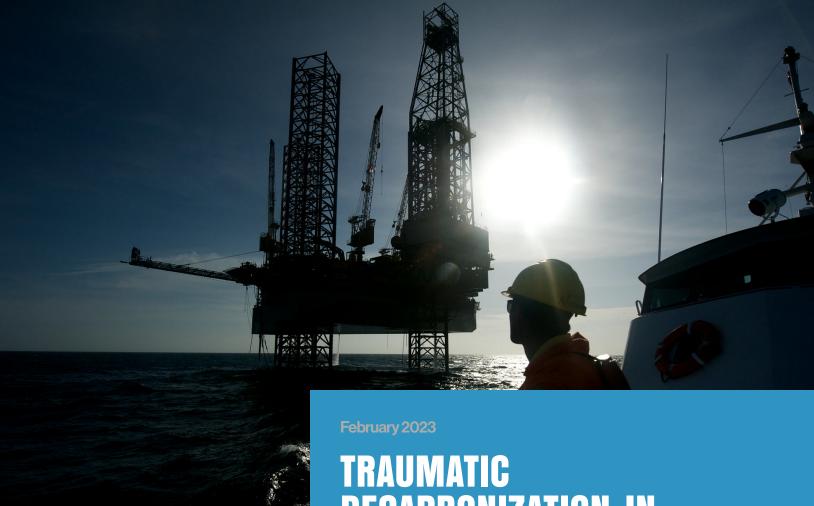
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TRAUMATIC DECARBONIZATION IN VENEZUELA AND ECUADOR

Katrina Burgess and Javier Corrales



ABOUT

Carbon Compacts, Decarbonization, and Peace in Fragile States in Africa and the Middle East Project

The Carbon Compacts, Decarbonization, and Peace in Fragile States in Africa and the Middle East project was a 21-month research project led by the World Peace Foundation at Tufts University and funded by the United States Institute for Peace. Our goal within the project was to analyze how traumatic decarbonization—a rapid loss of oil rents—would affect peace processes and political settlements in fragile oil-producing states in Africa and the Middle East. Under this project, a series of cross-cutting analyses and case studies (Iraq, Nigeria, South Sudan, Sudan, and Venezuela/Ecuador) were produced and are available at The World Peace Foundation website (https://sites.tufts.edu/wpf/carbon-compacts-decarbonization-and-peace-in-fragile-states-in-africa-and-the-middle-east/)

World Peace Foundation

The World Peace Foundation, an operating foundation affiliated with The Fletcher School at Tufts University, aims to provide intellectual leadership on issues of peace, justice, and security. We believe that innovative research and teaching are critical to the challenges of making peace around the world and should go hand-in-hand with advocacy and practical engagement with the toughest issues. To respond to organized violence today, we not only need new instruments and tools—we need a new vision of peace. Our challenge is to reinvent peace.

AUTHORS

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INTRODUCTION

When global oil prices fell precipitously in 2014, Venezuela and Ecuador were both ruled by left-populist parties reliant on massive oil rents. And yet their governments responded very differently to the oil shock. Venezuela became more repressive and authoritarian while failing to take measures to prevent a complete collapse of the economy. The regime also turned heavily to a new form of extractivism (mining) and greater reliance on illicit transnational trade (of gold and drugs). By contrast, Ecuador liberalized politically while introducing some market-oriented reforms, including rapprochement with the IMF. Non-oil extraction and illicit trade also expanded but as a localized phenomenon rather than as a central policy priority of the state.

This paper seeks to explain why Venezuela and Ecuador took such divergent paths despite their similar starting points. Part of the answer may lie in Venezuela's much higher dependence on oil exports and royalties before the crisis and much deeper collapse in oil production after the crisis compared to Ecuador (see Table 1). But this explanation is not sufficient for two related reasons. First, as Table 1 shows, oil rents accounted for roughly the same share of GDP in both countries at the time of the price collapse. Second, the differences in oil dependence and production are endogenous to other political variables that we argue are behind these divergent paths. Specifically, we identify two such variables: the cohesion of the ruling party and the reach of the military/coercive apparatus. We argue that differences across these variables at the time of the oil shock explain why the two regimes responded so differently.

Table 1. Selected Indicators of Oil Economy, 2014 – 20201

	VE	NEZUEL <i>A</i>	1	ECUADOR			
	2014	2017	2020	2014	2017	2020	
Oil production (thousands of barrels per day)	2,500	1,997	527	556	531	479	
Annual oil export revenue (billions USD)	60.1	25.1	13.1	13.3	6.9	5.3	
Fuel as share of merchandise exports (%)	97.7*	n.d.	n.d.	51.6	36.3	39.2**	
Oil rents as share of GDP (%)	11.4	n.d.	n.d.	11.1	5.0	6.7**	
Manufacturing, value added as share of GDP (%)	12.1	n.d.	n.d.	13.8	14.8	15.6	

^{* 2013 ** 2019}

We begin with a brief overview of the regimes in place at the time of the oil shock, including their degree of dependence on hydrocarbons. We then describe each regime's response and link it to our variables. We conclude with a broader discussion of the regime effects of traumatic decarbonization, particularly the conditions under which competitive authoritarian regimes built on oil rents are likely to become more democratic or more authoritarian.

EIA (2021a), EIA (2021b), The Global Economy.com (2021), World Bank (2021a), World Bank (2021b), author estimates based on data from Banco Central de Ecuador and OEC World. Oil rents are calculated as revenue minus the cost of production.

Setting the Stage

When oil prices crashed in 2014, Venezuela's president, Nicolás Maduro, had recently been elected by a slim majority in a snap election following the death of his predecessor, Hugo Chávez. Maduro inherited a competitive authoritarian regime built on the cult of Chávez, an array of legal reforms and informal practices that eliminated checks and balances, and massive redistribution of oil rents to the military, cronies, and the poor through social programs (Corrales and Penfold 2015). He also inherited an economy that was heavily dependent on oil revenues as shown in Table 1.

This competitive-authoritarian regime was erected in the 2000s. After winning his first election in late 1998, Chávez took advantage of deep dissatisfaction with Venezuela's political and economic elites to cripple the traditional parties, change the constitution, obtain control of the courts, place the military at the center of power, and challenge US influence in the region by siding with governments and movements that embraced anti-U.S. stands. At home, he built a new ruling party, eventually consolidated under the name United Socialist Party of Venezuela (PSUV), along with local institutions ostensibly designed to promote participatory democracy but often serving as the eyes and ears of the regime as well as oil-rent distribution centers. Venezuela's longstanding institutions of separation of powers and respect for pluralism declined rapidly. Abroad, he shared oil wealth and ideas with a coalition of like-minded movements or friendly regimes and created new regional institutions such as the Bolivian Alliance for the Americas (ALBA) and PetroCaribe to rival US-dominated ones such as the Organization of American States and the Inter-American Development Bank.

At first, opposition to these changes was largely concentrated among Venezuela's discredited political parties and the upper-middle classes, who opposed Chávez's concentration of power and sought to remove him undemocratically through street protests and a failed coup in 2002. By 2006, discontent spread to include middle class students and professionals, pro-democracy leftists, and even sectors of Venezuela's poor. Rather than changing direction, Chávez grew more authoritarian (Hsieh et al 2011)² and embarked on a massive nationalization campaign along with other stifling restrictions on private enterprise. Despite the oil boom, the economy began to falter as a result of fiscal and monetary mismanagement and politicization of the national oil company (PDVSA). Consumer shortages and energy blackouts added to the stresses of daily life in a country already wracked by one of the highest homicide rates in the world (Puente 2016). Though Chávez remained intensely popular among large sectors of Venezuela's poor, his electoral majorities shrank as the opposition broadened its appeal.

By the time Chávez died in 2013, the regime was already vulnerable and could easily have collapsed under the weight of Maduro's lackluster personality, serious macro and microeconomic problems, and an increasingly unified and mobilized opposition. And, yet, the regime dug in its heels and survived despite failing to address the structural problems with the economy. It did so by embracing full-blown authoritarianism and resorting to both licit and illicit mining as well as tolerance for some degree of drug trafficking in collaboration with criminal organizations within and outside the Venezuelan state.

Ecuador was similarly governed by a left-populist regime at the time of the oil shock. Its recently reelected president, Rafael Correa, had followed the Chávez political playbook during the oil boom, though less so in terms of economic policy. Like Chávez, he capitalized on high oil rents

² A notable step in this direction was the forced closure of an independent television station in 2006.

and widespread disillusionment with the country's traditional parties to transform the country's political system into a semi-authoritarian regime, challenge US hegemony in the region, and redirect spending toward social programs. On the economic front, he was less radical than Chávez. He preserved the dollarization model inherited from his predecessors and left the private sector mostly alone. Nonetheless, he restructured Ecuador's debt without IMF oversight, aligned closely with anti-U.S. regimes, and deepened ties with China as an alternative source of financing and markets. And, like Chávez, he increased the country's dependence on oil as shown in Table 1.

On the political front, Correa carried out what he called a "citizens' revolution" with a new constitution in 2008 and a new bureaucracy. The constitution had some democratizing elements, including declaring Ecuador a multicultural nation and guaranteeing a number of rights, such as the right to "buen vivir" (the good life), a Quechua-inspired philosophy of living well through community engagement and a robust ecosystem. But it also extended state control over the economy and granted more power to the executive (Corrales 2018). Correa's own party, Alianza PAIS (AP), dominated the Constituent Assembly and continued to win healthy majorities in a country accustomed to high levels of party fragmentation and electoral volatility (Conaghan 2008). Correa also stifled the private media, restructured the judicial system, and staffed the courts with loyal followers (de la Torre 2013), thereby removing other checks on his power.

Correa was unpopular among some economic elites, namely in banking, but the primary victims of his policies were dissenting social movements and political parties, including those on the left. He had an especially contentious relationship with Ecuador's well-organized indigenous movement. Initially close allies, the indigenous movement broke with Correa over his authoritarian policies and increasing reliance on oil and mining. Correa defused this opposition with a mix of repression and divide-and-conquer strategies such as the formation of parallel organizations (de la Torre 2013). As long as he retained his charismatic appeal and delivered economic benefits through generous public investment and social spending, his popularity remained high.

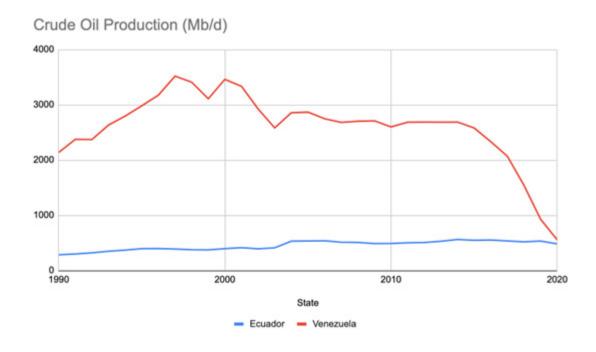
In contrast to the faltering *Chavista* regime under Maduro, Correa's hold on power appeared robust on the eve of the 2014 oil price collapse. And, yet, just a few years later, the ruling party was in shambles, and Correa was in self-imposed exile in Belgium. Under pressure not to change the rules to run for a third term, he chose a successor, Lenín Moreno, who won the 2017 election and then broke with Correa. Rather than resorting to generalized repression and illicit revenue generation, Moreno chose to respect – and even strengthen – some (though not all) institutional limits on his power while exercising fiscal restraint and shoring up the non-extractivist sectors of the economy. Though several authoritarian practices remained in place, Ecuador's political system shifted in a more democratic direction.

Oil Price Shock as a Critical Juncture

As Table 2 shows, both countries suffered a major blow when global oil prices fell from \$108/barrel in 2013 to \$52/barrel in 2015 (Statista 2021), although Venezuela's crisis had started earlier, became deeper, and lasted longer than Ecuador's. Unlike other petro-states, Venezuela began its decline in oil production during the boom decade (2003-2013). One of nearly 600 stateowned enterprises (Anzola 2018), PDVSA was wracked by political mismanagement and massive underinvestment. Daily oil production fell from a peak of 3,461 million barrels/day (Mb/d) in 2000

³ They fell further to \$44/barrel in 2016 (Statista 2021).

to 2,687 Mb/d in 2014 before crashing to an historic low of 555 Mb/d in 2020 (EIA 2021). By 2017, Venezuela's economy had shrunk by 56%, export revenue had fallen to below its 2000 levels, and inflation would reach an eye-popping 65,374% the following year (IMF 2021). The unemployment rate grew rapidly, and more than 92% of households found themselves living in poverty.



The economic catastrophe was so profound that it inspired tragic parodies such as the "Maduro Diet," a reference to widespread food shortages and dependence on government assistance to get basic meals like rice and milk. Reports emerged of the desperately hungry rummaging through trash piles for food scraps and overdosing on cyanide poisoning from ingesting raw cassava (yuca) (Rendon 2018). Some reports estimated that the average Venezuelan lost 24 pounds in 2017 and that 300,000 children were at risk of dying from malnutrition while mortality rates for children skyrocketed across all age groups (*Ibid*). Most of the country's macroeconomic indicators remained bleak, and local surveys and reports suggest that living conditions continued to deteriorate.⁴ An estimated 5.4 million Venezuelans have fled the country since the crisis began (UNHCR 2021), one of the largest refugee crises in the world.

The oil shock had a less severe but still politically relevant impact on Ecuadorans. In 2015, the economy shrank by 2% (IMF 2021), and the share of the population living on less than \$3.2/day rose from 8.6% to 9.4% (Romero 2021). Export revenues fell dramatically while unemployment increased, affecting the millions of Ecuadorans who had achieved a higher standard of living during the oil boom. Appreciation of the real exchange rate, driven by a strong dollar, further damaged the country's terms of trade, especially in the non-oil sector (IMF 2015). Correa, who prided himself on being the people's economist and initially boasted about his economic success, called it a "perfect storm'—an unpredictable, destructive force that had befallen the nation and its resources" (Lyall and Valdivia 2019, 356).

⁴ The Venezuelan government stopped publishing statistics after 2014.

Unlike in Venezuela, however, most indicators began to improve in 2016. Although total oil revenue fell by 77% between 2015 and 2020 (Banco Central de Ecuador), Ecuador entered the crisis with a smaller but more productive oil industry. Upstream infrastructure investment by the country's state-run oil companies, Petroecuador and Petroamazonas, yielded a steady rise in Ecuador's daily oil production, which reached a peak of 561 million barrels per day (Mb/d) in 2014 (EIA 2021a). As shown in Table 1, the price collapse caused a slight downturn in oil production but nowhere near as severe as in Venezuela. Meanwhile, Ecuador's still-intact private sector was better positioned to take up some of the slack, as illustrated by the rise of manufacturing value added as a share of GDP, and dollarization kept inflation low. Combined with measures taken by the government to stem the crisis, these stronger foundations enabled Ecuador to recover much more quickly than in Venezuela.

Table 2. Selected Socio-Economic Indicators, 2014 – 2017⁵

	VENEZUELA				ECUADOR					
	2014	2015	2016	2017	2018	2014	2015	2016	2017	2018
Total GDP (billion USD)	203.8	323.6	279.2	143.8	98.4	101.7	99.3	99.9	104.3	107.6
Export value index (2000 = 100)	222.8	111.3	79.6	95.3	102.7	522.2	372.1	341.0	388.1	439.0
Inflation, average consumer prices (% change)	62.2	121.7	254.9	438.1	6,5374.1	3.6	4.0	1.7	0.4	-0.2
Unemployment rate (%)	6.7	7.4	20.9	27.9	35.5	3.8	4.8	5.2	4.6	3.7
Households in poverty (%) ⁶	29.5	33.1	n.d.	n.d.	n.d.	22.5	23.3	22.9	21.5	23.2
Infant mortality rate (per 1,000 live births) ⁷	15.4	16.4	21.0	n.d.	n.d.	13.4	13.0	12.7	12.5	12.3
Total population (millions)*	30.2	30.6	30.7	30.4	28.9	16.0	16.3	16.5	16.8	17.0

Comparing Economic Responses

Venezuela and Ecuador responded very differently to the economic shock of lower oil prices. Maduro allowed shortages and inflation to run rampant while making little effort to resurrect the oil economy. Instead, he turned to non-oil extraction, particularly illegal mining and drug trafficking. By contrast, Correa took steps to stem the hemorrhaging of the economy even while resisting across-the-board liberalization and closer ties with the IMF. His successor, Lenín Moreno, made a more dramatic break with past policies by tightening adjustment, strengthening ties with West-

⁵ IMF (2021); World Bank (2021c)

The World Bank stopped reporting these statistics after 2015 but this figure had reportedly increased to 94 percent by 2020 (Universidad Católica Andrés Bello 2021).

Pecause of incomplete data, the United Nations Inter-agency Group for Child Mortality Estimation has been unable to provide complete data on Venezuela. In 2017, the infant mortality rate estimate ranged from 18.84% to 23.49% (United Nations Inter-agency Group for Child Mortality Estimation 2021).

ern capital, and revitalizing traditional sectors such as manufacturing and services. Both regimes increased investment in mining, but Ecuador did so to a lesser degree and with more emphasis on deals with formal mining corporations.

1. Macroeconomic and sectoral policies

Despite the near-collapse of Venezuela's oil-dependent command economy, Maduro did little to alter the Chávez model of expanded state presence, widespread price controls, and strong restrictions on the private sector at least until 2020. Instead, he adopted a few mostly orthodox monetary and fiscal adjustments that only deepened the recession: a series of massive devaluations (which produced more capital flight), reconversion of the currency by dropping zeros (which did nothing to stop inflation), and rationing of foreign currencies (which hurt the private sector's ability to import) and consumer goods (which accentuated shortages). He also cultivated closer ties with Russia and Turkey to compensate for declining loans from China.

When the oil shock hit, Maduro significantly diminished the supply of dollars channeled to the private sector for imports. Without the ability to import, the already hyper-regulated business sector's capacity to produce or sell shrank even further. Business bankruptcies escalated, and inflation accelerated. From every angle, business conditions became dismal. The only groups that survived, and in fact, did quite well, were business groups with close political ties to the government whose monopoly power and contracts with the state enabled them to make money while still underdelivering on goods and services for the rest of the population.

The Ecuadoran regime was much quicker to adopt adjustments and reforms, starting under Correa but deepening under Moreno. Correa slashed spending and raised taxes to cover the state's revenue losses. He also reportedly signed a deal that committed 80% and 90% of Ecuador's future oil production to China until 2024 to secure new loans immediately after the price collapse (IMF 2015). Moreno took further steps to stem the crisis. While retaining the China deal, he opened free trade talks with the United States and pivoted toward the IMF as a source of external financing.8 In March 2019, he negotiated a \$4.2 billion IMF loan conditioned on austerity measures such as tax reform and the removal of fuel subsidies. Despite withdrawing the latter in response to violent protests, a new deal was reached totaling \$6.2 billion with an immediate disbursement of \$2 billion in addition to several hundred million that had already been distributed. These measures did little to address Ecuador's resource dependence or inequitable income distribution, but they helped the country weather the economic storm much better than in Venezuela.

2. Non-oil extraction

Venezuela and Ecuador both turned to ore mining as a way to substitute oil revenues that quickly dried up after the price collapse. But the ways they did so were entirely different. Whereas Ecuador developed its mining sector through international partners and tried to discourage informal mining practices, Venezuela bet heavily on mining and allocated mining concessions to quasistate-owned enterprises and nefarious non-state actors. Maduro used mining as the country's new economic pillar, allowed illicit activity to dominate the sector, and used mining revenues to fill pockets of military leaders, ruling party officials, criminal gangs which included drug dealers, as well as guerrillas from Colombia operating in Venezuelan territory. In other words, mining in Venezuela became central to fund the rise of a new narco-mining-mafia dictatorship.

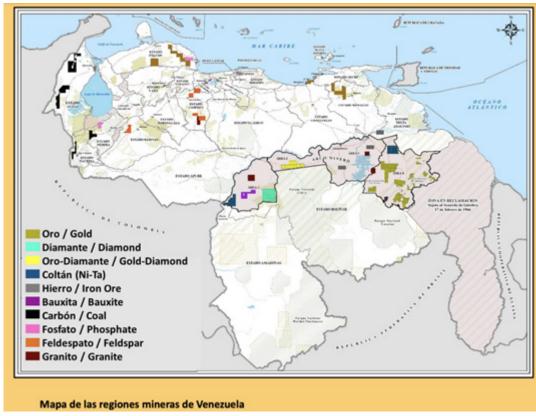
This oil-for-credit deal was the primary cause for the swift resignation of Ricardo Merino from the position of Petroecuador CEO in November 2020 after less than three months on the job (Silva 1AD).

Before continuing, it is worth noting that there is almost no reliable data on the Venezuelan mining industry after 2014. Most government entities stopped reporting reliable numbers, given the large amount of illicit activity, and violent criminal activity has made it all but impossible to report from inside Venezuela. Even when studying the official Bolivarian Government Investor Prospectuses and Reports, readers will find "strategies for growth and development" as well as detailed outlines of the capital investment needed for certain mining areas to reach productivity, but few mentions of success or current production metrics (Venezuela Export 2019). What we have gathered is a compilation of various journalistic, statistical, and government reports and analyses that, when pieced together, tell a more complete story.

Rosales (2019) aptly argues that Venezuela's turn to mining extractivism and smuggling after the oil shock was the result of "statization" (overexpanded state leading to crisis) and "de-nationalization" (inability of the state to control mining territories). Venezuela's semi-legal mining industry boomed in 2016 after the oil price collapse. This expansion was led by the regime's designation of the mining sector as a core source of revenue in the Venezuelan economy. The mining engine was spearheaded by the opening up of the *Arco Minero* (Orinoco Mining Arc), a strategic development zone that is rich in gold, copper, diamond, coltan, iron, bauxite, and other minerals. The designation had important results in that it not only called for increased development in a mineral-rich area, but it also created a special military zone for the newly established Anonymous Military Company for Mining, Oil and Gas Industries (CAMIMPEG) to "guarantee the continuity of mining activities and block resistance movements that might obstruct operations...placing the military sector squarely and openly in the extractive business" (World Rainforest Movement 2021).

One result has been a massive discrepancy between official and unofficial export numbers. Government figures state that 25.4 tons of gold were extracted in 2019 while opposition figures estimate closer to 80 tons (Voz de América 2019). While the number is likely to be somewhere in this range, it's not unreasonable to conclude that it skews closer to the 80 tons number given that 1,899 illegal mining sites have been detected in Venezuela, more than any other country in South America, as well as about 189,000 workers in the mines of the Venezuelan Amazon (Amazon Georeferenced Socio-Environmental Information Network 2020).

Through a complex web of extraction, transportation, and bribery that involves artisan miners, gangs and guerrillas, members of the military, and high-ranking government officials, legally and illegally mined ores are extracted and exported to trade partners like China, Turkey, and the United Arab Emirates (Rendon, Sandin, and Fernandez 2020). The extensive military presence, combined with the broad network of official SOEs and unofficial non-state actors friendly to the Venezuelan regime, has put the development of the Arco Minero and much of the mining industry overall in the hands of the regime. While official accounts say that the state only has up to a 55% stake in mining operations via SOEs like Minerven, unofficial state participation is much higher given the preference of official and unofficial SOEs as well as private entities to offer bribes and kickbacks to ensure smooth operation. That said, mining and smuggling activities are carried out by a fragmented network of state and non-state, national and transnational, licit and illicit, and organized and unorganized actors that often escapes the control of the state.



Source: Government of the Bolivarian Republic of Venezuela, "Venezuela abierta al futuro: Motor Minero" Oferta exportable y de inversions (Export and Investment Offer), 2019.

As one might expect, the high degree of participation in the mining sector—directly or indirectly—by a fairly dysfunctional state has resulted in an anarchization of the industry, widespread corruption, and an environmental catastrophe (Martiz 2018). Even regime allies like state governors, who were once promised windfalls for their respective state budgets due to increased mining revenues, have failed to see their loyalty and partnerships rewarded (*Ibid*). Once operations were up and running, the government secured additional revenue and loyalty through bribes, revenue funneling, and direct control over some gold mines with little attention paid to those outside close-knit circles.

Although drug trafficking, another black market source of revenue for the regime, was reported frequently before the oil price collapse, this sector exploded after the price collapse. Cocaine trafficking between the Cartel of the Suns, an alleged cartel composed of members of the Venezuelan military and government (InSight Crime 2021), and former ELN and FARC militants grew to unprecedented levels, to the point that the U.S. Department of Justice accused the country's top leaders of running a "narco-state" in 2020 (United States District Court, Southern District of New York 2020). With oil production at record lows and illicit economic activities funding the regime's activities, Venezuela looks to have little incentive to change from its current path.

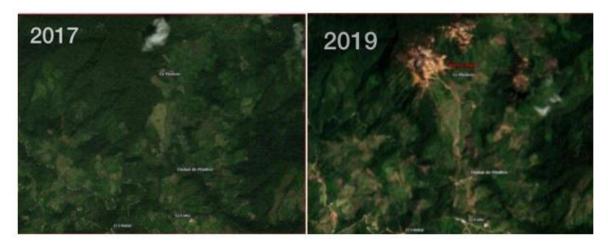
Ecuador also turned to mining extractivism, but through more formal mechanisms and processes than in Venezuela. Mining had played a small role in the economy since the 1980s, and Ecuador increased investment and production significantly after the collapse of oil prices. Copper, gold, and other forms of ore mining across Northern Ecuador provided a windfall in the years after the price of oil collapsed (Harris 2020). Between 2016 and 2017, the Ecuadorian Ministry of Mining

increased exploratory mining concessions across the country from roughly 3% to around 13% of the country's continental land area, distributing concessions to a mix of Canadian, Australian, Chinese, and other multinational companies as well as the state SOE, Ecuacorrientes (Roy et al. 2018). The result was a near tripling of total mining exports from 2016 to 2020, with the first large-scale copper and gold mines starting production in 2019 in a joint venture between SOE Ecuacorrientes and Lundin Gold (Harris 2020). It is estimated that there are now 32,000 people in Ecuador working in mining, with about 11,000 depending on artisanal or small-scale mining (PlanetGOLD 2020). Nonetheless, this number pales in comparison to the roughly 500,000 workers involved *only in illegal* mining operations in Venezuela (Rendon, Sandin, and Fernandez 2020).

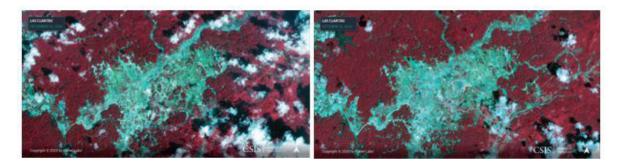
These efforts were not without controversy. Despite their leftist credentials, Correa and Moreno allowed the widespread neglect of environmental and indigenous rights in extractivist activities. Indigenous communities decried several of the concessions as unconstitutional and broaching on human rights abuses as some companies evicted locals from their homes to access the ore. One project, in particular, was riddled with controversy from the start: the San Carlos Panantza mining project. The project is owned by ExplorCobres S.A., a Chinese subsidiary in Morona Santiago, and has been paralyzed since 2016 because of opposition from the Shaur-Achuar Nankints indigenous community. The resistance was initially triggered by the displacement of eight families and the elimination of the ancestral village of Nankints, leading to a violent attack on two mining camps. In 2017, additional evictions by the government generated fierce backlash, followed by a state of emergency order that led to a government crackdown on protests (Aguilar 2017). In March 2020, one of the mining camps from the 2016 attack was hit once again with guns and heavy weaponry, including dynamite (Harris 2020). Although legal attempts to halt the project have been unsuccessful, indigenous communities are now trying a never-before-used tactic by filling a formal complaint against Ecuador in the International Labor Organization.

Nor has all non-oil extraction in Ecuador been carried out by legal entities. Illegal mining grew rapidly in response to higher gold prices in 2011, the collapse of oil prices in 2014, a major earthquake in 2016, and the 2016 Colombian Peace Deal. Local gangs and former Colombian guerrillas (FARC and ELN) encroached on concessions to set up illegal mining operations and sell their commodities through corrupt channels that mix the illegally extracted ores with legally extracted ones. Illegal mining is concentrated near Ecuador's border regions, particularly in the northern provinces of Esmeraldas, Carchi, and Imbabura in addition to Zamora Chinchipe y Morona Santiago in the south. An illustrative example is the illegal mining operations in La Merced de Buenos Aires parish in Urcuquí from 2017 to 2019. Initially thought to have only about 50 illegal miners, reports indicated between 7,000 - 10,000 illegal miners by 2019 in the parish with a population of only 2,000 (Redacción Primicias 2019).

That same year, government operations against illegal mining rose to record highs in response to a June 2019 skirmish between the government and local gangs in Buenos Aires that left over 19 injured. President Moreno declared a state of emergency and deployed 2,400 armed forces into Buenos Aires to arrest miners and criminal gang members for illegal mining operations as well as other violent, sexual, and white-collar crimes (Secretaría General de Comunicación de la Presidencia 2021). One government press release estimates that, between January 2018 and July 2019, government authorities arrested 809 people in connection to the mining and dismantled 92 criminal groups who controlled mines and engaged in human trafficking, tax evasion, smuggling, and murder (Todd 2019).



La Merced de Buenos Aires, Imbabura 2017-2019



Las Claritas mining compound, allegedly run by illegal armed groups, between 2016 - 2019

Nonetheless, the scale of non-oil extractivism and illicit trade in Ecuador is far smaller than in Venezuela. While local police and judicial officials have been accused of corruption and participating in illegal mining operations (Bargent and Bonilla 2019), state involvement is a localized phenomenon without the direct sponsorship or participation of high-level government officials. In contrast, high-ranking government officials in Venezuela have been directly linked to and regularly profit from illegal mining and other illicit economic activity.

Explaining the Divergent Paths

What explains these divergent responses in Venezuela and Ecuador to a similar exogenous shock? We argue that the answer can be found in two places: (1) the cohesion of the ruling party; and (2) the reach of the military/coercive apparatus. By the time the crisis hit Venezuela, the ruling party was dominated by hard-liners with a visible presence in poor neighborhoods; the military was deeply entrenched in state agencies and illicit activities; and criminal organizations controlled vast areas of Venezuela's territory. In Ecuador, by contrast, the ruling party was weakly consolidated (and would eventually split); the military was a relatively peripheral actor; and criminal organizations operated at the margins of the state.

Cohesion of Ruling Party

Chávez and Correa both built hegemonic ruling parties able to win presidential elections by comfortable margins. They bolstered this electoral advantage with constitutional reforms and other rule changes to tilt the playing field against the opposition along with budgetary outlays made possible by the massive aggregate demand stimulus generated from the oil windfall. In particular, they increased spending on social programs for the poor (as well as the military and various economic elites), which produced declines in poverty and inequality in both countries for a while. Both parties dominated the national legislature and won the largest share of local elections under their leadership.

Differences within the ruling party help explain regime differences to the oil shock. Venezuela's ruling party had developed a strong cult of Chávez and closed ranks around his hard-line approach to politics and economics. When the crisis hit, hard-liners within the party represented the strongest pole, led by second in command, Diosdado Cabello. For a while, it seemed Chávez was going to leave power to Cabello, considering his pull within Chavismo. The predominance of this radical group created strong gravitational forces that pulled Maduro toward siding with hardliners in favor of greater authoritarianism. In contrast, Ecuador's ruling party was experiencing a fissure between pro-Correa and anti-Correa factions that was sparked, in part, by Correa's attacks on leftist parties and civil society organizations. These divisions constrained Correa from pursuing reelection in 2017 and then provided Moreno with the backing he needed to break with Correa and move in a more democratizing direction.

Maduro's strategy to keep the party behind him was to align closely with the policies of his predecessor (i.e., reaffirm the status quo) and court Cabello, who controlled an important part of the ruling coalition: elements of the military and important illicit business connections with cronies. Had Maduro not sided with Cabello and the hard-liners, his term could have been in jeopardy because Cabello was in a strong institutional position to unseat him from within. Maduroa also lacked the option of forging alliances with the private sector, which had been decimated by the regime's policies with the exception of a few cronies who had grown rich through their ties with the state.

Other factions within the ruling party also closed ranks around Maduro for two reasons. First, he granted them "power quotas" (*cuotas de poder*) and increased autonomy within the regime. Specifically, the military got further access to economic activities while civilian leaders holding public office or management positions in state-owned enterprises got more freedom to act with impunity. Second, he reassured party members that they were politically safe by taking a hardline approach to the opposition. Faced with massive street protests in 2014 and a landslide victory by the opposition Democratic Unity Roundtable (MUD) in the 2015 legislative elections, he employed authoritarian tactics to retain his party's control. In addition to harshly repressing demonstrators, he crippled the opposition-controlled National Assembly by stripping its budgetary oversight powers and nullifying nearly all legislation passed by its members. In 2017, he convened a Constituent Assembly composed entirely of supporters that would quickly supersede the National Assembly as the main lawmaking body.

Competitive authoritarian regimes concentrate power, erode checks and balances, restrict political rights of opponents, and change the rules of the system to favor the ruling party (Levitsky and Way 2010).

¹⁰ There is debate whether the rates of decline are commensurate with the windfall received from oil (see Grier and Maynard 2016{Grier, 2016 #1582}; Rodríguez 2008{Rodríguez, 2008 #625}), but the political impact of falling poverty and inequality nonetheless accrued to the benefit of the ruling parties.

The authoritarian option was less inevitable in Ecuador than in Venezuela. This is because the ruling party experienced yet another type of political shock that was not present in Venezuela – displeasure with the president. In 2015, indigenous groups, labor organizations, and anti-tax demonstrators staged massive protests, and Correa's approval ratings dropped from 60% in January to 45% in July (EIU 2015), fueling a growing anti-Correa faction with the party. Pro-Correa hardliners thus had to contend with anti-Correa softliners convinced that he had become too corrupt, too authoritarian, and too dismissive of feminists, environmentalists, and indigenous groups. These softliners successfully pressured Correa not to seek re-election in 2017. And when Moreno became president, they offered him greater possibilities of breaking with Correa (and thus the hardliners).

In other words, after the oil shock, the ruling party in Ecuador experienced the proverbial hard-versus soft-liners cleavage far more saliently than in Venezuela. Ecuador's hard-liners wanted little change to the economic model (that is, no IMF-style economic adjustment or rapprochement with the United States) and no negotiations for power-sharing with the opposition. If anything, they preferred turning more repressive. But they faced significant pushback within the party by soft-liners in favor of making economic and political accommodations. In addition, Moreno could rely on a robust private sector that had coexisted fairly comfortably with the ruling party. This menu of options, less available in Venezuela, gave Moreno more freedom to break with his predecessor and his policies.

Another incentive for Moreno to seek distance from Correísmo and thus the authoritarian hard-liners was Correa's continued meddling in party affairs after leaving office. Tacitly during the campaign, and overtly once Moreno became president, Correa declared distrust in Moreno. He used both social and traditional media to openly criticize Moreno's policies, which Moreno, in turn, viewed as an unwelcome attempt to curtail his autonomy. Correa's distrust compelled Moreno to turn away from him, in turn, prompting Correa to repudiate Moreno further, resulting in a reinforcing process of mutual distancing. And because there were anti-correístas available to court, Moreno gravitated toward them with a shared preference for more transparency in government.

That said, there were plenty of correístas still around during Moreno's term. Moreno's key challenge, after making the determination to de-autocratize, was to figure out how to undermine Correa's pervasive influence within his party, the bureaucracy, and society at large. He began by stripping Correa's key ally, Vice President Glas, of all his powers and accusing him of taking \$13.5 million in bribes from the Brazilian construction firm Odebrecht. Glas was sentenced to six years in prison and impeached by the legislature, and Moreno went into self-imposed exile in Belgium. Moreno then held a national plebiscite to restore term limits and prohibit any citizen convicted of financial crimes from running for public office. The plebiscite passed with 64 percent of the vote (de la Torre 2018, 83), and judicial authorities ordered Correa's arrest a few months later for failing to testify in a bribery case. In April 2020, he was found guilty of corruption, sentenced to eight years in prison (in absentia), and banned from politics for 25 years (Cabrera 2020).

Moreno could have turned more authoritarian to deal with Correa and correístas. He did try some authoritarian tactics, such as purges of the bureaucracy almost by decree. But, in the end, he was also constrained by the split within the ruling party. To challenge Correa, Moreno needed to gain the support of other groups within and outside the party, and the only available groups were more pro-democracy actors. Moreno's own standing with his party was too circumscribed to challenge the correístas independently. He needed allies. And many of these potential allies had no interest in supporting an authoritarian turn by Moreno.

Reach of Coercive-Military Apparatus

When oil prices collapsed in 2014/2015, the coercive apparatus was positioned very differently in each regime. The Venezuelan military was thoroughly entrenched in the ruling party, the state bureaucracy, and strategic economic sectors, and new paramilitary groups helped carry out policing functions. The Ecuadorian military had only a moderate stake in the economy and governance institutions. It also remained largely backstage in the country's political drama while leaving domestic security to an underfunded and disgruntled police force. These different positions had profound implications for the fate of the two regimes when faced with traumatic decarbonization.

The far stronger presence of the military in Venezuela than Ecuador represented a historical reversal of fortune. In Venezuela, civilian authorities had controlled the state and governed democratically for over forty years. While retaining some degree of autonomy and institutional power, the military largely stayed out of politics until the 1980s, when a nationalist faction led by Hugo Chávez became disgruntled with political corruption and government-imposed austerity. Lacking direct access to political power, Chávez and his allies attempted a military coup in February 1992, followed by another coup attempt in November 1992. The coups failed, but Chávez earned a broad following that helped him take office with votes rather than bullets six years later. Under his rule, Venezuela's military became thoroughly politicized and gained control of a vast economic empire that stretched into illicit activities.

By contrast, Ecuador's military had been far more interventionist and economically powerful than its counterpart in Venezuela for most of the 20th century. The armed forces either governed directly or "arbitrated between competing political factions vying for control over the Ecuadorian state" (Avilés 2009, 1551). They also played a direct role in the economy and created a vast network of military-owned enterprises (Avilés 2009; Shifter 2016). Correa attempted to reverse this pattern by asserting his authority in the political sphere and stripping the military of some of its economic prerogatives. In the process, the military lost some of its economic power and institutional autonomy but remained politically independent. Thus, by the time oil prices collapsed in 2014/2015, the two militaries had very different interests and were poised to play very different roles in their countries' political futures.

Venezuela: Civil-Military Alliance

As president, Chávez appointed military officers to his cabinet and constitutionally integrated the military into Venezuela's development strategy (Article 328). The latter enabled him to establish off-budget mechanisms of revenue generation through mineral extraction, military-run businesses, and the National Development Fund (FONDEN), whose funding came primarily from oil revenues (Tian and Lopes de Silva 2019). The Ministry of Defense took over firms in agriculture, banking, and insurance (Perera 2019), and military leaders were appointed to run dozens of stateowned companies and institutes, including PDVSA (Avilés 2009, 1559). According to one estimate, over 1,600 active or retired military officers held positions in public administration between 1999 and 2013 (Strønen 2016, 23). Chávez also mobilized the military to implement his ambitious social programs, sending more than 40,000 troops to clean up streets and schools, deliver healthcare, and rebuild infrastructure in poor neighborhoods during his first term (Avilés 2009, 1559).

Discontent within the military grew after civilian authorities ordered troops to repress mass protests (known as the *caracazo*) prompted by cuts in fuel subsidies in 1989 (Avilés 2009).

One study finds that FONDEN increased annual military spending by 26 percent and allocated around \$6.9 billion to the military to finance 39 projects between 2005 and 2015 (Tian and Lopes de Silva 2019).

Chávez also turned to pro-chavista non-state actors, known as colectivos, to serve as the regime's shock troops against protesters and dissidents. Over time, the colectivos came to resemble paramilitary groups who received impunity from the regime, often to engage in crime, in return for their coercive "services" (Bautista de Alemán 2019). Chávez extended and formalized this strategy of creating parallel institutions when he restructured the state's coercive apparatus in 2009. Two new institutions – the Bolivarian National Police (PNB) and the General Command of the Bolivarian Militia – joined the colectivos as key actors in the regime's coercive apparatus.

Meanwhile, the military's economic involvement spread from the formal economy to informal and often illicit activities such as drug trafficking and illegal mining. Although evidence is murky, there have been multiple arrests and repeated allegations of high-level military officers engaged in drug trafficking (Strønen 2016). The military's primary role in the drug trade appears to be allowing safe passage of cocaine shipments, especially in states bordering Colombia, where Chávez set up military operations after the 2002 coup attempt (InSight Crime 2021). Journalists and defectors also report military officers hoarding and reselling goods in informal domestic markets, smuggling goods across borders, and engaging in fraudulent export-business activities using favorable exchange rates with the tacit support of the state {Ebus, 2021 #2058}. By the time Maduro took office, the military was firmly entrenched in these sectors and poised to capture the associated rents when oil prices crashed and food scarcity created new smuggling opportunities (Tian and Lopes de Silva 2019).

Ecuador: Declining Military Influence

Correa also altered civil-military relations but mostly in the opposite direction of diminishing the military's social and economic role while constraining its institutional autonomy. Though he shared the military's anti-neoliberal, developmentalist agenda, he was an outsider who viewed the military as a potential challenger to his centralizing project. He signaled his intentions early in his first term by breaking tradition to appoint a civilian as his first minister of defense. He went on to eliminate compulsory military service, remove references to the military's tutelary role from the constitution, and form a truth commission to investigate military human rights abuses (Shifter 2016). He also challenged the military's economic prerogatives with a constitutional provision prohibiting the armed forces from owning companies not directly related to defense.

The military pushed back against these encroachments but ultimately accepted them in return for concessions. Correa allowed control of PetroEcuador to remain in the hands of the navy and stood by while the military transferred around 150 non-defense military corporations to the Social Security Institute of the Armed Forces (ISSFA), whose revenues benefit the military despite not being under its direct control (Shifter 2016). He also approved pay increases, arms purchases, and targeted promotions (Reuters Staff 2008). In return, the military protected him during a tense and violent standoff with striking police offers in 2010 and exercised restraint after a very public spat between Correa and the high command in 2016.14 They also stayed in their barracks amidst protests by military pensioners against cuts in ISSFA's budget.

¹³ He also relied on informants on the neighborhood communal councils to provide intelligence on opposition activities.

In response to a public protest by the military's high command at a trial hearing for human rights violations, Correa ordered the ISSFA to return \$41 million it had earned from a plot of land in Guayaquil. When the high command refused to comply, he fired them.

These divergent trajectories in Venezuela and Ecuador go a long way toward explaining the distinct regime outcomes of traumatic decarbonization. Maduro had the perfect instrument for autocratic survival: a highly politicized military with vested economic interests and well-established smuggling networks in non-oil sectors accompanied by paramilitary groups that could ramp up repression as economic conditions deteriorated. This parallel coercive apparatus influenced decarbonization in two ways: 1) by partnering with the state to engage in predatory mining and illegal smuggling, and 2) by helping to repress dissent (i.e., facilitate the turn to authoritarianism). Correa had no such instrument. Instead, he faced a largely tamed but politically independent military with little capacity to generate non-oil rents and reluctant to engage in mass repression in defense of the regime. He also lacked a loyal police force and had never cultivated a parallel coercive apparatus comprised of gangsters, militias, paramilitaries, or armed civilians. Moreno inherited these constraints, as evidenced by the military's resentment when asked to repress demonstrations against the removal of fuel subsidies in 2017 (Pion-Berlin and Acácio 2020). As a result, Ecuador's leaders had limited incentives and opportunities to move in a more autocratic direction in response to the oil shock.

CONCLUSION

Venezuela and Ecuador offer an ideal structured-comparison to assess regime reactions to oil shocks. At the time of the 2013-15 shock, the two countries shared similar structural and institutional conditions: dependence on oil and a semi-authoritarian regime with leftist-populist leanings. Although Venezuela was a larger petro-state, both countries had become increasingly reliant on oil during the oil boom. The shock had similar effects in both cases: it left a huge fiscal crisis and a decline in the ruling party's electoral competitiveness. Suddenly, these regimes needed to find alternative sources of revenues, and both relied on new forms of extractivism. Neither case made strides in de-carbonizing their economies. Beyond that, however, their overall reactions were different. Venezuela reinforced authoritarianism whereas Ecuador liberalized a bit. Venezuela reinforced the pre-existing command economy whereas Ecuador turned toward more market-oriented policy responses. Venezuela embraced mining extractivism in collaboration with illicit actors as its new model of development, whereas Ecuador relied far less on it.

Our main contribution has been to identify two political factors that help explain this divergence in response. The ruling party in Venezuela was dominated by hardliners; in Ecuador, there was a rising division between hard-liners and soft-liners. This division first caused Correa to relinquish seeking re-election, and then gave his successor more room to move away from hard-line policies. Another vital institution was the military (and non-state armed) actors: by the time the crisis hit, they were far more involved in government and economics in Venezuela than in Ecuador. This difference gave the Venezuelan state incentives to respond to the crisis by relying more on what these institutions could offer (more repression and more illicit trade).

Neither outcome was inevitable even within these constraints. As historical institutionalists remind us, exogenous shocks tend to create uncertainty and often dislodge entrenched institutions, thereby allowing for greater contingency (Alesina and Drazen 1991; Thelen 1999). In these moments, the strategic calculations and choices of leaders can make a significant difference. We argue that this was the case in Venezuela and Ecuador. Maduro gambled successfully that siding with the regime's hardliners would allow him to retain power while Correa made a miscalculation that cost him his political career but pulled Ecuador back from the brink of authoritarianism.

Largely as a result of these choices, Venezuela became even more authoritarian while Ecuador experienced a tentative turn toward democracy.

Maduro's choice makes sense given ruling party dynamics and civil-military relations but it none-theless came at a very high cost to the Venezuelan state. Repressing the opposition intensified anger at home and sanctions from abroad while allowing the military to collude with criminal groups to control illicit trade and extraction threatened the expansion of violence and a loss of control. Most remarkably, staying the course economically unleashed the worst economic crisis in the country's history. Yet rather than making concessions, Maduro dug in his heels, intensified the repression, and waited out the storm.

Correa's choice also reflects institutional constraints but at the cost of his own career. He could have resorted to more authoritarian tactics in alliance with the hardliners to engineer a third reelection in 2017. Instead, he stepped aside to allow Moreno to run as the ruling party candidate, hoping his successor would adhere to his policies and keep the institutions of semi-authoritarianism in place while backing an electoral reform that established indefinite reelection starting in 2021. His gamble failed miserably, however, as Moreno proceeded to dismantle much of Correa's populist authoritarianism while taking legal action to cripple his political career and pathway to reelection. In the process, Ecuador stepped away from the brink of deepening authoritarianism in favor of tentative steps toward greater democracy.

In short, not all petro-states are created equally. Even those erected under similar ideological orientations (autocratic leftist-populism) can still display different institutional configurations regarding the status of the ruling party, the armed sectors, and the productive industries. Together with key decisions by leaders, these institutions are crucial in shaping the way regimes responded to external shocks.

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The Cargon Compacts, Decarbonization and Peace in Fragile States in Africa and the Middle East program is funded in part by a grant from the U.S. Institute of Peace.

The opinions, findings, and conclusions or recommendations expressed are those of the author and do not necessarily reflect the views of the United States Institute of Peace.