

Brain Drain from Venezuela's Petroleum Giant, PDVSA

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Abstract

This paper examines the historical context and social forces that shape the emigration of professionals from Venezuela's government-owned oil company, Petróleos de Venezuela, S.A. (PDVSA), from 1999 to the present. While building on previous studies on brain drain from Venezuela and on the international migration of former PDVSA workers, this analysis is focused on the United States, Canada and Colombia.

Introduction¹

This paper examines the historical context and social forces that shape the emigration of professionals from Venezuela's government-owned oil company, Petróleos de Venezuela, S.A. (PDVSA), from 1999 to the present. Brain drain refers to large-scale emigration of skilled (usually defined as a college degree or otherwise significant expertise) individuals. This paper builds upon previous studies on brain drain from Venezuela and on the international migration of former PDVSA workers in the last decade.² The intent of this paper is to further advance our knowledge of the PDVSA case by examining the Venezuelan exodus to the United States, Canada and Colombia more systematically and by incorporating new data and theoretical discussions that are pertinent to the analysis of brain drain from Venezuela and particularly the exodus from PDVSA.

The approach most often employed to describe the factors shaping the Venezuela exodus is based on "push" and "pull" factors. That approach, while convenient at times, does not allow us to grasp the complexity of the forces shaping this migration.³ In this paper, I emphasize contextual (domestic, bilateral and regional) as well as behavioral factors, such as motivations to migrate. This paper draws on social network analysis to present an exploration of the forces and structural changes that have been present in the making of the Venezuelan exodus and its perpetuation in recent years. In addition, I touch on theoretical issues that are pertinent to this case and merit future attention.

Venezuela and Oil

Venezuela's oil reserves are among the world's largest, and PDVSA's refining capacity has been estimated at 3.1 million barrels per day (b/d).⁴ In 2011, the company reported production of about 3 million b/d and revenues of US\$124.8 billion.⁵ Oil accounts for about 95% of Venezuela's export earnings, 45% of its federal budget revenues and 12% of its GDP. Therefore, high oil prices bring a windfall to Venezuela.⁶ Oil prices rose from about US\$60/barrel in December 2005 then first crossed the US\$100/barrel mark in February 2008, peaking at around US\$145/barrel that July. In October 2008, prices plunged to US\$36/barrel but recovered to US\$60/barrel in May 2009. Prices exceeded US\$100/barrel in May 2011 and have remained high since (generally over US\$80/barrel).

PDVSA had been considered proof that a state-owned enterprise could be run efficiently in Venezuela,⁷ but as then president Hugo Chávez began to use it as the source for his "Bolivarian" agenda, things changed in terms of the company's production and effectiveness. In 2002, the Venezuelan government announced that 10% of PDVSA's annual investment budget would go to social programs. Later regulation created PDVSA "subsidiaries" for this purpose. In 2011, PDVSA spent US\$30 billion, about 24% of the company's revenues, on various programs not directly related to the oil business.⁸ Monies were funneled through the National Development Fund (Fonden), which is not included in the government's budget.⁹ The media and other sources served as frequent documenters of how oil revenues from Venezuela were instrumental in its aggressive foreign policy agenda.

Historical Context for Migration

A complex set of factors leads to brain drain. These usually include political and/or economic factors. During the late 1970s (a time of high oil prices), Venezuela implemented

domestic industrial programs and its oil industry was consolidated. The country experienced great immigration from 1950 to 1959 and 1970 to 1979. Brain drain existed, however, as evidenced by the formation of the Fundación Gran Mariscal de Ayacucho (FGMA) in 1975. The FGMA grants Venezuelan students scholarships to universities throughout the world if they commit to return and work in Venezuela.

Oil prices were weak during most of the 1980s, and for other reasons beyond the scope of this paper, Venezuela was close to an economic collapse by the end of the decade. When Carlos Andrés Pérez was elected president in 1989, Venezuela's external debt was unsustainable, the fiscal deficit was out of control, there were food shortages and credit was limited.

Under Perez, the government decided to handle these problems with the assistance of the International Monetary Fund and a massive "shock program," at the center of which was a major devaluation that reduced the value of the national currency by two-thirds. The plan included a major fiscal adjustment, a substantial increase in the prices of gasoline and public transportation, reductions of import tariffs and a large increase in interest rates to reflect the true cost of credit.

On February 26th, the government announced that the price of public transportation would be increased by 30% for the next 90 days. The next morning, demonstrations began in the poor suburbs of Caracas. By afternoon there were massive riots across the capital and in all major Venezuelan cities. Rioting and looting continued for five days. At the end of the fifth day of violence, more than 300 people had been killed. As it is known today, the "Caracazo" event was the turning point in modern Venezuelan history.

The Pérez administration never recovered from the "Caracazo" and Hugo Chávez attempted a coup d'état in February 1992. Although he did not succeed, he became well known. After that, convinced that the corruption was at the center of the country's misfortunes, large

segments of the population considered Chávez a hero, and he was later elected to be president. His government immediately began implementing structural changes based on the enactment of a new constitution that gave the president sweeping powers and created the conditions for him to pass numerous other laws, from taxing bank withdrawals to making agrarian reforms. These changes polarized Venezuela. Citizens from the middle and upper classes demonstrated against the regime, while a large segment of the poor held counterdemonstrations.

In February 2002, PDVSA's board of directors criticized the government's energy policies and the government retaliated, appointing a new board. In protest, trade unions and Venezuela's largest business associations struck on April 9, 2002. Two days later, an anti-Chávez demonstration involving an estimated one million people reached the presidential palace. Gunmen wounded more than 200 demonstrators and as many as 19 people died. A coup attempt against Chávez ended with his resignation and he was replaced, but (with the help of military loyalists) he resumed the presidency on April 14, 2002. Venezuela's Supreme Court decided against a referendum on Chávez's rule, prompting opposition leaders to call for a nationwide strike. On December 2, 2002, millions of workers walked off the job. Oil exports nearly stopped, and oil executives defied the court's order to return to work.

Using remaining PDVSA workers and importing talent from countries sympathetic to him, the government broke the strike after 63 days. The government appointed new management, which fired the strikers—estimates range from 17,000-20,000 people fired—ordering them to vacate PDVSA housing properties and canceling their benefits. Strikers were accused of destroying equipment and arrest warrants were issued for several former managers.¹⁰ The dismissed employees' names were published in the national newspapers and posted on the Internet.¹¹

Making Sense of Venezuela's Recent Emigration Trends

Prior to the 1990s Venezuelans did not have a tradition of emigrating and there were attractive opportunities in their own country,¹² but Venezuela later became a net exporter of skilled workers. As mentioned, there are numerous theories on the reasons for migration but motivations are typically economic and/or political. In her 2011 study of skilled migration from the Caribbean, Natasha Parkins found that the major motivations were: “1. Crime, violence, lawlessness and general societal indiscipline, 2. Occupation and skill mismatch, 3. Lack of economic opportunities, and 4. Lack of social opportunities.”¹³ While it is beyond the scope of this paper to examine each of these factors, the trends in crime and violence in Venezuela have been widely documented and can provide an example of the motivations for recent emigration from the country.

For example, *The New York Times* reported that over 16,000 people were murdered in Venezuela in 2009, while in Iraq, a country with a similar population, 4,664 civilians died the same year.¹⁴ A report by the U.S. Department of State noted that: “in 2010, Caracas became the deadliest capital in the world [...] averaging one murder every hour.”¹⁵ The Venezuelan Violence Observatory wrote that: “Murders have become a way of attacking property, a mechanism for the resolution of personal disputes or problems between neighbors, and a way to apply private justice. [...] Violence against police personnel has also increased substantially [...] and] in 2012 one policeman died every day.”¹⁶ In a survey of Venezuelan enterprises sponsored by the World Bank, the greatest concern for over 30% of businesses was “crime, theft and disorder.”¹⁷

A study of former PDVSA employees by Niebrzydowski and De la Vega (2010) determined that the major push factors for migration were violence and politics.¹⁸ This is

supported by the PDVSA workers' eligibility for asylum in several countries. In the U.S., for example, the number of Venezuelans seeking asylum more than tripled after the oil strike, from 350 asylum applicants in 2003 to 1,257 in 2004 (**Error! Reference source not found.**).

Table 1: Number of Persons Granted Asylum in the United States (Affirmatively and Defensively) From Selected Countries, Fiscal Years 2003-2011 (by Number of Asylees for 2011)

Country	2003	2004	2005	2006	2007	2008	2009	2010	2011
China, PR	6,009	4,349	5,247	5,599	6,380	5,493	6,159	6,678	8,609
Venezuela	350	1,257	1,105	1,359	1,153	1,063	585	648	1,107
Haiti	1,733	2,316	2,935	2,992	1,646	1,257	1,006	833	878
Colombia	4,558	4,372	3,365	2,960	2,125	1,660	1,005	592	538

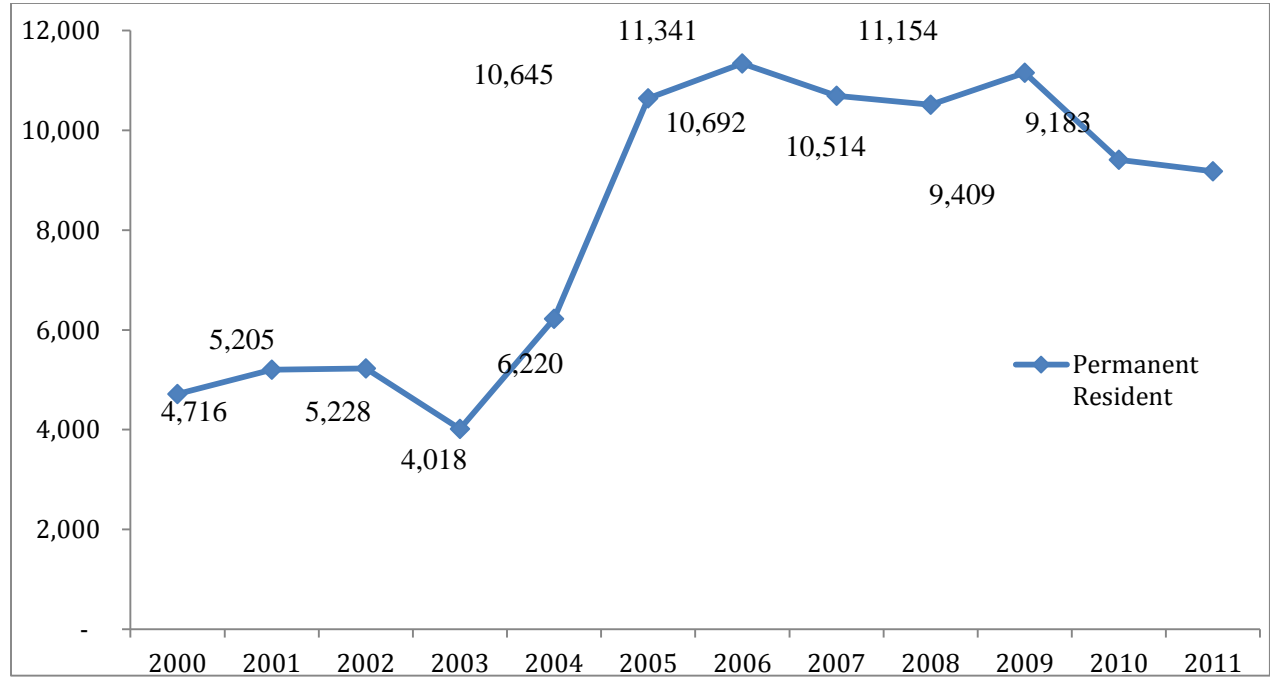
Sources: U.S. Department of Homeland Security 2012, *Yearbook of Immigration Statistics 2011*, U.S. Gov. Printing Office: Washington, D.C., Tables 17, 19.

Brain drain implies a negative effect, as resources are invested in educating people who then work in other countries. Further, many developed countries use immigration laws and programs to entice skilled migrants. The U.S. began doing so in 1952, and as of 2006, about 500,000 skilled immigrants competed for 120,000 employment-based permanent visas.¹⁹ The U.S. also granted legal resident status for employment-based preferences to 124,384 persons in 2011.²⁰ In Canada, a Federal Skilled Worker visa covers 29 skilled positions—including oil/gas drilling and service supervisors.²¹ A maximum of 10,000 such visas are granted within a 12-month period, and on May 8, 2012, Citizenship and Immigration Canada announced that the cap for 2011-2012 had been reached.²² In fact, most migrants from developing countries do emigrate to high-income countries. Recent World Bank estimates indicated that among Latin American and Caribbean migrants, 85% go to high-income OECD countries.²³

The U.S. receives a high percentage of Venezuela's migrants. Graph 1 shows the number of Venezuelans obtaining legal permanent resident (LPR) status between 2000 and 2011, which

shows an upward trend since 2000 (Chávez began his first term of office in 1999). Notably, approvals for LPR status for Venezuelan-born persons increased from 4,018 in 2003 to 11,341 by 2006.

Graph 1: Number of Persons Who Were Born in Venezuela and Obtained U.S. Legal Permanent Resident Status for Fiscal Years 2000-2011

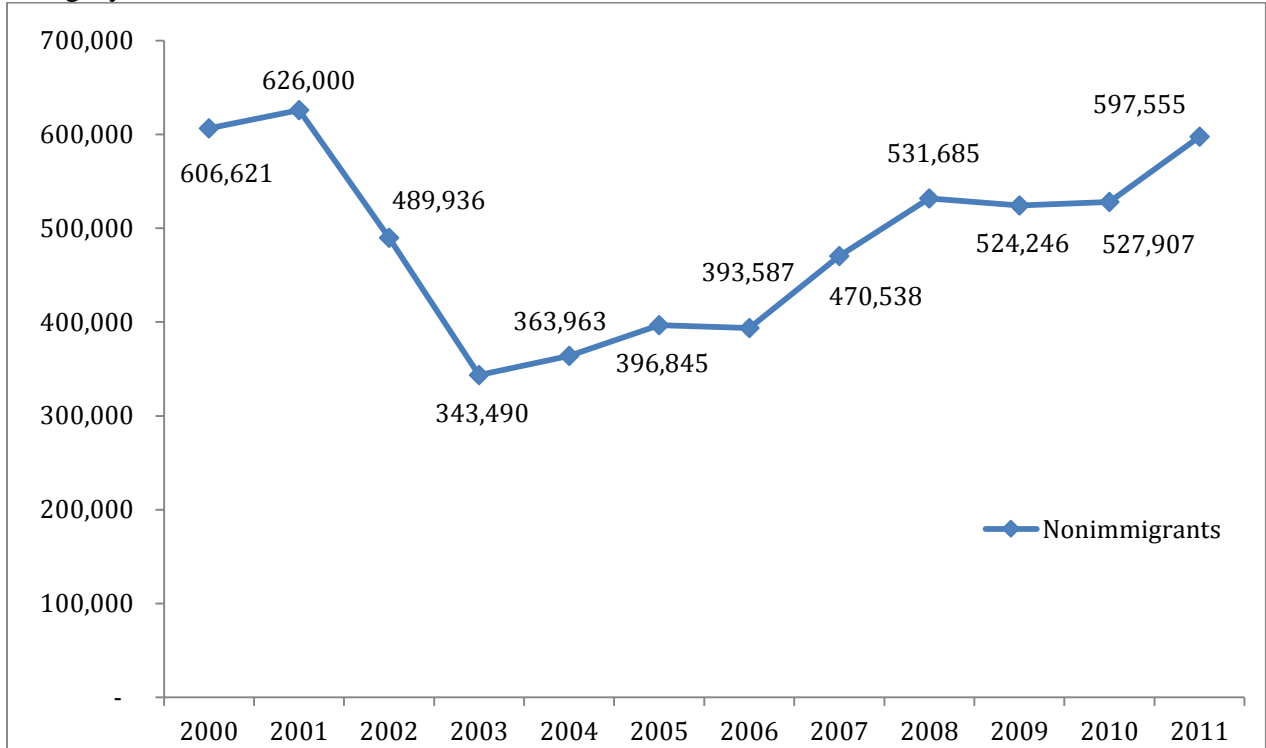


Sources: U.S. Department of Homeland Security 2012, *Yearbook of Immigration Statistics 2011*, U.S. Gov. Printing Office: Washington, D.C., Table 3.

In addition, it is well established that many workers do not move as permanent residents and that many of them launch strategies to stay as permanent residents by adjusting their status from temporary employment-based visas and other types of visas.

Given the importance of these “nonimmigrants” to understanding migration trends, I show the number of nonimmigrants admitted into the U.S. from Venezuela between 2000 and 2011 in Graph 2.²⁴

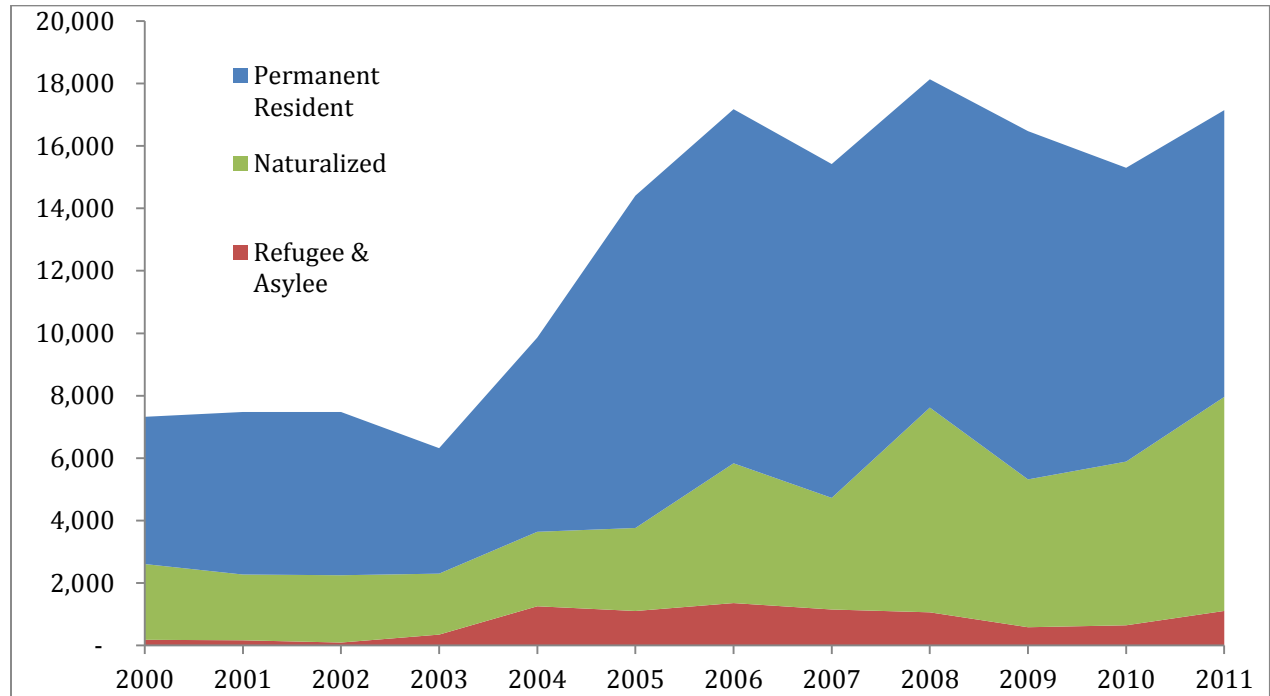
Graph 2: Nonimmigrant Admissions (I-94 Only) for Persons Born in Venezuela, by Selected Category of Admission for Fiscal Years 2000-2011



Sources: U.S. Department of Homeland Security 2004, *Yearbook of Immigration Statistics 2003*, Table 23. U.S. Department of Homeland Security 2005, *Yearbook of Immigration Statistics 2004*, Table 23. U.S. Department of Homeland Security 2012, *Yearbook of Immigration Statistics: 2011*, Table 28.

By adding the persons in the U.S. of Venezuelan birth that became nationalized to those granted asylum and those receiving LPR status, I show the number of Venezuelans accepted to reside in the U.S. in Graph 3. The information indicates an important upward trend since 2003, a year after the general strike.

Graph 3: Persons Who Were Born in Venezuela and Entered the U.S. as Refugees/Asylees, Those Who Obtained Legal Permanent Resident Status and Those Who Were Naturalized in Fiscal Years 2000-2011



Sources: U.S. Department of Homeland Security 2012, *Yearbook of Immigration Statistics 2011*, Data for nonimmigrants, Table 26; for legal permanent residents, Table 3; for refugees and asylees, Table 17 for those admitted affirmatively and Table 19 for those admitted defensively. Note: Nonimmigrant totals are for I-94 only.

There were also 10,265 Venezuelan immigrants living in Canada as of the 2006 census and of those, 2,840 entered before 1991; 1,450 from 1991-1995; 1,715 from 1996-2000 and 4,260 from 2001-2006.²⁵ A similar and even more dramatic increase has also taken place in the rate of Venezuelan immigration into Colombia. In 2004, Colombia issued identity cards to two Venezuelans every two weeks and the 2010 average was 162 cards per week. In June 2011, the total was 230 per week (an average of 46 per day).²⁶

An estimated one million Venezuelans have emigrated during the time that Chávez was president, and 9,000 of those are Venezuelan scientists who came to the U.S. (compared with 6,000 remaining in Venezuela).²⁷ In 2010, Claudio Bifano reported that 61% of Venezuela's accredited researchers were ages 40 to 49, and only 3.2% were under 30 (while half of

Venezuelans were under twenty years old).²⁸ Young people reported leaving for better job opportunities and income, but also to find improved living conditions.²⁹

In the study by Niebrzydowski and De la Vega (2010), former PDVSA employees listed the welcome that they received, either because of their qualifications and/or as exiles seeking political asylum, and the opportunity for good jobs as the most important pull factors.³⁰ This is confirmed by reports that say in Alberta, “Workers looking to find oilfield careers [...] will find as much work as they can handle for a very long time.”³¹ The aforementioned study also showed that networking with former coworkers, friends and family helped the migrating workers find new jobs abroad and that most migrants had used such networks.³²

Applicability of Migration Theories

As I covered more thoroughly in early pages, there were push factors that existed before the Chávez regime (e.g., wage differentials), while other push factors (e.g., acute social polarization and rampant violence) developed after he came to power.³³ There were also pull factors that existed before the period under consideration here (e.g., international demand for talented professionals), and others that became more pronounced (e.g., worldwide demand estimated at 60,000 new oil and gas workers needed in the next decade just for the tar sands opportunity).³⁴

Although, the push/pull factor approach allows us to shed light on migration trends from Venezuela, several migration theories could provide insights into aspects of the exodus and the perpetuation of the migration process. Elaboration on each applicable theory is beyond the scope of this paper, but below I refer to some of them that I consider relevant to this case. My comments use theory definitions offered by Douglas Massey et al. in the 1994 “An Evaluation of Migration Theory: The North American Case” as a foundation.

According to neoclassical economic theory, workers seek to maximize their long-term earnings by comparing observed pay for their skill set factored by the probability of employment and moving to the location where the result would be greatest.³⁵ For 2011, the CIA Factbook lists Venezuela's unemployment rate at 7.3-8.1%—lower than the U.S. (9.1%), Canada (10.8%), and Colombia (10.8%)—although real wages have been severely eroded given Venezuela's commercial bank lending rate (19.89%) and inflation nearing 30%.³⁶

Violence, political instability and the takeover of personal assets pose threats to civil rights and, as Frédéric Docquier states, “One of the potential explanatory variables for migration is the sociopolitical environment at the country of origin.”³⁷ However, in analyzing El Salvador during its civil war, Richard C. Jones found that political violence was responsible only indirectly (through the economic hardships it produced) for causing emigration.³⁸

The new economics of migration theory, which pays greater attention to the behavior of households than most labor migration theories, argues:

International migration stems from failures in other markets that threaten the material well-being of households and create barriers to their economic advancement. [...] Given the relatively higher wages in developed countries, international migration offers a particularly attractive and effective strategy for minimizing risks and overcoming capital constraints.³⁹

This argument has explanatory value for the case of the migration of PDVSA workers and entrepreneurs because in the study by Niebrzydowski and De la Vega (2010), immigrants listed violence and economic deterioration in Venezuela as motivations for leaving.

Network theory attributes the perpetuation of the migration process to “sets of interpersonal ties that connect migrants, former migrants and non-migrants in origin and destination areas through ties of kinship, friendship and shared community origin.”⁴⁰ Networks are being built as PDVSA professionals settle in significant numbers in the U.S., Canada and

Colombia and then draw other immigrants to join them. Current U.S. immigration policies facilitate such networking as those who become U.S. residents are entitled to bring their family who can in turn help other family members immigrate.

The segmented labor market theory, which considers immigration as a demand-driven process, also fits the PDVSA situation. In this particular case, the segmented labor market theory and the new economics of migration theory complement each other. Immigration is driven by demand built into the economic structure of advanced industrial societies,⁴¹ and many countries need the oil industry expertise the Venezuelans have to offer. However, emigration from Venezuela is not a typical case of labor migration, hence the need to consider frameworks in which the role of political changes is examined more carefully.

Effects of Brain Drain

At PDVSA, recovery from the strike took months. In 2006, Chávez announced that Venezuela would take a majority share in PDVSA's strategic alliances with foreign oil companies (worth US\$30 billion and 600,000 b/d capacity at that time). This caused outside investors to withdraw⁴² and left PDVSA almost entirely responsible for funding those operations. Further, in 2012, *El Universal* reported that although PDVSA's Annual Report and Accounts showed that the company had "increased investments in core areas (exploration, production and refining), the injection of funds for social development projects was 80% higher than PDVSA's operation investment."⁴³ PDVSA has suffered frequent and major incidents since 2002 that have affected operations, such as the explosion and fire at the Amuay refinery where as many as 26 people died, and "experts say mismanagement, electrical faults and lack of maintenance have been the most frequent causes."⁴⁴ Between the loss of expertise and the deflection of revenues,

many experts feel that the PDVSA's "capacity to operate efficiently has been deeply eroded, perhaps irreversibly."⁴⁵

There is also some question whether Venezuela's increased oil revenues and its deflection to social programs have had the stated effect. While some sources say that the poor are better off, the IMF calculated the poverty rate in 2011 at 31.9% (it was 33.6% in 2007).⁴⁶ While IMF data show that per capita income rose in 2011, consumer prices jumped 27.6%. In 2013, expected inflation could be over 40% as an effect of the recent devaluation (46.5%) of the Venezuelan currency (bolivars) from Bs. 4.3/US\$ 1.00 to Bs. 6.30/US\$ 1.00. The IMF report noted that: "Concerns about upside risks to inflation are particularly acute in Venezuela and Argentina, where policies have not been tightened noticeably and inflation continues at high levels."⁴⁷

In an opinion survey by the World Economic Forum, executives were asked to rate how well their country attracted and retained the brightest and most talented people. On a scale of 1-7, Venezuela scored 2.1—better than only 7 (out of 139) countries.⁴⁸ In an analysis based on the U.S. American Community Survey for 2006-2008, Lourdes Gouveia (2011) provides evidence that such desirable people have emigrated. She noted that 93% of Venezuelans in the U.S. who were 25 and older were high school graduates, and half were also college graduates. She also noted that Venezuelans reported a median household income of \$52,000, and Venezuelan workers tended to be in occupations associated with high levels of socioeconomic standing (48.6 occupational socioeconomic index).⁴⁹

The former PDVSA employees also find a welcome in Canada because extracting the heavy oil of Venezuela's Orinoco region uses techniques applicable to the Alberta oil sands.

Reflecting this, “many [immigrants] are oil-field veterans who have taken positions in Canadian refineries at salaries topping \$100,000 a year.”⁵⁰

In Colombia, Luis Giusti (an ex-PDVSA president) estimated that there could now be 1,300 oil workers who have relocated there from Venezuela.⁵¹ Humberto Calderón Berti, president of Vectra (one of three Colombian oil companies created by ex-PDVSA executives) notes: “Colombia was delayed many years due to a lack of human capital, which has now arrived. To make a good petroleum engineer takes 15-20 years, and those that arrived in Venezuela were persons with 30 or more years of experience.”⁵² As Ronald Pantin, CEO of Pacific Rubiales Energy Corporation (also ex-PDVSA), said: “When we came here in 2007, the company produced 24,000 barrels, and by the end of the year we were producing 275,000 barrels. Colombia then produced 560,000 barrels per day and today produces close to 900,000.”⁵³

Conclusion

While Venezuela has typically had positive net immigration, the loss of its skilled professionals has been a main factor affecting the country in recent years. The concern about brain drain is not new in Venezuela as evidenced by the government’s creation of the FGMA scholarship program in 1975 to subsidize education abroad under the condition that graduates return to work in Venezuela. Brain drain was also ameliorated during the 1980s and 1990s by a boom in the oil industry. However, the great economic, political and social transformations that have led to brain drain in recent years have brought new quantitative and qualitative dimensions to the process. By focusing on migration data and specifically on brain drain from PDVSA, this paper illustrates this point.

PDVSA was a profitable, relatively autonomous company offering attractive careers for many skilled professionals. Direct interventions by the Chávez government created an increasingly adversarial relationship with PDVSA executives, causing them (and workers) to join the 2002-2003 general strike. Afterward, many thousands of PDVSA workers were fired, ostracized and unable to obtain suitable jobs. The context for their migration also included political instability, crime and other factors that were examined in this paper.⁵⁴ In the U.S., the Venezuelans that have emigrated are well educated, and former PDVSA workers have been instrumental in extracting Canadian oil while others have accelerated oil production in Colombia, providing good examples of the effects of brain drain.

Government programs that attract professionals and investors from the oil industry, combined with social networks that further increased awareness about labor market conditions elsewhere, facilitated the migration process and its perpetuation. Last, but not least, the individual ambitions of highly motivated professionals and entrepreneurs who are concerned with the future of their careers and the stability of their families have been instrumental aspects of the migration process.

Endnotes

¹ This paper was created under the direction of Dr. Margarita Rodriguez as an assignment for her Migration and Development course at the University of Miami.

² Niebrzydowski, S. and I. De la Vega. "Venezuela, Política y Emigración: El Caso de la Industria Petrolera en 2002 y 2003." [Venezuela, Politics and Emigration: The Case of the Petroleum Industry in 2002 and 2003]. In *La Diáspora del Conocimiento* [The Diaspora of Knowledge]. Venezuela: Academia de Ciencias Físicas, Matemáticas y Naturales, 138, (2010). (Hereafter cited as *La Diáspora*).

³ For example, in my first approach to this phenomenon as a graduate student, I emphasized the organization of factors shaping migration following the "push-pull" approach. Even though this paper draws to a great extent from that study, which already contained elements that transcended that perspective, I further polish the theoretical discussion and process new data in this paper.

⁴ Mares, D. R. and N. Altamirano. *Venezuela's PDVSA and World Energy Markets: Corporate Strategies and Political Factors Determining Its Behavior and Influence*. The James A. Baker III Institute for Public Policy, Rice University, 15, (2007). Retrieved from: http://www.bakerinstitute.org/programs/energy-forum/publications/docs/NOCs/Papers/NOC_PDVSA_Mares-Altamirano.pdf. (Hereafter cited as Mares and Altamirano).

⁵ Ramírez, Rafael. "Presentation of Management and Results of PDVSA in 2011." (2012). Retrieved from: http://www.pdvsa.com/index.php?tpl=interface.en/design/readmenuprinc.tpl.html&newsid_temas=111.

⁶ Central Intelligence Agency (CIA). Venezuela. The World Factbook. Retrieved from: <https://www.cia.gov/library/publications/the-world-factbook/geos/ve.html>.

⁷ Mares and Altamirano, (2007): 1-2.

⁸ Vyas, K. "With Chavez Victory, PDVSA to Continue Juggling Business and Social Duties." *Rigzone* (Dow Jones newswire), (2012). Retrieved from: http://www.rigzone.com/news/oil_gas/a/121217/With_Chavez_Victory_PdVSA_to_Continue_Juggling_Business_and_Social_Duties.

⁹ Alvarez, C. J. and S. Hanson. *Venezuela's Oil-based Economy*. Council on Foreign Relations. (2009). Retrieved from: <http://www.cfr.org/economics/venezuelas-oil-based-economy/p12089>.

Fonden, the largest of the Venezuelan state's investment fund, was established in 2005.

¹⁰ Many industry reports attributed the problems to the difficulties normally associated with idling production. The techniques needed for extraction of Venezuela's heavy oil would make its wells particularly sensitive to shutdowns.

¹¹ Immigration and Refugee Board of Canada. "Venezuela: Current Situation of Employees of the State Oil Company Petróleos de Venezuela (PDVSA) Who Were Discharged Following Their Participation in Strikes During December 2002 and April 2003." Refworld, UNHCR (The UN Refugee Agency), (2004). Retrieved from: <http://www.unhcr.org/refworld/docid/41501c7215.html>.

The Immigration and Refugee Board of Canada, as part of their consideration whether former PDVSA employees might be eligible for asylum or refugee status, documented these events from the aftermath of the strike, primarily from reports in Venezuela's main newspaper, *El Universal*.

¹² Bifano, C. "Breves Consideraciones Sobre el Tema y Presentación del Programa José María Vargas [Brief Considerations on the Theme and Presentation of the José María Vargas Program]." *La Diáspora*, (2010): 2-3.

¹³ Parkins, N. "Push and Pull Factors of Migration." *American Review of Political Economy*, 8, No. 2, (2011). Retrieved from: <http://arpejournal.com/ARPEvolume8number2/Parkins.pdf>.

¹⁴ Romero, S. "Venezuela, More Deadly Than Iraq, Wonders Why." *New York Times*, (2010). Retrieved from: http://www.nytimes.com/2010/08/23/world/americas/23venez.html?pagewanted=all&_r=0.

¹⁵ Bureau of Diplomatic Security. "Venezuela 2011 Crime and Safety Report." Overseas Security Advisory Council (OSAC), U.S. Department of State, (2011). Retrieved from: <https://www.osac.gov/pages/ContentReportPDF.aspx?cid=11224>.

¹⁶ El Observatorio Venezolano de Violencia (OVV) [Venezuelan Violence Observatory], trans. author. "Informe 2012 OVV. [OVV 2012 Report]." (2012). Retrieved from: <http://www.observatoriodeviolencia.org.ve/site/noticias/78-informe-2012-ovv.html?start=1>.

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- ¹⁷ International Finance Corporation, World Bank Group. *Enterprise Surveys: Venezuela Country Profile*. (2010). Retrieved from: <http://www.enterprisesurveys.org/~media/FPDKM/EnterpriseSurveys/Documents/Profiles/English/venezuela-2010.pdf>.
- ¹⁸ Niebrzydowski and De la Vega, (2010).
From their qualitative study of PDVSA, including interviews with men and women from three populations: still at PDVSA, pro-government; fired strikers; new hires replacing strikers. Many ex-employees refused the interview for fear of political repercussions.
- ¹⁹ Wadhwa, V., G. Jasso, B. Rissing, G. Gereffi, and R. Freeman. *Intellectual Property, the Immigration Backlog, and a Reverse Brain-Drain: America's New Immigrant Entrepreneurs, Part iii*. Ewing Marion Kauffman Foundation, Duke University, Harvard Law School and New York University, (2007).
Retrieved from: http://www.cggc.duke.edu/documents/IntellectualProperty_theImmigrationBacklog_andaReverseBrainDrain_003.pdf.
- ²⁰ U.S. Department of Homeland Security. *Yearbook of Immigration Statistics: 2011*. U.S. Government Printing Office: Washington, D.C., 18, (2012).
Retrieved from: http://www.dhs.gov/sites/default/files/publications/immigrationstatistics/yearbook/2011/ois_yb_2011.pdf.
- ²¹ CanadaVisa.com. "Qualifying Occupations for Federal Skilled Worker." Retrieved from: <http://www.canadavisa.com/new-instructions-federal-skilled-worker-applications.html>.
A similar program exists at the provincial level (i.e., Quebec).
- ²² Citizenship and Immigration Canada. "Notice: Canada's Federal Skilled Worker Cap Reached." (2012).
Retrieved from: <http://www.cic.gc.ca/english/department/media/notices/notice-fsw.asp>.
- ²³ World Bank. *Migration and Remittances Factbook 2011*. 2nd edn, Washington, D.C., (2011). Retrieved from: <http://siteresources.worldbank.org/INTLAC/Resources/Factbook2011-Ebook.pdf>.
- ²⁴ Notes to the original table in the *Yearbook of Immigration Statistics: 2011* state that the total "number of I-94 admissions in 2010 and 2011 greatly exceeds totals reported in previous years due to a more complete count of land admissions." The table from the *Yearbook of Immigration Statistics: 2003*, includes a note that the "total excludes the following classes of admission processed in the Nonimmigrant Information System: for all countries — 264,777 parolees, 37,640 withdrawals and stowaways, 62,634 refugees, 332 asylees and 906,314 crewmen."
- ²⁵ Statistics Canada, *2006 Census of Population*, Statistics Canada catalogue, No. 97-557-XCB2006007.
Retrieved from: <http://www12.statcan.gc.ca/census-recensement/2006/dp-pd/tbt/Rp-eng.cfm?LANG=E&APATH=3&DETAIL=0&DIM=0&FL=A&FREE=0&GC=0&GID=0&GK=0&GRP=1&PID=89424&PRID=0&PTYPE=88971,97154&S=0&SHOWALL=0&SUB=0&Temporal=2006&THEME=72&VID=0&VNAMEE=&VNAMEF=>.
- ²⁶ "Llegaron los Venezolanos, [The Venezuelans Have Arrived]." *Semana*, (2011). Retrieved from: <http://www.semana.com/nacion/llegaron-venezolanos/157924-3.aspx>.
- ²⁷ Ibid.
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