next three years – just 2 percent of its budget for the same period.[10]

Managerial constraints

Pemex is "horribly run", according to Juan Jose Suarez Coppel, its director. He complains that successive Mexican governments have deprived Pemex of funds rather than let it invest in exploration and technology. It takes between six and eight years from discovering oil to producing it, so "no president who invests is going to see the barrels of oil", Mr Suarez explains. Each time a new oil field is discovered, Pemex allows production in other fields to go into decline.[11] Pemex is notorious for its slow-moving bureaucracy. Drilling shale wells in Coahuila are 30-40% more expensive than in the United States because of administrative obstacles.[12]

The majority of the board members of Pemex are nominated by politicians or trade union leaders. The Mexican Congress appoints four professional governors to the board of Pemex. They are nominated through a process of inter-party horse-trading in Congress, which limits their independence and their ability to serve the best interests of the enterprise. Other members of the 15-strong board are also subject to various inherent conflicts of interest; for example five of them are nominated by the oil workers union.[13] These board members have the tendency to act in the best interest of their backers; and not in the best interests of the company.

Corruption

Pemex has a history of corruption. The Ministry of the Public Service stated that Pemex is the most corrupt entity of the federal government. A Pemex Deputy Controller asserted

9 *James A. Baker III Institute for Public Policy, Rice University*, "The Future of Oil in Mexico", June 2011, http://bakerinstitute.org/programs/energy-forum/publications/energy-studies/the-future-of-oil-in-mexico-el-futuro-del-sector-petrolero-en-mexico, p. 6

10 Rosenberg, Mica, "Analysis: Mexico in no rush to exploit shale oil bonanza", *Reuters*, 27 February 2012, http://www.reuters.com/article/2012/02/27/us-mexico-shale-idUSTRE81Q20Q20120227

11 *The Economist*, "Senores, start your engines" Special Report Mexico, 24 November 2012, http://www.economist.com/news/special-report/21566782-cheaper-china-and-credit-and-oil-about-start-flowing-mexico-becoming

12 Rosenberg, Mica, "Analysis: Mexico in no rush to exploit shale oil bonanza", *Reuters*, 27 February 2012, http://www.reuters.com/article/2012/02/27/us-mexico-shale-idUSTRE81Q20Q20120227

13 *James A. Baker III Institute for Public Policy, Rice University*, "The Future of Oil in Mexico", June 2011, http://bakerinstitute.org/programs/energy-forum/publications/energy-studies/the-future-of-oil-in-mexico-el-futuro-del-sector-petrolero-en-mexico, p. 7

that between 2006 and 2010 153 cases of fraud were detected within Pemex's largest unit, including inflating multimillion dollar contracts, giving contracts in exchange for favours, giving contracts to friends or to unqualified firms. Media sources indicate that Pemex employees have helped criminal groups to steal fuel.[14]

Inefficiency and lack of expertise

Pemex generates far less revenue from the resources at its disposal than most other energy firms do. Mexico's government maintains a monopoly for Pemex but does not provide it with the autonomy and capital necessary for raising its efficiency or its capacity for deep water exploration and production.[15] Pemex is eager to explore deeper water of the Mexican Gulf coast but has little experience managing such complicated off-shore projects.[16] The company lacks the expertise and technology that is needed for deep water exploration. Pemex does not currently have the technical capability or financial means to develop potential deepwater projects in the Gulf of Mexico or shale oil deposits onshore.[17] With more capital, better technology and a more skilled workforce, Pemex could generate well over 50% more revenue than it has in recent years. In addition, it could produce the same amount of revenues as it does now with significantly fewer employees.[18]

A better way

Because of these constraints, oil and gas production in Mexico will remain much lower than what it could be. Brazil provides a template how to overcome such constraints. In 1995, the Brazilian parliament approved a constitutional amendment that permitted private investment in exploration and production of hydrocarbons. Two years later, a law was passed that further opened the energy sector to private investment, set timetables for the complete liberation of prices and imports and partly privatised the Brazilian national oil company, Petrobras. This partial privatisation through the selling of shares has introduced some discipline into the government's relationship with Petrobras. The value of the company is significantly affected by how shareholders view its performance, which provides the Brazilian government with an incentive to stay out of its management and permit it to operate as a profit-making company. Competition provided a stimulus for Petrobras to use its resources more productively and its efficiency and production increased dramatically after the reforms.[19] Pemex would benefit from similar reforms.

14 *Immigration and Refugee Board of Canada*, "Mexico: Corruption in the national oil company (Pemex); treatment of employees by management and union leaders; incidents of violence against Pemex employees", 20 September 2011, MEX103806.E, available at: http://www.refworld.org/docid/50754bcd2.html

15 Mares, David R., "Oil Policy Reform in Resource Nationalist States: Lessons for Mexico", *James A. Baker III Institute for Public Policy, Rice University*, 29 April 2011, http://www.bakerinstitute.org/publications/EF-pub-MaresLessons-04292011.pdf, p. 18

16 Rosenberg, Mica, "Analysis: Mexico in no rush to exploit shale oil bonanza", *Reuters*, 27 February 2012, http://www.reuters.com/article/2012/02/27/us-mexico-shale-idUSTRE81Q20Q20120227

17 *U.S. Energy Information Administration*, "Mexico", 17 October 2012, http://www.eia.gov/countries/analysisbriefs/Mexico/Mexico.pdf

18 *James A. Baker III Institute for Public Policy, Rice University*, "The Future of Oil in Mexico", June 2011, http://bakerinstitute.org/programs/energy-forum/publications/energy-studies/the-future-of-oil-in-mexico-el-futuro-del-sector-petrolero-en-mexico, p. 5

19 Mares, David R., "Oil Policy Reform in Resource Nationalist States: Lessons for Mexico", *James A. Baker III Institute for Public Policy, Rice University*, 29 April 2011, http://www.bakerinstitute.org/publications/EF-pub-MaresLessons-04292011.pdf, p. 29-30