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**WESTERN HEMISPHERE  
SECURITY ANALYSIS CENTER**

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**August 2011**

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# **The Current State of Argentina's Oil Industry**

**Erich de la Fuente**  
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*The views expressed in this research paper are those of the author and do not necessarily reflect the official policy or position of the US Government, Department of Defense, US Southern Command or Florida International University.*

## EXECUTIVE SUMMARY

An oil wealthy country, Argentina has repeatedly tried and failed to capitalize on its potential. The unfortunate energy policies of subsequent Argentinean government and a lack of investment capital have been two of the main reasons that have significantly limited the production of export oil in the recent past. Yet, with recent discoveries and changes to the country's hydrocarbon laws, there may be a new dawn for Argentina's oil industry.

Since 1999 when Argentina's oil production peaked at approximately 800,000 barrels per day, there has been a 24 percent decrease in its oil output. The country's oil reserves have also been in a steady decline. Yet, the recently enacted reforms by Argentina's government to incentivize foreign investment in the oil industry seem to be working, allowing investors to negotiate the terms of exploration directly with local governments.

As a result, foreign investment is increasing, as well as new willingness to finance exploration of untapped reserves. Also, the discovery of shale oil in Argentina may provide the potential to become a key exporter in the region. Nonetheless, there are challenges that need to be overcome and it may be years before the various oil projects underway become profitable. The success of the current oil projects, coupled with the potential of shale oil, new discoveries and the sustainability of the current energy policy reforms will likely determine if Argentina is finally able to fulfill its potential and exert itself as an oil exporter country in Latin America.

## INTRODUCTION

Over the past several decades, the question of whether Argentina could become a viable oil exporter has formed part of the oil industry debate in Latin America. The country was hopeful of becoming a significant oil exporter in the 1970s, but those aspirations did not go on to become a reality, as the country was never able to capitalize on this natural resource. Lack of investment capital and government energy policies unfavorable to foreign investments pushed production into a decline.<sup>1</sup>

Argentina has struggled to live up to its potential, continuing to lag behind Latin America's main oil producers (see Figure 4). However, recent changes to Argentina's hydrocarbon laws have drawn a boost of foreign capital investments to explore its significant untapped reserves, indicating its export capacity has the potential to increase. Additionally, the new enthusiasm about the potential of shale oil, which Argentina is estimated to have plenty of, also increases the possibilities in the global oil industry for it to become a significant oil exporter in Latin America.<sup>2</sup>

That Argentina has the potential to be a key oil exporter has never been in question. How the country moves forward in making that a reality remains to be seen over the next decade. This paper will present the current state of the Argentine oil industry, as well as important foreign investments projects, recent discoveries and possible

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<sup>1</sup> Emerging Money, "Will Oil Production in Argentina Be Able to Follow Brazil?" *Seeking Alpha*, November 1, 2010. <http://seekingalpha.com/article/233748-will-oil-production-in-argentina-be-able-to-follow-brazil>.

<sup>2</sup> Clifford Krauss, "Argentina Hopes for a Big Payoff in its Shale Oil Field Discovery," *The New York Times*, July 4, 2011. <http://www.nytimes.com/2011/07/05/business/global/05shale.html?page-wanted=all>.

challenges that will likely set the path for the country's direction on whether Argentina can become a viable oil exporter in the future.

## **BACKGROUND**

Argentina has been a potential oil exporter since its discovery. *Yacimientos Petrolíferos Fiscales (YPF)* was the primary oil provider for the country until 1990 when the country shifted from state owned oil companies to private firms. With new ownership, reforms were implemented helping to increase oil, gas and electricity production. These changes also attracted the investment of Repsol Oil Company, a Spanish firm that currently owns 55 percent of YPF and is highly vested in Argentine oil exploration.<sup>3</sup>

In the midst of the 2001 economic crisis, the Argentine government adopted measures to keep oil prices low. Consequently, low oil prices have led to inefficient use of oil resources, resulting in an increase of government subsidies during times of high demand, such as in the winter months. Moreover, subsidizing these costs has not only placed budgetary constraints on the Argentine state, but also hinders the country's ability to export since the government is required to first satisfy national demand of oil and gas before exporting any remaining resources abroad.<sup>4</sup>

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<sup>3</sup> Petro Industry News, "Oil Industry: Argentina makes biggest discovery for 20 years," (May 11, 2011) [http://www.petro-online.com/news/fuel-forthought/13/breaking\\_news/oil\\_industry\\_argentina\\_makes\\_biggest\\_discovery\\_for\\_20\\_years/15153/](http://www.petro-online.com/news/fuel-forthought/13/breaking_news/oil_industry_argentina_makes_biggest_discovery_for_20_years/15153/).

<sup>4</sup> Pablo Fernandez-Lamela, "Argentina's Energy Pricing Challenges," *Hemisphere*, Vol. 20, Spring 2011, [http://casgroup.fiu.edu/pages/docs/2157/1306356964\\_Hemisphere\\_Vol\\_20.pdf](http://casgroup.fiu.edu/pages/docs/2157/1306356964_Hemisphere_Vol_20.pdf).

## CURRENT STATE OF THE ARGENTINE OIL INDUSTRY

The peak of Argentina's oil manufacturing was in 1999 when the country produced an estimated 800,000 barrels per day.<sup>5</sup> Following the 2001-2002 economic crisis however, production has gradually and consistently decreased throughout the years. At its lowest point, oil production had declined to approximately 600,000 barrels per day.<sup>6</sup> Figure 1 below highlights the oil production trend experienced by Argentina over the last 11 years, emphasizing the gradual decline throughout this period.<sup>7</sup> In all, there has been an approximate 24 percent decrease in oil output since 1999.

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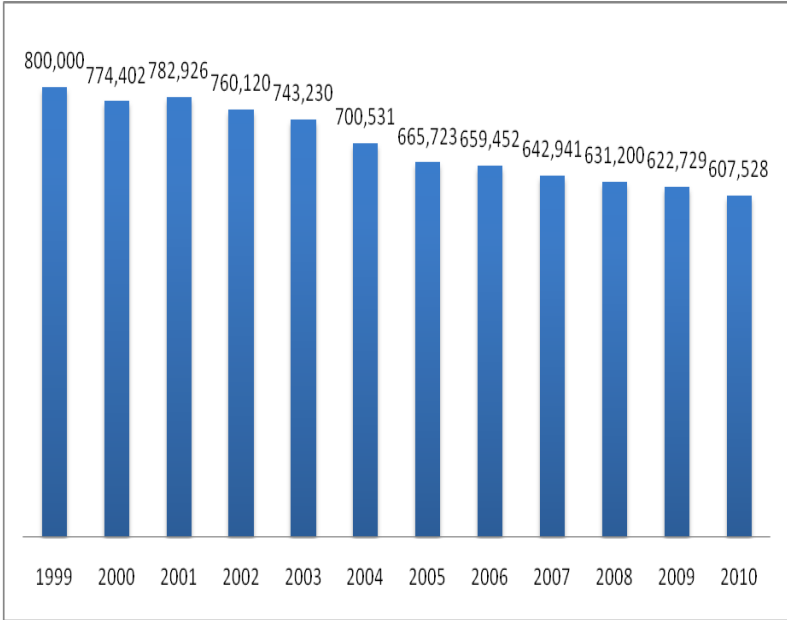
<sup>5</sup> Energy Information Administration, "Energy Oil Profile," *The Encyclopedia of Earth*, September 23, 2008. [http://www.eoearth.org/article/Energy\\_profile\\_of\\_Argentina](http://www.eoearth.org/article/Energy_profile_of_Argentina).

<sup>6</sup> Ibid.

<sup>7</sup> Instituto Argentino de Petróleo y del Gas. [www.iapg.org.ar](http://www.iapg.org.ar).



**FIGURE 1: Annual Oil Production-Argentina  
(In barrels per day)**

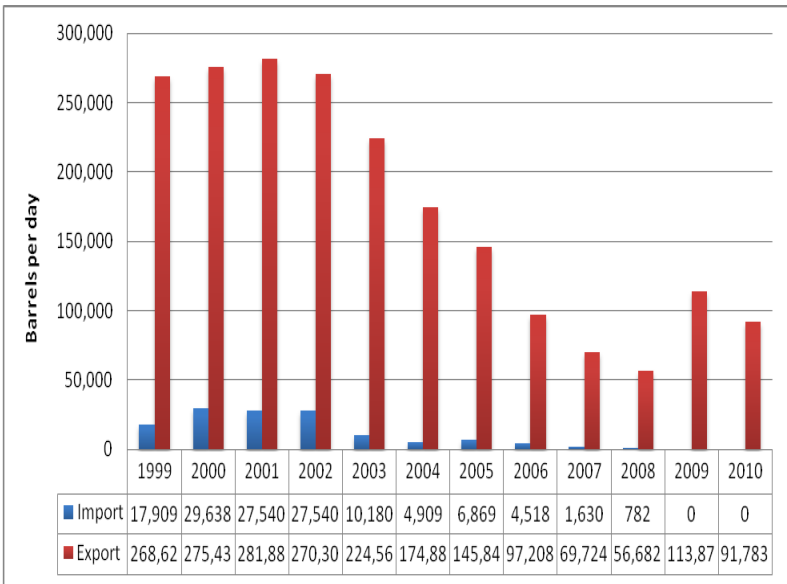


Source: Instituto Argentino del Petroleo y del Gas,  
<http://www.iapg.org.ar/estadisticasnew/>.

Simultaneously, the serious economic and financial crisis the country endured resulted in a significant loss of cash reserves, thus directly impacting the country's ability to import foreign oil. Without the revenue from oil exportation, the country is unable to import the quantity of oil necessary to meet the future needs of its citizens.<sup>8</sup> Figure 2 below reveals the import-export pattern experienced by Argentina. As the chart indicates, Argentina has not imported oil since 2009. It is also worth noting in that same year, the country experienced a significant jump in oil exportation, but then decreased in 2010 instead of continuing to increase.

<sup>8</sup> Fernandez-Lamela Pablo, opp. cit. Spring 2011.

**FIGURE 2: Import & Export in Argentina**

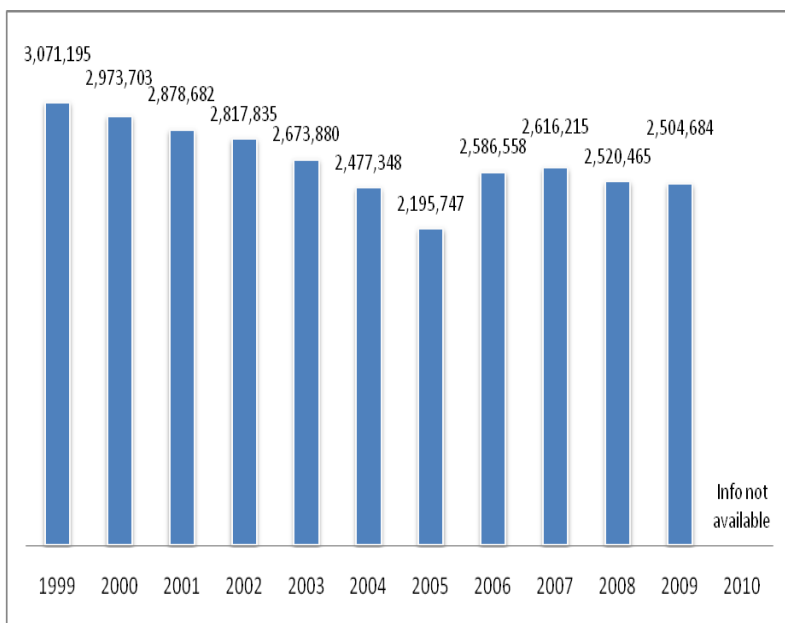


Source: Instituto Argentino del Petroleo y del Gas,  
<http://www.iapg.org.ar/estadisticasnew/>.

Proven oil reserves have also been jeopardized. Studies indicate the reserves have declined by an estimated 20 percent over the last 10 years.<sup>9</sup> While there was an increase in oil in 2007 and 2008, the general pattern, as illustrated in Figure 3, depicts the steady decline of oil reserves in the country.

<sup>9</sup> Ibid.

**FIGURE 3: Proven Crude Oil Reserves**



Source: Instituto Argentino del Petroleo y del Gas,  
<http://www.iapg.org.ar/estadisticasnew/>.

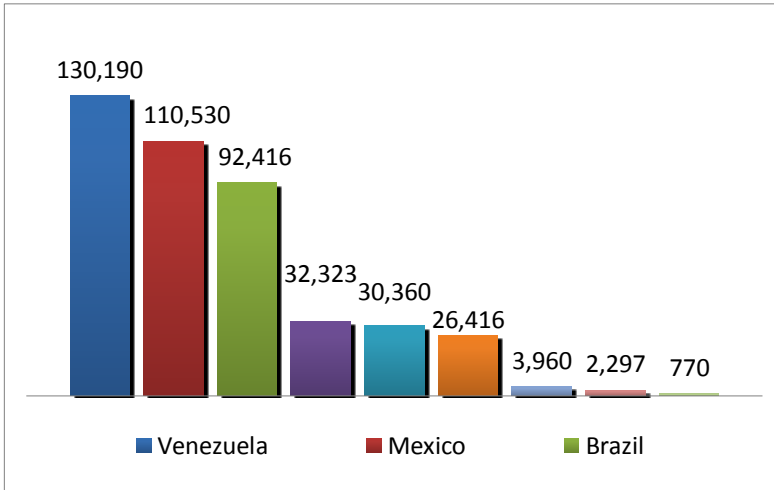
## COMPARISON WITH LATIN AMERICA

Venezuela and Mexico have always been the primary producers and exporters of oil in Latin America, a region that contains more than 10% of the world's oil reserves and produces approximately 8.9% of the crude oil consumed on a global scale.<sup>10</sup> Brazil and Argentina have always followed at a far distance, but as the Brazilian oil industry has boomed over the last decade, Argentina has been left behind at a distant fourth (see Figure 4 below).<sup>11</sup> In the international oil market, Argentina ranks 24<sup>th</sup> in oil production.

<sup>10</sup> International Energy Agency, "Key World Energy Statistics-2010," (2010) [www.iea.org](http://www.iea.org).

<sup>11</sup> Ibid.

**FIGURE 4: 2008 Annual Oil Production-Latin America  
(In 1000 tons)**



Source: International Energy Agency 2008 Statistics, [www.iea.org](http://www.iea.org).

## FOREIGN INVESTMENTS

In light of the oil situation affecting the country, Argentina enacted reforms to incentivize foreign companies to invest in the oil industry. To this end, the Argentine government amended the hydrocarbon laws in January of 2007 granting the provinces the constitutional rights to explore and exploit the oil resources within their territories.<sup>12</sup> While the federal government still ensures the domestic supply of oil is first accounted for, the change in law has enticed investors to enter Argentina. Foreign firms can now negotiate the terms of exploration directly with local governments, allowing for a greater opportunity for investors to venture, and benefit from Argentina's natural resources.

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<sup>12</sup> Latin Lawyers, "A Protected Bay for Energy Investors," (Argentina: 2009) [www.crowell.com/documents/New-Argentine-Hydrocarbons-Law-Protected-Bay-for-Energy-Investors-Latin-Lawyer-Arif-Ali.pdf](http://www.crowell.com/documents/New-Argentine-Hydrocarbons-Law-Protected-Bay-for-Energy-Investors-Latin-Lawyer-Arif-Ali.pdf).

The decentralization process has created an incentive for provincial states to encourage exploration and multiple foreign countries have started taking advantage of this benefit. In 2009, Chinese oil companies, for example, invested \$136.7 million in Argentine oil exploration. Hopeful to tap into potential oil wells, the Chinese company Sinochem also purchased Occidental Petroleum Corp's operations in Argentina for \$2.45 billion.<sup>13</sup> Finally, China's CNOOC and Bidas, agreed to pay \$7 billion for BP's share of Argentina's Pan American Energy Company.<sup>14</sup> The Chinese are interested in partnering with resource providers in South America with the goal of tapping into their vast natural resources.

Repsol Oil Company, which owns 55% of YPF, is also investing in offshore and land exploration. Furthermore, the three biggest oil firms in South America, Enarsa, YPF, and Enap Sipepetrol, are investing \$150 million in the Argentine oil and gas industry for offshore exploration activities in the southern parts of the country. Similarly, Petrobras Energia, a subsidiary of the Brazilian owned Petrobras, declared it would invest \$500 million to develop hydrocarbon resources in the country's southern province of Santa Cruz. Lastly, in 2010, Enarsa Oil Company launched a joint offshore oil exploration initiative with Repsol-YPF to dig oil wells in deep and ultra deep waters.<sup>15</sup>

The French oil company Total, and American companies such as Apache, Exxon Mobil and EOG Resources, are also

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<sup>13</sup> Leslie Hook and Jude Webber, "China Taps into Argentina's Oil Prospects," *Financial Times*, December 12, 2010.  
<http://www.ft.com/intl/cms/s/0/7acec448-0626-11e0-976b-00144feabdc0.html#axzz1Vzv1w4wx>.

<sup>14</sup> Ibid.

<sup>15</sup> Enarsa Energia, [www.enarsa.com.ar](http://www.enarsa.com.ar).

making major investments in the Argentina oil industry, especially in the country's shale fields.<sup>16</sup>

## **RECENT DISCOVERIES AND THE POTENTIAL OF SHALE OIL**

In addition to the amendment in the hydrocarbon laws, recent oil discoveries have also worked in favor of Argentine oil investment. In 2008, for instance, Pan American Oil, a British Petroleum controlled company and the second largest oil producer in the world, discovered up to 100 million barrels of oil in the Chubu and Escalante regions of Southern Argentina. As a result, the company renegotiated its contract to remain in the country for an additional 10 years as long as there is continued investment in exploration.<sup>17</sup>

The greatest discovery of all was found in the Loma la Lata in the Nuequeño Province.<sup>18</sup> More than 150 million barrels of shale oil, a crude oil substitute, was discovered by YPF early this year. This discovery is the country's largest oil discovery in 20 years, and is the equivalent of 35% of YPF's oil reserves and 6% of the country's general reserves.<sup>19</sup> Following the discovery, a U.S. Department of Energy report revealed Argentina has a significant amount of natural gas trapped in shale rock, more than all of Europe, which could

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<sup>16</sup> Clifford Krauss, opp. cit. July 4, 2011.

<sup>17</sup> Oil Voice, "Pan American Reports Significant Oil Discovery in Argentina," (January 27, 2008) [http://www.oilvoice.com/n/Pan\\_American\\_Reports\\_Significant\\_Oil\\_Discovery\\_in\\_Argentina/05f559a7.aspx](http://www.oilvoice.com/n/Pan_American_Reports_Significant_Oil_Discovery_in_Argentina/05f559a7.aspx).

<sup>18</sup> Ramón Roca, "Análisis: Argentina y Brasil son las Garantías del Futuro para Repsol," *Diario Negocio*, May 11, 2011. [www.diarionegocio.es/empresas/analisis-argentina-y-brasil-son-las-garantias-futuro-repsol-20110511](http://www.diarionegocio.es/empresas/analisis-argentina-y-brasil-son-las-garantias-futuro-repsol-20110511).

<sup>19</sup> Petro Industry News, opp. cit. May 11, 2011.

transform the supply of oil to the region.<sup>20</sup> Consequently, YPF announced plans to install an additional 17 oil wells, furthering its oil exploration in the area.<sup>21</sup>

Oil experts are touting the discovery and potential use of shale oil in the world as revolutionizing the oil industry. “We are going to see much wider distribution of oil reserves, to the benefit of the whole world. It could rerank countries, in which the very needy might become self-sufficient,” stated Fadel Gheit, a managing director and senior oil analyst at Oppenheimer & Company.<sup>22</sup> For Argentina, which has discovered vast reserves of shale oil, and likely has more to be found, this can change the outlook of its oil industry. “The importance of this discovery goes well beyond the volume,” said Sebastián Eskenazi, YPF’s chief executive as he announced the finding of the 150 million barrels in the province of Neuquén. “The important thing is it is something new: new energy, a new future, new expectations.”<sup>23</sup>

However, Argentina’s new discovery of shale oil also poses the challenge of creating innovative ways to retrieve this resource, and the question whether the country can capitalize on these reserves. Shale oil, an organic fine-grained sedimentary rock, might provide hope for the future oil production in the country, but being a non-conventional resource, Argentine engineers and geologists are challenged with how to effectively tap and retrieve this resource.<sup>24</sup> The

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<sup>20</sup> Energy-Pedi News, “Argentina: YPF makes big shale oil find at its Loma la Lata property in Neuquen province,” *Reuters*, May 10, 2011. [www.energy-pedia.com/article.aspx?articleid=145340](http://www.energy-pedia.com/article.aspx?articleid=145340).

<sup>21</sup> Petro Industry News, opp. cit. May 11, 2011.

<sup>22</sup> Clifford Krauss, opp. cit. July 4, 2011.

<sup>23</sup> Ibid.

<sup>24</sup> Martin Belvis, “Shale Oil: Un recurso no convencional que puede darle a Neuquén más petróleo,” *Rio Negro Online*, January 29, 2011. [www.l.rionegro.com.ar/diario/energia/2011/01/29/27312.php](http://www.l.rionegro.com.ar/diario/energia/2011/01/29/27312.php).

techniques to extract it include hydraulic fracturing, in which high-pressure fluids are used to break up shale rock to release the oil, and horizontal drilling allows the tapping of thin layers of oil-filled shales in the rocks. Oil experts caution that geologists recently began studying shale fields and to date can only make educated guess on its potential.<sup>25</sup>

Since the discovery, YPF has deployed engineers to Houston, Texas to learn how to extract and refine shale oil to be able to maximize those resources. The United States is at the forefront of the technology to extract shale oil. “I am pretty confident that during the next 10 years the best oil volume growth story in the world will be the U.S.,” said Aubrey K. McClendon, chief executive of Chesapeake Energy, a major domestic shale oil producer. In fact, similar fields to those in Argentina located in North Dakota and Texas are already beginning to produce oil.<sup>26</sup>

## **CONCLUSION**

Argentina has the potential to become a significant oil exporter over the next decade. The untapped oil reserves the country boasts, combined with the increase in foreign investment capital, support this assumption. The amendment of the hydrocarbon laws in 2007 have been instrumental in creating and attracting much needed foreign investment capital, as well as facilitating the conditions necessary to explore oil.

For Argentina to be successful this time around, a long-term commitment is necessary by both the authorities and foreign investment companies. Oil projects in general take years to materialize and return a profit. Moreover, in the case of Argentina, a number of vast reserves recently discovered are

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<sup>25</sup> Clifford Krauss, *opp. cit.* July 4, 2011.

<sup>26</sup> *Ibid.*



of shale oil, posing the question whether it can actually bring in the technology and the knowhow to refine, utilize and export this resource.

The discovery of shale oil presents Argentina with the opportunity to specialize in technological advancements to develop this new potential energy source. More importantly, it places the country in a position to become a primary oil exporter in the region. In light of this, it is imperative for the country to invest in research in this specific field in order to become a key oil export country.

With Argentina sitting on top of an abundance of natural resources, multiple countries are interested in developing key partnerships and providing for additional foreign investment. In this regard, a strategic relationship between the U.S. and Argentina is critical, particularly if the U.S. aims to expand its oil suppliers. In 2010, the U.S. already invested \$1.2 billion in importing mineral fuel and oil from Argentina,<sup>27</sup> and as described above, U.S. companies are placing their bets in the country's promising oil shale fields. With the ongoing political instability in the Middle East, as well as the United States' rocky relationship with Venezuela, Argentina could become an important reliable oil partner in the future.

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<sup>27</sup> Office of the United States Trade Representative-Executive Office of the President, "Argentina Trade Facts," (United States: 2010) [www.ustr.gov/countries-regions/americas/argentina](http://www.ustr.gov/countries-regions/americas/argentina).

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## **ABOUT THE AUTHOR**

**Erich de la Fuente** is a Research Scientist at ARC/FIU. He is an expert on strategic communications and public affairs, counseling organizations operating in the U.S., Latin America, Africa, the Middle East and the former Soviet Republics. Mr. de la Fuente has led proactive international public awareness campaigns, developed crisis management plans and designed comprehensive communication strategies and internal communications programs for a variety of clients around the world. He has also been a lead communications consultant for a variety of anti-corruption, good governance and rule-of-law projects in various countries around the world, including Armenia, Georgia, Ukraine, Slovenia, Colombia, El Salvador, Paraguay, Jordan, and Rwanda. Mr. de la Fuente holds a Master's in Latin American Studies from Georgetown University (Washington, D.C.) and a Bachelor's Degree in International Relations from Florida International University (Miami, FL). Mr. de la Fuente is fluent in English, Spanish, Portuguese and Italian, and proficient in Russian.

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