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Developing countries' political cycles and the resource curse: Venezuela's case

The resource curse literature's main lesson is that developing and natural resource-rich countries should save most of their oil windfalls in foreign currency. Moreover, the political cycle literature's recent contributions predict stronger cycles in these countries. This paper investigates how political cycles might explain low oil windfall savings. Using Venezuela's case, the paper argues that power concentration during periods of oil price explosiveness leads to increased public investment in prestige projects aimed at increasing the incumbent's – or his party's – re-election probabilities. The article backs the argument analyzing the Chavista democratic period of 1999-2016. It also identifies parallels with Venezuela's 1970-1988 period.

Keywords: oil windfalls; political cycles; resource curse; Venezuela

Words: 7,546.

Introduction

The 1970s are remembered in the Global North as a crisis-prone decade, during in which the dilemmas posed by stagflation dominated the public debate. However, in the major oil-exporting countries within the Global South, the 1970s are related to bonanza times. Nevertheless, as one of the major oil-exporting countries of the developing world at the time, Venezuela had a short-lived bonanza. In the late-1970s, the country entered a depression that lasted for almost 30 years until oil prices picked up in the late-1990s (Agnani & Iza, 2011). During the 55-year period depicted in Figure 1, the correlation between a terms-of-trade-corrected real GDP per capitaⁱⁱ and real oil prices was -0.51. Therefore, Venezuela is the resource curse's classic example because the country's oil abundance has negatively affected its long-run growth.

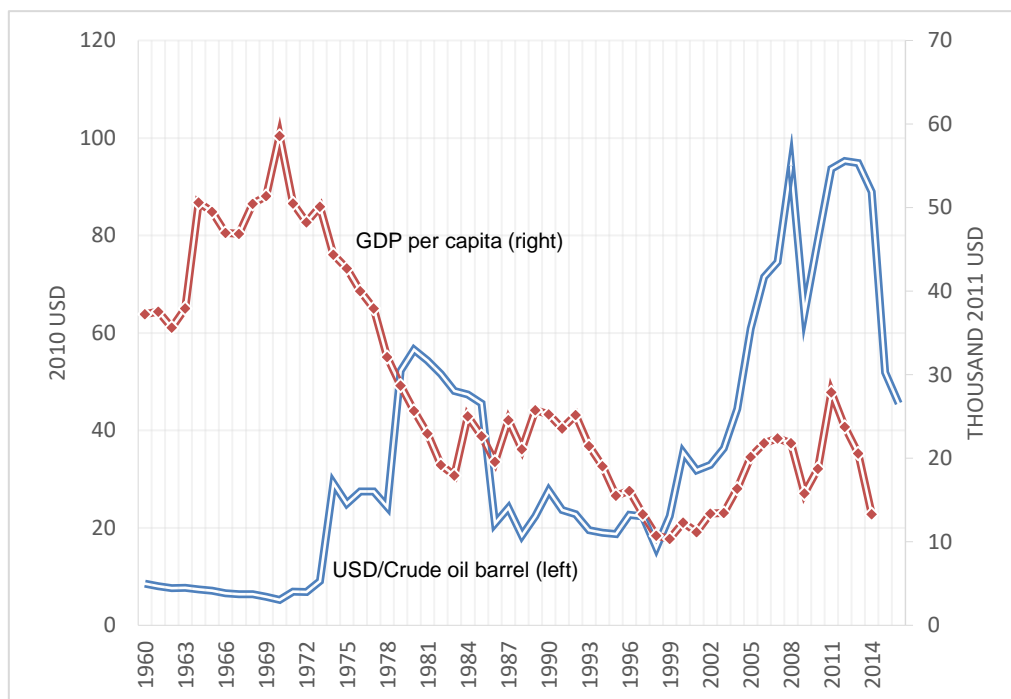
Moreover, Venezuela used to be one of Latin America's oldest democracies. The country witnessed a democratic transition in 1958 and remained a democracy until the late-2000s (Marshall, Gurr, & Jaggers, 2017). However, the Polity IV database considers the

Chávez administration's last years as an autocratic regime. For instance, in 2009 the government closed more than 30 TV and radio stations (Castillo, 2009). The Polity IV database then considers Maduro's administration as a democracy until 2016. In December 2015, the opposition won the parliamentary election for the first time since Chávez was elected president in 1998 (BBC Mundo, 2015).

However, in 2017, the *Tribunal Supremo de Justicia* – the country's highest court – supplanted the parliament because the latter swore in the three Amazonas State parliamentarians, whose election the *Consejo Nacional Electoral* – Venezuela's centralized election administration institution – deemed fraudulent (Huston-Crespo, 2017). Since then Maduro, has been ruling without a parliament, and new Amazonas parliamentarian elections are still pendingⁱⁱⁱ. Despite the debate about Venezuela's recent democratic status, the country had a democratic system during most of the period depicted in Figure 1. Therefore, the political business cycle (PBC) literature is relevant for the country^{iv}. This literature's main idea is that incumbent governments manipulate the business cycle during electoral periods in an attempt to remain in power.

The PBC literature's insights seem valid for the Venezuelan case, given that during 1960-2014 the negative correlation between a terms-of-trade-corrected real GDP per capita and real oil prices was lower during electoral rather than non-electoral years (-0.42 vs. -0.53)^v. Moreover, Vergne (2009, p. 73) shows that developing and natural resource-rich countries have stronger political cycles than similar yet less natural resource-abundant countries. Governments shift expenditure towards current expenditures during electoral years, which are more visible to the voter, according to the author. However, there is a debate surrounding what counts as more visible expenditures. Some public investment projects such as railways may indeed be visible to voters and promote the incumbent's prestige.

Figure 1. Crude oil barrel's yearly average price and Venezuela's terms-of-trade-corrected GDP per capita



Source: Data from Feenstra et al. (2015) World Bank (2018a). Oil prices are an average of the Brent, Dubai and West Texas Intermediate prices.

Therefore, this paper attempts to answer the question of how political cycles explain low oil windfall savings in countries affected by the resource curse. I argue that oil price dynamics affect the political cycle in developing petro-states in the following way. The periods of oil price explosiveness – i.e. high volatility – allow the government to increase public investment ahead of electoral years. Given that power concentrates during periods of oil price explosiveness, the president selects most investment projects. Oil windfalls are thus spent on expensive and prestige investment projects deemed able to increase the incumbent’s – or his party’s – re-election probabilities. In order to support this argument, the article analyzes oil windfall management during the Chavista democratic period (1999-2016). It also identifies parallels with how oil windfalls were managed during the 1970-1988 period. Both periods had a democratic rule and high oil price explosiveness. Nonetheless, before analyzing

these periods, the following section presents a brief literature review of the oil industry's economic effects in developing countries, the PBC and oil price explosiveness. The final section concludes.

The Resource Curse, Electoral Cycles and Oil Price Explosiveness

In petro-states, society depends on the state and not the other way around (López & Baquero, 2017). The state remains autonomous with respect to society, given that it mostly extracts its revenues from itself (taxing state-owned oil companies) or foreign oil companies, rather than from society (Schwarz, 2008). Moreover, the resource curse literature considers rent seeking as a transmission mechanism between natural resource abundance and low long-term growth (Tornell & Lane, 1999, p. 24). Rent-seeking activities 'capture property rights from the government' (Krueger, 1990, p. 18). Therefore, all major societal groups try to capture the petro-state and have vested interests in the oil industry's further development. Consequently, public expenditure's main goal is to appease society (Schwarz, 2008, p. 609). Oil money allows the state to finance a broad-based clientelist system and Venezuela has been a showcase of an oil-financed appeasement strategy. However, in general, appeasement involves benefiting interest groups with the aim of discouraging their political intervention. Oil-financed appeasement promotes extreme power centralization in petro-states and thus relates to non-democratic regimes. Venezuela stands out as an exception here since its appeasement strategy sustained the *de facto* two-party system that was in place until the early-1990s (Karl, 1997, p. 93) and the multi-party system that ensued.

Moreover, the petro-state's rentier system allows average income levels to increase faster than productivity. This situation overvalues the currency and thus non-oil-exporting sectors lose competitiveness. Oil booms exacerbate the situation. Corden and Neary's (1982) Dutch disease model shows how a natural resource-intensive sector boom reduces the non-booming tradable sector's production. Venezuela's first oil boom during the 1920s dealt a

final blow to the country's former top exporting sectors (Coronil, 1997, p. 117), whereby the country has been almost exclusively exporting oil ever since. The resource curse literature evolving from the theoretical work of van Wijnbergen (1984) and the empirical work of Sachs and Warner (2001) links Dutch disease-induced currency overvaluation with lower growth rates. Within this literature, the usual transmission channel is the negative impact that real appreciations have on the non-booming tradable sector's productivity growth. This sector is assumed to be the manufacturing sector and the economy's productivity growth driver (van Wijnbergen, 1984, p. 53).

Within more recent resource curse literature, institutional quality is the main long-term growth driver. Mehlum, Moene, and Torvik (2006) show that the resource curse is only present in countries with bad institutions, which are referred to as being grabber friendly. These institutions incentivize entrepreneurs to migrate out of productive activities into grabbing activities, i.e. rent seeking. By contrast, countries with good institutions have producer-friendly ones, i.e. institutions that allow the co-existence of productive and rent-seeking activities. However, promoting productive activities in developing, natural resource-rich countries implies tackling bottlenecks that hinder growth in areas including infrastructure, education, and health. Another strand of the recent literature underscores that oil windfalls' optimal allocation comprises a mix of public investment and foreign currency savings. Therefore, windfall management needs to consider the economy's development requirements^{vi}. Nevertheless, resource-rich countries that escaped the resource curse save more (Matsen & Torvik, 2005, p. 512). Finally, another literature strand argues against the resource curse. Lederman and Maloney (2008, p. 33) argue that once macroeconomic volatility and factor accumulation are controlled for, natural resources represent neither a curse nor a blessing. Nevertheless, studying the connection between political institutions in developing, democratic and natural resource-rich countries and long-term growth driving variables such as investment remains relevant.

The resource curse and political cycles

There is literature exploring the relation between natural resource rents and electoral cycles. Robinson, Torvik, and Verdier (2006) develop a theoretical model explaining that politicians in countries where natural resources are state-owned increase public employment to improve their re-election chances. Therefore, resource-rich countries will escape the resource curse if their institutions moderate public employment's growth (Robinson et al., 2006, p. 450). Moreover, Klomp and de Haan (2016) find that elections increase natural resource rents in countries with young democracies. These additional rents then allow the incumbents to increase public expenditure and reduce taxes in advance of elections.

Venezuela stands out in the political budget cycle literature for two reasons. First, analyzing a developing country sample during the 1975-2001 period, Vergne (2009) highlights stronger government current expenditure increases during electoral years in natural resource-rich countries. Given that Venezuela was the Latin American country with the highest average share of natural resource rents in GDP during 1970-2001^{vii}, it should have also been among the countries with the strongest political cycles. Nevertheless, during the 1990s Venezuela was among the Latin American countries with a smoother political cycle (Nieto-Parra & Santiso, 2009, p. 13). The country's primary expenditure's political cycle increased during the 2000s (Nieto-Parra & Santiso, 2009, p. 13), a decade with higher oil price volatility. Second, the country's increasing political cycle intensity during the 2000s contradicts Brender and Drazen (2005, p. 1292), who argue that established democracies' – including Venezuela's^{viii} – political cycles should diminish over time, given that voters have more experience and information about the incumbent's incentive to manipulate the budget. Nevertheless, one could argue that the oil price dynamics during the 1990s and 2000s explain the increasing political cycles in Venezuela^{ix}.

The literature argues that the government manipulates expenditure that is more visible for voters during electoral years (Dubois, 2016, p. 248; Nieto-Parra & Santiso, 2012,

p. 566; Vergne, 2009). However, what constitutes more visible expenditure is debated. While Vergne (2009) argues that current expenditure is more visible, Klein and Sakurai (2015) claim that capital expenditures are more visible. Furthermore, Nieto-Parra and Santiso (2012) argue that both types of expenditure can be visible to voters. However, Rodríguez (2006) argues that capital expenditures might need more time to be visible. Therefore, governments might tilt expenditures towards these expenditures one year ahead of elections, as the author finds in the Latin American case during the 1990-2004 period (Rodríguez, 2006, p. 20)^x. The fact that Klein and Sakurai (2015) only find political cycles during electoral years for capital expenditures for Brazil during 2001-2008 might be explained because the authors study municipal-level elections. Municipalities' capital expenditures can be more visible in the short run, e.g. acquiring an ambulance.

Oil price bubbles and explosivity

Given that this paper argues that oil price dynamics affect political cycles, I will now explain the former. Recent literature finds evidence of oil price bubbles during the 2000s and 2010s. Mayer (2010) argues that commodities' increased price volatility during the 2000s was due to the growing index traders' presence in commodity exchanges. Supply and demand fundamentals play a minor role in these traders' investment decisions. Index traders' increased presence suggests that commodities became another asset class in the 2000s. Therefore, increased price volatility combined with more financial investors might lead to bubbles. Unless asset prices reflect their fundamental value, they are within a bubble path (Brunnermeier, 2008). Lammerding, Stephan, Trede and Wilfling (2013, p. 492) and Parsons (2010, p. 109) identify oil price bubbles during 2003-2011.

However, oil price explosivity predates oil financialization. For instance, following Caspi, Katzke and Gupta (2015), oil prices stagnated during 1941-1973 and then followed an explosive path during the 1970s-1980s. Moreover, the authors show that oil prices were low

and stable during the 1990s. Caspi et al. (2015, p. 3) refrain from labeling periods of oil price explosivity as bubbles due to the lack of futures contract data for the entire period that they analyze (1876–2014)^{xi}. Despite the creation of the Organization of the Petroleum Exporting Countries (OPEC) in 1960 – a producer’s cartel interested in stabilizing the market – oil prices increased their volatility during the 1970s-1980s. Moreover, OPEC’s inability to behave like a cartel in the 1990s (Almoguera, Douglas, & Herrera, 2011) coincided with more stable oil prices during that decade. During the 2000s – a decade with oil price explosivity or bubbles – OPEC renewed its cooperation efforts, under Venezuela’s lead (Hellinger, 2017, p. 64). The literature has documented government spending increases during booms in democratic developing countries^{xii}. However, there has been less focus on the direct impact of oil price explosivity or bubbles on electoral cycles in developing and natural resource-rich countries. The next section studies the political cycle’s impact in Venezuela during and after the 2000s’ commodities boom on the country’s oil windfall-saving capabilities.

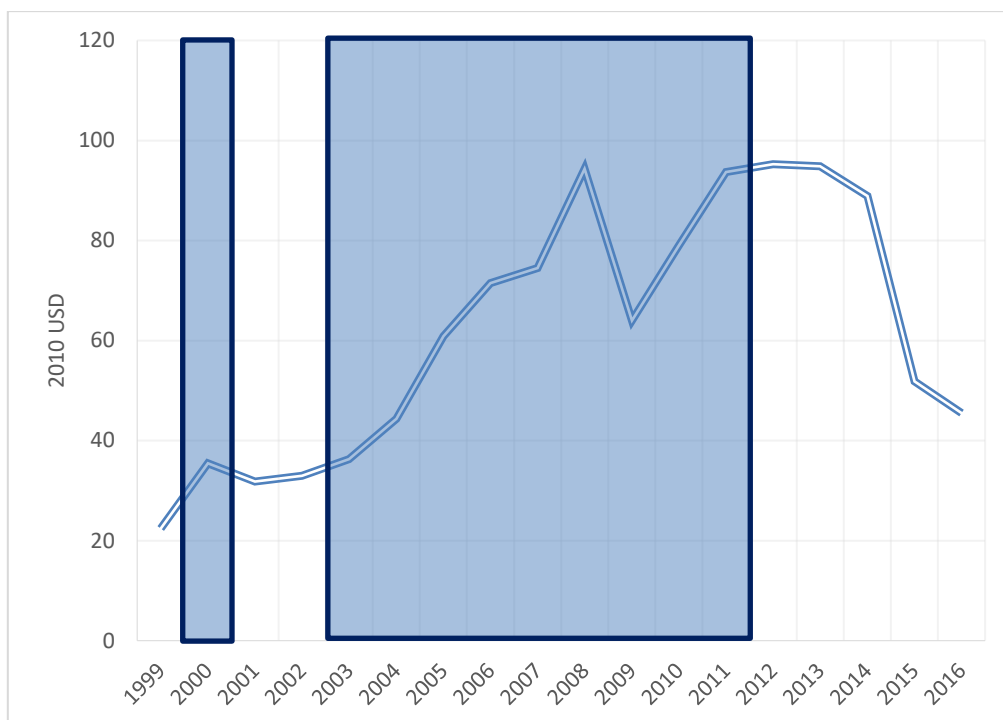
The Chavista 1999-2016 Period: Oil Price Bubbles and Railways To Nowhere

Chávez’s ascendance to the presidency in 1999 coincided with the beginning of an oil price boom that lasted until 2012 (see Figure 2). Moreover, at least one oil price bubble – related to the 2008 global financial crisis – formed during the 1999-2016 period, according to several studies. Other studies underscore the bubble in 2000, related to the dot-com bubble^{xiii}. Overall, crude oil’s average real price more than quadrupled between 1999 and 2012. The oil price boom resulted in a large hard currency influx for the government. The *Fondo de Inversión para la Estabilización Macroeconómica* (FIEM) – an oil-financed sovereign wealth fund created in 1998 during the Caldera administration’s last year (Guerra, 2004, p. 110) – was later renamed *Fondo de Estabilización Macroeconómica* (FEM) under the Chávez administration (Jiménez & Tromben, 2006, p. 80). The FIEM contemplated saving and spending rules for the state’s oil-related revenues depending on the deviation of the current oil price with

respect to its average during the last five years (Guerra, 2004, p. 111). Between 1999 and 2003, the FIEM's spending rules were relaxed several times (Guerra, 2004, pp. 112–113). Spending flexibilization led to the fund losing its economic significance. Since 2003, the FEM assets' value has remained under USD 1 billion, compared with its USD 7 billion peak reached in 2001 (Sovereign Wealth Fund Institute, 2018b, 2018a).

After the FEM's *de facto* dismantling, the government set up another sovereign wealth fund in 2005, the *Fondo de Desarrollo de la Nación* (FONDEN). Vera estimates that during the 2005-2013 period 115 USD billion were fed into the fund (Vera, 2015, p. 564). Transparency regarding FONDEN's balance and investment portfolio has been rather low (Ellsworth & China, 2012). Therefore, one can argue that the president had discretionary power over FONDEN's spending. Despite the lack of data, by 2013 FONDEN's balance must have been all but depleted; otherwise, the fund could have cushioned the sharp fall in imports between 2012 and 2016. In 2016, imports represented less than 25% of their 2012 peak^{xiv}.

Figure 2. Crude oil barrel's annual average price and bubbles (shaded areas) during 1999-2016



Source: Data from World Bank (2018a). Oil prices are an average of the Brent, Dubai and West Texas Intermediate prices. Bubbles according to Caspi et al. (2015, p. 12) and Lammerding et al. (2013, p. 499).

Venezuela's oil diplomacy

Venezuela's oil-financed diplomacy is partly responsible for the country's inability to save its oil windfalls. The Chávez administration oversaw a rise in oil diplomacy, mainly targeted towards the Central American and Caribbean regions. Here, the Bolivarian Alliance for the Peoples of Our America (ALBA) and Petrocaribe played a central role. ALBA is an integration scheme created in 2004 and most of its finance stems from the state-owned *Petróleos de Venezuela* (Girvan, 2011, p. 175). Furthermore, Petrocaribe is a *Petróleos de Venezuela* subsidiary, established in 2005. It offers long-term preferential payment of the oil bill of Central American and Caribbean countries. Venezuela's official development assistance

during 2006-2007 ranked on par with Saudi Arabia's among the Global South's largest donors in absolute terms, only below China and India (United Nations Economic and Social Council, 2008, p. 10). This aid was approved at President Chávez's discretion, according to officials from recipient Caribbean states (Girvan, 2011, p. 168).

Power concentration, oil windfalls, and electoral pressure

The president's increased discretionary power over the domestic and international use of oil windfalls converted them into a *de facto* parallel budget, without parliamentary oversight. Several enabling acts (*leyes habilitantes*) granted by the parliament since 1999 can explain the birth of this parallel budget. Enabling acts allow the Venezuelan president to rule by decree, according to the country's constitution (Asamblea Nacional Constituyente, 1999). These acts' duration can be long, given that no time limit is defined within the constitution (Tavares Duarte, Soto Hernández, & Chirinos Portillo, 2008, p. 48). Presidents Chávez and Maduro ruled by decree over more than one-third of their administrations' time during 1999-2016^{xv}.

The country's worsening polity score during 1999-2012 also reflects increasing power concentration. Moreover, between 2009 and 2012 the polity variable's negative values signaled more commonalities with autocratic rather than democratic regimes. Nevertheless, Venezuela's democratic features regained strength between 2013 – the year when President Chávez died – and 2016 (Marshall et al., 2017). The argument of failing to save oil windfalls due to power concentration is contradicted by the fact that oil-exporting countries – including the United Arab Emirates and Saudi Arabia, which have much higher power concentration than Venezuela (Marshall et al., 2017) – have some of the largest oil-funded sovereign wealth funds (Sovereign Wealth Fund Institute, 2018b). However, unlike Venezuela, these Gulf countries are autocracies, and thus they do not face political cycles. It is therefore worthwhile investigating in the next section whether Venezuela's government spending has electoral cycles.

Public investment's electoral cycle

I focus on public investment because investment growth exceeded consumption growth during most of the 1999-2014 period (Banco Central de Venezuela, n.d.-d). Moreover, public investment drove investment growth, given that the former grew on average by little more than 9% per year during the entire period, while private investment contracted on average by slightly more than 4% per year (Banco Central de Venezuela, n.d.-a). Furthermore, the government tilted public expenditure towards shorter-term visible investment projects prior to elections. Public investment's share in total government expenditure decreased by 0.43 percentage points during 1999-2014, two years ahead of the electoral year, and increases by 0.67 percentage points one year ahead of the electoral year (see Table 1). This behavior is consistent with the evidence presented by Nieto-Parra and Santiso (2012, p. 560) and Rodríguez (2006, p. 20) for the Latin American region during previous periods.

Oil price bubbles drive the period's public investment electoral cycle. Public investment's share in total public expenditure rises by more (+2.61 percentage points) one year ahead of the electoral year within oil price bubbles. In the absence of a bubble, public investment increases two years ahead of the electoral year. Oil price bubbles allowed then the Venezuelan government to tilt its expenditures more towards public investment in general and above all one year ahead of electoral years. Therefore, Venezuela's public investment strategy might be an important recourse curse transmission channel during the Chavista democratic period.

Table 1. Average capital expenditure as a share of total government expenditure (%) during 1999-2014

	<i>Two years ahead of an electoral year</i>	<i>Other years</i>	<i>One year ahead of an electoral year</i>	<i>Other years</i>
All years	18.70	19.13	19.48	18.81
Years with oil price bubbles	18.48	20.72	21.87	19.26
Years without oil price bubbles	19.35	16.91	15.91	18.02

Source: Own calculations based on data from the ECLAC (2016) and Figure 2.

Prestige public investment projects' rise and non-oil sectors

Until 2012, the government increased the most its investment in transportation equipment. However, public investment in transportation equipment contracted at an average annual rate of almost -23% between 2013 and 2014 (Banco Central de Venezuela, n.d.-a). This contraction translated into important delays, most notably found in the railway projects. The Tinaco-Anaco line – a project linking the two cities located in the Venezuelan Llanos more than 400 km apart with a Chinese bullet train – was abandoned in 2016 after four years of delays (Goodman, 2016).

One could argue that investing in such prestige and visible projects aimed to increase President Chávez's re-election probability. This public investment strategy combined with a negative trend in private investment during the Chavista democratic period (Banco Central de Venezuela, n.d.-a) prevented the emergence of new economic sectors that could diminish the country's oil dependence. The non-oil economic sectors that grew were more of the non-tradable nature, as Dutch disease theory predicts. Up until 2012, the non-oil sector presented a respectable 4.3% average annual growth rate (Banco Central de Venezuela, n.d.-c). However, with the break of the increasing oil price trend starting in 2013, the non-oil sector

showed a 0.7% average annual contraction until 2014, the last year for which official data is available.

Average growth despite high investment rates

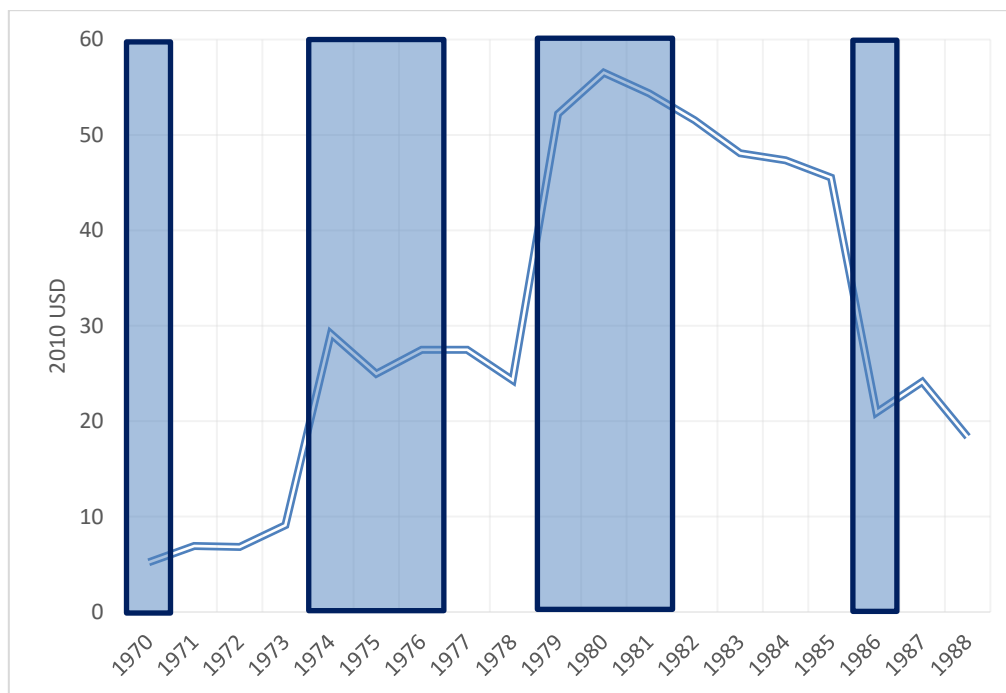
During 1999-2016, Venezuela's and Latin America's growth rates were similar. Therefore, judging from this indicator one could argue that Venezuela escaped the resource curse during the Chavista democratic period. Nevertheless, Venezuela's much higher investment share over GDP compared with the rest of the region^{xvi} should have translated into higher growth rates. The country's investment during 1999-2012 averaged about 33% of GDP (Banco Central de Venezuela, n.d.-d). During the same period, the average annual GDP growth was 3.7%. By contrast, Latin America and the Caribbean's annual investment shares over GDP averaged little more than 20%. Despite much lower investment rates, the region's average annual growth was marginally lower than Venezuela's at 3.15%.

The different investment rates were also maintained during 2013-2014, a period when oil prices decreased. Venezuela's average investment over GDP increased to a little more than 36% (Banco Central de Venezuela, n.d.-c). However, this increase reflects a slower investment fall, as every GDP component fell during 2013-2014, when the average annual GDP growth rate plunged to -1.3%. Latin America and the Caribbean's average investment also increased to almost 21% during 2013-2016 (World Bank, 2018b). The region's growth also decelerated, albeit to a much lesser degree, reaching an annual average of 0.65% during 2013-2016. Therefore, despite higher investment shares over GDP, Venezuela's growth rate was like the regional trend during the commodity boom and lower thereafter. Power concentration during the Chavista democratic period explains the prioritized investment projects. These aimed at increasing the incumbent's re-election probabilities, more than fostering new economic sectors that would reduce oil dependence. Furthermore, oil price

bubbles during the Chavista democratic period tilted public investment's electoral cycle towards short-term visible investment projects.

The 1970s-1980s: Oil Price Shocks and Nationalization

Figure 3. Crude oil barrel's annual average price and explosivity (shaded areas) during 1970-1988



Source: Data from World Bank (World Bank, 2018b). Oil prices are an average of the Brent, Dubai and West Texas Intermediate prices. Explosivity periods are taken from Caspi et al. (2015).

Oil price increases were much higher during the 1970s and early-1980s than during the Chavista democratic period. Between 1970 and 1980, oil prices increased more than tenfold in real terms, peaking at more than USD 56 in 2010 USD (Figure 3). According to Caspi et al. (2015, p. 12) during 1970-1988 four episodes of oil price explosivity took place. The longest episode was related to the 1973 Yom Kippur War's oil price shock. The second longest oil price explosivity period was related to the Iranian Revolution in 1979 and the

beginning of the Iran-Iraq War in 1980. Despite the oil price cycle similarities between the 1970s-1980s period and the most recent one, the fact that Venezuela suffered from an almost 30-year long ‘great depression’ between the mid-1970s and the mid-2000s (Agnani & Iza, 2011) – and thus became a poster child of the resource curse – should not necessarily repeat itself in the case of the current recession, which started in 2014 (Banco Central de Venezuela, n.d.-d).

Since its beginning in 1974, the Pérez administration was aware of the need to avoid a massive influx of petrodollars in the Venezuelan economy to prevent it from overheating. The *Fondo de Inversiones de Venezuela* (FIV) – created in 1974 – was the oil-financed sovereign wealth fund where the government would save the 1973 oil crisis’ windfalls. The FIV’s initial endowment was USD 3.23 billion^{xvii} and the fund should have received half of the government’s oil-related revenues afterwards. The idea behind the FIV’s creation was to reduce the government’s oil revenue dependence. The fund should incentivize the government to increase its non-resource taxes, including inheritance and property taxes (Karl, 1997, p. 131). Nevertheless, the FIV never worked as intended given that it was by no means fed according to what was planned (Karl, 1997, p. 136). After the initial endowment in 1974, the fund received little more than USD 2.3 billion until 1977 (Palma, 1989, p. 13)^{xviii}. If the saving rule had been respected, no less than USD 13.3 billion should have been fed into the FIV during 1975-1977^{xix}.

Venezuela’s energy cooperation

The FIV allowed Venezuela to play an important regional role by financing the country’s development cooperation towards poorer Central American and Caribbean countries. By signing the Puerto Ordaz Accord in 1974, the Pérez administration made Venezuela a pioneer of South-South cooperation (Grayson, 1985, p. 392). The agreement was signed between Venezuela and all of the independent Central American countries at the time for

the 1975-1980 period. Two Caribbean countries – Jamaica and the Dominican Republic – joined later. The agreement included FIV soft loans with long repayment periods for the part of the oil bill that accrued due to an oil price above USD 6 per barrel. Moreover, the recipient countries could further improve their loan conditions. Funds stemming from the Puerto Ordaz Accord's loans could be redirected towards development projects if an international financial institution (e.g. the Inter-American Development Bank) also financed the projects. In this case, the Puerto Ordaz Accord loan's interest rate was further reduced, and the repayment period was extended. Such an arrangement made the FIV Venezuela's *de facto* official development assistance agency. Given that the oil price was much higher than USD 6 per barrel during the 1975-1980 period, and the agreement covered most of the Puerto Ordaz Accord's beneficiaries' oil imports, Venezuela's development aid was substantial.

Oil price explosivity during 1980 – the Puerto Ordaz Accord's final year (see Figure 3) – paved the way for further energy cooperation. However, this time, Venezuela allied with Mexico to continue providing development assistance to Central America and the Caribbean. The new cooperation scheme emerged after the OPEC's refusal to support Venezuela's proposition of establishing global South-South cooperation independent of religious or regional affinity (Grayson, 1985, p. 394). During 1980, the collaboration was formalized in the San José Accord, which followed a similar logic as its predecessor, the Puerto Ordaz Accord. It is estimated that during the initiative's first years Mexico and Venezuela disbursed in equal terms annual soft loans of about USD 560 million to the nine recipient countries, the same as the previous accord plus Barbados^{xx}.

Power concentration and electoral cycles

Contrasting the FIV's regional pro-development character, the fund posed a challenge to avoiding the misuse of oil windfalls within Venezuela. Since the FIV's inception, the fund lacked Congress' oversight^{xxi}. President Carlos Andrés Pérez justified such a lack of oversight

given the FIV's international role. The fund was therefore under direct presidential supervision (Karl, 1997, p. 131) and became a parallel budget. Thus, throughout his administration, the FIV allowed President Pérez to extend the power gained during 1974, when he ruled by decree thanks to an enabling act.

Public investment's electoral cycle

Public investment's share of total government expenditure increased by 1.78 percentage points during 1970-1988, two years ahead of the electoral year, and decreased by 0.41 percentage points one year ahead of the electoral year (see Table 2). Therefore, the government tilted public expenditure towards longer-term visible investment projects before elections during the 1970-1988 period. Restricting the analysis to the years with oil price explosiveness, public investment's share decreases by 3.19 percentage points two years ahead of the electoral year. This result seems to suggest that public investment reduced its long-term visible profile within periods of oil price explosivity. Nevertheless, it is difficult to assess whether this implies an increase in short-term visible public investment, given that there was no year ahead of elections with oil price explosivity. Nonetheless, oil price explosivity increased the share of public investment, irrespective of the electoral cycle. By contrast, in the absence of oil price explosiveness, public investment's share decreases by 1.66 percentage points two years ahead of the electoral year, and increases by 6.1 percentage points one year ahead of elections. Therefore, the absence of oil price explosivity tilted public investment cycles towards shorter-term and visible investment projects.

Table 2. Average capital expenditure as a share of total government expenditure (%) during 1970-1988

	<i>Two years ahead of the electoral year</i>	<i>Other years</i>	<i>One year ahead of the electoral year</i>	<i>Other years</i>
All years	33.48	31.70	31.75	32.16
Years with oil price explosiveness	35.85	39.04	NA	37.84
Years without oil price explosiveness	26.36	28.02	31.75	25.65

Source: Own calculations based on data from Karl (1997, p. 165) and Caspi et al. (2015).

Prestige public investment projects' rise

Despite strong increases in public investment during the oil price explosivity episodes of the 1970s-1980s, Venezuela's oil dependence continued, albeit to a reduced degree. The Pérez administration oversaw what Di John (2014) labeled as a big push natural-resource-based industrialization strategy. The strategy included the creation of state-owned conglomerates in the oil and petrochemicals sectors. In 1976, the oil sector was nationalized and the state-owned oil enterprise *Petróleos de Venezuela* was created. In the following year, the state-owned petrochemical enterprise *Petroquímica de Venezuela* was created. Moreover, public investment growth went hand in hand with private investment growth during the 1970s (Hausmann, 2003, p. 256). Although the chemicals and health-related products' export share increased from 17% in 1970 to 25% in 1979, the oil exports' share remained almost unchanged from 72% in 1970 to 69% in 1979 (Simoes & Hidalgo, 2011). Nevertheless, during the 1980s – a decade of decreasing oil prices (see Figure 3) – the oil export share was indeed reduced to 41% and chemicals and health-related products' export share increased to 35% (Simoes & Hidalgo, 2011). However, none of the alternative exports developed in the 1980s belonged to the private sector, whose investment rates collapsed during this decade (Hausmann, 2003,

pp. 257–258).

Conclusion

Oil price explosivity during the two periods analyzed increased Venezuela's public investment's share in total government expenditure. However, public investment's political cycle was affected by oil price explosivity in different ways during the two periods. During the entire 1970-1988 period, the government tilted public investment towards longer-term projects ahead of elections. However, during years without oil price explosiveness, the government shifted investment towards short-term projects ahead of elections. During the most recent 1999-2016 period – characterized by oil price bubbles – explosivity was associated with the government tilting expenditure towards shorter-term investment projects. The Venezuelan government failed to save oil windfalls during both the 1970s and 2000s, despite having oil-financed sovereign wealth funds during both periods. Moreover, the oil windfalls that remained abroad were spent abroad as official development assistance and not invested. This practice – combined with low savings – left Venezuela in a vulnerable position during oil price corrections. Furthermore, enabling acts that allowed presidents to rule by decree in economic matters concentrated power around presidents, providing a major explanation why Venezuela's sovereign wealth funds became *de facto* parallel budgets without parliamentary oversight.

Despite high investment rates, Venezuela has – almost without interruption – suffered from the resource curse since the mid-1970s, a period in which oil price explosiveness increased. In particular, the country's investment rates were much higher than in Latin America and the Caribbean during 1999-2014. Moreover, the country's public investment's share in total government expenditure was higher during 1970-1988 than 1999-2014. The problem is that investments were largely directed towards prestige projects. Thereby, oil dependence was left unaddressed. The results reported here provide a basis for

further empirical research. For instance, research designs including panel data regressions could contribute towards a theory of commodity price volatility's impact on the political cycles of countries affected by the resource curse.

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References

- Agénor, P.-R. (2016). Optimal fiscal management of commodity price shocks. *Journal of Development Economics*, 122, 183–196.
- Agnani, B., & Iza, A. (2011). Growth in an oil abundant economy: The case of Venezuela. *Journal of Applied Economics*, 14(1), 61–79.
- Alesina, A., Campante, F. R., & Tabellini, G. (2008). Why is Fiscal Policy Often Procyclical? *Journal of the European Economic Association*, 6(5), 1006–1036.
<https://doi.org/10.1162/JEEA.2008.6.5.1006>
- Almoguera, P. A., Douglas, C. C., & Herrera, A. M. (2011). Testing for the cartel in OPEC: Non-cooperative collusion or just non-cooperative? *Oxford Review of Economic Policy*, 27(1), 144–168. <https://doi.org/10.1093/oxrep/grr007>
- Asamblea Nacional Constituyente. (1999). *Constitución de la República Bolivariana de Venezuela*.
- Banco Central de Venezuela. (n.d.-a). *Formación bruta de capital fijo por tipo de activo y sector institucional*. Retrieved from <https://www.bcv.org.ve/estadisticas/oferta-y-demanda>
- Banco Central de Venezuela. (n.d.-b). *Importaciones de bienes FOB según sectores y destinos económicos*. Retrieved from <https://www.bcv.org.ve/estadisticas/comercio-exterior>

- Banco Central de Venezuela. (n.d.-c). *Producto interno bruto por clase de actividad económica*. Retrieved from <https://www.bcv.org.ve/estadisticas/producto-interno-bruto>
- Banco Central de Venezuela. (n.d.-d). *Producto interno bruto y sus componentes*. Retrieved from <https://www.bcv.org.ve/estadisticas/producto-interno-bruto>
- BBC Mundo. (2015). Oposición obtiene amplia victoria en las elecciones. *BBC News Mundo*. Retrieved from https://www.bbc.com/mundo/noticias/2015/12/151204_venezuela_parlamentarias_oposicion_chavismo_dp
- Bracho, D. (2017). Fiscal Luisa Ortega Díaz fue removida de su cargo por la ANC. *Panorama*. Retrieved from <http://www.panorama.com.ve/politicaeconomia/Fiscal-Luisa-Ortega-Diaz-fue-removida-de-su-cargo-por-la-ANC-20170805-0013.html>
- Brender, A., & Drazen, A. (2005). Political budget cycles in new versus established democracies. *Journal of Monetary Economics*, 52(7), 1271–1295. <https://doi.org/10.1016/j.jmoneco.2005.04.004>
- Brunnermeier, M. K. (2008). Bubbles. In S. N. Durlauf & L. E. Blume (Eds.), *The New Palgrave Dictionary of Economics* (2nd ed., pp. 578–82). New York, NY: Palgrave Macmillan.
- Caspi, I., Katzke, N., & Gupta, R. (2015). Date stamping historical periods of oil price explosivity: 1876–2014. *Energy Economics*.
- Castillo, M. (2009). U.S. report: Chavez moving to silence media critics—CNN.com. *CNN*. Retrieved from <http://edition.cnn.com/2009/WORLD/americas/08/18/venezuela.radio/index.html?iref=newssearch>

- Corden, W. M., & Neary, J. P. (1982). Booming Sector and De-Industrialization in a Small Open Economy. *The Economic Journal*, 92(368), 825–848.
<https://doi.org/10.2307/2232670>
- Coronil, F. (1997). *The magical state: Nature, money, and modernity in Venezuela*. Chicago and London.: University of Chicago Press.
- Correo del Orinoco. (2013). *Se han aprobado 4 en la Revolución Bolivariana. Todo lo que necesitas saber sobre la Ley Habilitante*. Retrieved from
<http://www.correodelorinoco.gob.ve/todo-que-necesitas-saber-sobre-ley-habilitante/>
- Di John, J. (2014). The Political Economy of Industrial Policy in Venezuela. In R. Hausmann & F. Rodríguez (Eds.), *Venezuela Before Chávez: Anatomy of an Economic Collapse* (pp. 321–370). University Park, PA: The Pennsylvania State University Press.
- Diario Las Américas. (2017, July 19). Maduro extiende por octava vez decreto de estado de excepción y emergencia económica. *diariolasamericas.com*. Retrieved from
<https://www.diariolasamericas.com/america-latina/maduro-extiende-octava-vez-decreto-estado-excepcion-y-emergencia-economica-n4127229>
- Dubois, E. (2016). Political business cycles 40 years after Nordhaus. *Public Choice*, 166(1–2), 235–259. <https://doi.org/10.1007/s11127-016-0313-z>
- Economic Commission for Latin America and the Caribbean. (2016). CEPALSTAT Statistics and Indicators. Retrieved August 23, 2018, from
http://estadisticas.cepal.org/cepalstat/WEB_CEPALSTAT/estadisticasIndicadores.asp?idioma=i
- El Demócrata. (2015, December 7). Ley Habilitante: La carta todopoderosa de Maduro para dictar cualquier ley. *El Demócrata*. Retrieved from

- <https://www.eldemocrata.cl/noticias/ley-habilitante-la-carta-todopoderosa-de-maduro-para-dictar-cualquier-ley/>
- Ellsworth, B., & China, E. (2012, September 26). Special Report: Chavez's oil-fed fund obscures Venezuela money trail. *Reuters*. Retrieved from <https://www.reuters.com/article/us-venezuela-chavez-fund/special-report-chavezs-oil-fed-fund-obscures-venezuela-money-trail-idUSBRE88P0N020120926>
- Feenstra, R. C., Inklaar, R., & Timmer, M. P. (2015). The Next Generation of the Penn World Table. *American Economic Review*, 105(10), 3150–3182.
- Girvan, N. (2011). Is ALBA a New Model of Integration? Reflexions on the CARICOM Experience. *International Journal of Cuban Studies*, 3(2/3), 157–180.
- Goodman, J. (2016). Chinese bullet train in Venezuela stalls as alliance derails. *AP News*. Retrieved from <https://apnews.com/3367297bb5cc4fc497579164f679ec75>
- Grayson, G. W. (1985). The San José oil facility: South-South cooperation. *Third World Quarterly*, 7(2), 390–409.
- Guerra, J. (2004). *La política económica en Venezuela, 1999-2003*. Caracas: UCV Consejo de Desarrollo Científico y Humanístico.
- Hausmann, R. (2003). Venezuela's growth implosion: A neo-classical story? In D. Rodrik (Ed.), *In search of prosperity: Analytic narratives on economic growth* (pp. 244–70). Princeton, NJ and Woodstock, Oxfordshire.
- Hellinger, D. (2017). Oil and the Chávez Legacy. *Latin American Perspectives*, 44(1), 54–77. <https://doi.org/10.1177/0094582X16651236>
- Huston-Crespo, P. M. E. (2017). ¿Es legal lo que hizo el TSJ de Venezuela? Aquí la respuesta. *CNN*. Retrieved from <https://cnnespanol.cnn.com/2017/03/30/es-legal-lo-que-hizo-el-tsj-de-venezuela-aca-la-respuesta/>
- Infobae. (2017). La lista de los 40 países democráticos que hasta el momento desconocieron la Asamblea Constituyente de Venezuela. *Infobae*. Retrieved from

<https://www.infobae.com/america/venezuela/2017/07/31/la-lista-de-los-40-paises-democraticos-que-hasta-el-momento-desconocieron-la-asamblea-constituyente-de-venezuela/>

Jiménez, J. P., & Tromben, V. (2006). Política fiscal y bonanza: Impacto del aumento de los precios de los productos no renovables en América Latina y el Caribe. *Revista de la CEPAL*, 90, 61–86.

Karl, T. L. (1997). *The Paradox of Plenty: Oil Booms and Petro-States*. Berkeley, CA: University of California Press.

Klein, F. A., & Sakurai, S. N. (2015). Term limits and political budget cycles at the local level: Evidence from a young democracy. *European Journal of Political Economy*, 37, 21–36. <https://doi.org/10.1016/j.ejpoleco.2014.10.008>

Klomp, J., & de Haan, J. (2016). Election cycles in natural resource rents: Empirical evidence. *Journal of Development Economics*, 121, 79–93.

Krueger, A. O. (1990). Government failures in development. *The Journal of Economic Perspectives*, Vol. 4(No. 3), 9–23.

Lammerding, M., Stephan, P., Trede, M., & Wilfling, B. (2013). Speculative bubbles in recent oil price dynamics: Evidence from a Bayesian Markov-switching state-space approach. *Energy Economics*, 36, 491–502.

Lederman, D., & Maloney, W. F. (2008). In Search of the Missing Resource Curse. *Economía*, 9(1), 1–56. <https://doi.org/10.1353/eco.0.0012>

López, L., & Baquero, G. (2017). *Venezuela energética. Propuesta para el bienestar y progreso de los venezolanos*. Caracas: Editorial Dahbar.

Marshall, M. G., Gurr, T. R., & Jagers, K. (2017). *Polity IV Project: Political Regime Characteristics and Transitions, 1800–2016*.

Matsen, E., & Torvik, R. (2005). Optimal Dutch disease. *Journal of Development Economics*, 78(2), 494–515. <https://doi.org/10.1016/j.jdeveco.2004.09.003>

- Mayer, J. (2010). The financialization of commodity markets and commodity price volatility. In S. Dullien, J. Priewe, A. Márquez, & D. J. Kotte (Eds.), *The Financial and Economic Crisis of 2008–2009 and Developing Countries* (pp. 73–98). New York and Geneva: United Nations.
- Mehlum, H., Moene, K., & Torvik, R. (2006). Institutions and the Resource Curse. *The Economic Journal*, 116(508), 1–20. <https://doi.org/10.1111/j.1468-0297.2006.01045.x>
- Muñoz, R. E. (2006). Ciclos político económicos: Teoría y evidencia empírica. *Revista Temas de Coyuntura*, (54), 29–71.
- Nieto-Parra, S., & Santiso, J. (2009). *Revisiting Political Budget Cycles in Latin America* (SSRN Scholarly Paper No. ID 1456845). Retrieved from Social Science Research Network website: <https://papers.ssrn.com/abstract=1456845>
- Nieto-Parra, S., & Santiso, J. (2012). Revisiting Political Budget Cycles in Latin America. In J. Santiso & J. Dayton-Johnson (Eds.), *The Oxford Handbook of Latin American Political Economy*. Retrieved from <http://www.oxfordhandbooks.com/view/10.1093/oxfordhb/9780199747504.001.0001/oxfordhb-9780199747504-e-21>
- Niño, L. (2017, December 29). 2017 para Venezuela: Un año de protestas sociales, polarización política y crisis económica. *France 24*. Retrieved from <http://www.france24.com/es/20171228-2017-resumen-venezuela-protestas-sociales>
- Nordhaus, W. D. (1975). The political business cycle. *The Review of Economic Studies*, 42(2), 169–190.
- Palma, P. A. (1989). *1974-1983: Una década de contrastes en la economía venezolana*. Caracas: Academia Nacional de Ciencias Económicas.

- Parsons, J. E. (2010). Black Gold and Fool's Gold: Speculation in the Oil Futures Market. *Economía*, 10(2), 81–116.
- Robinson, J. A., Torvik, R., & Verdier, T. (2006). Political foundations of the resource curse. *Journal of Development Economics*, 79(2), 447–468.
<https://doi.org/10.1016/j.jdevec.2006.01.008>
- Rodríguez, J. A. (2006). ¿Responden el gasto e inversión públicas a ciclos económicos y políticos? *Latinwatch*, (Second quarter).
- Sachs, J. D., & Warner, A. M. (2001). The curse of natural resources. *European Economic Review*, 45(4–6), 827–838. [https://doi.org/10.1016/S0014-2921\(01\)00125-8](https://doi.org/10.1016/S0014-2921(01)00125-8)
- Schwarz, R. (2008). The political economy of state-formation in the Arab Middle East: Rentier states, economic reform, and democratization. *Review of International Political Economy*, 15(4), 599–621.
- Shi, S., & Arora, V. (2012). An application of models of speculative behaviour to oil prices. *Economics Letters*, 115(3), 469–472. <https://doi.org/10.1016/j.econlet.2011.12.126>
- Simoes, A., & Hidalgo, C. A. (2011). *The Economic Complexity Observatory: An Analytical Tool for Understanding the Dynamics of Economic Development*. Retrieved from <http://atlas.media.mit.edu/en/>
- Sovereign Wealth Fund Institute. (2018a). FEM - Macroeconomic Stabilization Fund. Retrieved August 20, 2018, from <https://www.swfinstitute.org/swfs/fem/>
- Sovereign Wealth Fund Institute. (2018b). Sovereign Wealth Fund Rankings. Retrieved August 20, 2018, from <https://www.swfinstitute.org/sovereign-wealth-fund-rankings/>
- Tavares Duarte, F. del V., Soto Hernández, M. E., & Chirinos Portillo, L. M. (2008). Elemento material de los decretos con fuerza de ley propiamente dichos en la constitución de la República Bolivariana de Venezuela de 1999. *Revista de Derecho*, (29), 23–54.

- Tornell, A., & Lane, P. R. (1999). The voracity effect. *American Economic Review*, 89(1), 22–46.
- United Nations Economic and Social Council (2008). Trends in South-South and triangular development cooperation: Background study for the Development Cooperation Forum. *New York: United Nations*, 9–10.
- U.S. Bureau of Economic Analysis. (2018). Gross Domestic Product: Implicit Price Deflator [GDPDEF]. Retrieved August 30, 2018, from <https://fred.stlouisfed.org/series/GDPDEF>
- van Wijnbergen, S. (1984). The “Dutch Disease”: A Disease After All? *The Economic Journal*, 94, 41–55.
- Vera, L. (2015). Venezuela 1999–2014: Macro-Policy, Oil Governance and Economic Performance. *Comparative Economic Studies*, 57(3), 539–568.
- Vergne, C. (2009). Democracy, elections and allocation of public expenditures in developing countries. *European Journal of Political Economy*, 25(1), 63–77.
<https://doi.org/10.1016/j.ejpoleco.2008.09.003>
- World Bank. (2018a). *World Bank Commodity Price Data (The Pink Sheet)*. Retrieved from <http://www.worldbank.org/en/research/commodity-markets>
- World Bank. (2018b). *World Development Indicators*. Retrieved from <http://databank.worldbank.org/data/reports.aspx?source=world-development-indicators>

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- ⁱ Version: 6.20.2.
- ⁱⁱ This measure is better for measuring Venezuelan living standards since it takes into consideration the varying international purchasing power of exports, mainly oil (Hausmann & Rodríguez 2014: 19).
- ⁱⁱⁱ The court's decision was criticized by the prosecutor general of Venezuela, Luisa Ortega Díaz, who was thereafter dismissed by the National Constitutional Assembly, established in 2017 with the aim of drafting a new constitution (Bracho, 2017). The constitutionality of this assembly is disputed, and it is not recognized by over 40 countries, including Argentina, Brazil, Colombia, the United Kingdom, and the United States (Infobae, 2017). The institutional crisis of 2017 was accompanied by several demonstrations, which left about 127 dead (Niño, 2017).
- ^{iv} This literature stems from the seminal contribution of Nordhaus (1975). For a recent literature review on the PBC, refer to Dubois (2016).
- ^v Own calculations based on data from Feenstra et al. (2015) and the World Bank (2018b).
- ^{vi} See for instance Agénor (2016) and Matsen and Torvik (2005).
- ^{vii} Own calculations based on data from the World Bank (2018b).
- ^{viii} Brender and Drazen (2005, p. 1278) define an established democracy as one having had competitive elections for the entire 1960-2001 period. Only Colombia, Costa Rica and Venezuela in Latin America qualify as such.
- ^{ix} The only case study found on the political cycle in Venezuela fails to consider the influence of oil prices in the political cycle. See Muñoz (2006).
- ^x Nieto-Parra and Santiso (2012) obtain a similar result for the 1990-2006 period.
- ^{xi} Shi and Arora (2012, p. 472) find evidence of short-lived bubbles in oil prices during the 1985-2010 period in 1986, 1989, 1990, 1996, 2000, 2008 and 2010.
- ^{xii} See for instance Alesina, Campante and Tabellini (2008) or Karl (1997).
- ^{xiii} See Figure 2's note.
- ^{xiv} Own calculations based on data from BCV (n.d.-b) for 1999-2015 and the World Bank (2018b) for 2016.
- ^{xv} Based on data from Correo del Orinoco (2013) and El Demócrata (2015). During 2016, Maduro ruled by decree thanks to several emergency decrees approved by the *Tribunal Supremo de Justicia*, despite the parliament's repeal of the decrees (Diario Las Américas, 2017).
- ^{xvi} Excluding high-income economies.
- ^{xvii} Equivalent to about 2018 USD 13 billion. Own calculation based on U.S. Bureau of Economic Analysis (2018).

^{xviii} Equivalent to about 2018 USD 8.3 billion. Own calculation based on U.S. Bureau of Economic Analysis (2018).

^{xix} Based on the oil exports revenues given in Palma (1989, p. 25). Equivalent to about 2018 USD 45.6 billion. Own calculation based on U.S. Bureau of Economic Analysis (2018).

^{xx} Based on figures in Grayson (1985, p. 395). This amount represents almost 2018 USD 1.5 billion. Own calculation based on U.S. Bureau of Economic Analysis (2018).

^{xxi} The Congress was the bicameral Venezuelan parliament of the time.

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