

Science & Technology Innovation Program



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Crypto in Venezuela: Two Sides of a Coin

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Introduction

“Today, a cryptocurrency is being born that can take on Superman,” said Venezuelan President Nicolás Maduro, referring to the United States, and surrounded by cryptocurrency mining rigs.

Cryptocurrencies, once dismissed as a digital curiosity, have transcended their humble beginnings to become an important pillar of financial technology innovation. This transition is more than an economic shift; cryptocurrencies have emerged as tools to empower individuals with new financial freedoms and transparency, challenging traditional power structures, and offering a new vision for a free and fair global economy.

In developed countries, cryptocurrencies are used to invest, conduct financial transactions, and hold an individual’s assets. However, in developing countries, particularly in Latin America, they provide larger benefits, including opportunity for complete financial autonomy, enhanced privacy, and the ability to manage one’s own financial resources without third party interference. Through cryptocurrency, users have the tools to bypass weak institutions, which have little public trust, amidst devaluation and inflation. Cryptocurrencies allow people to control their own finances as transactions cannot be undone or tampered with by a third party, and the value of cryptocurrency remains unchanged by government actions that can lead to inflation or volatile interest rates.

However, the same benefits that cryptocurrencies have for the Venezuelan population are used by their oppressors to operate discreetly. The fundamental openness and liberty of cryptocurrencies emboldened the autocratic government of Venezuela, led by OFAC-sanctioned Nicolás Maduro, who is notorious for corruption and human rights violations. The government has used cryptocurrencies to bypass US sanctions, and to construct money laundering schemes to legitimize its capital.

Between 2018 and 2023, Venezuela introduced the petro, a government-backed digital currency, with ambitions to leverage the global interest in cryptocurrency to create a national currency suitable for modern international commerce. The experiment failed: in 2023, following the March 2023 arrest of dozens of people in Venezuela’s cryptocurrency oversight body, SUNACRIP (Superintendencia Nacional de Criptoactivos y Actividades Conexas), over charges of corruption, the government stopped trading the petro, called for a nationwide stoppage to cryptocurrency mining, and shuttered the doors of its licensed cryptocurrency exchanges.¹ The massive corruption scandal that has since unraveled showcases how the petro project was used to drain billions of dollars in oil revenue out of Caracas. This document explores the intricacies of this period, and assesses how the Maduro government skillfully hijacked the cryptocurrency wave for its own gain, deepening entrenched issues of corruption and exploitation while neglecting the possible advantages for the Venezuelan people.

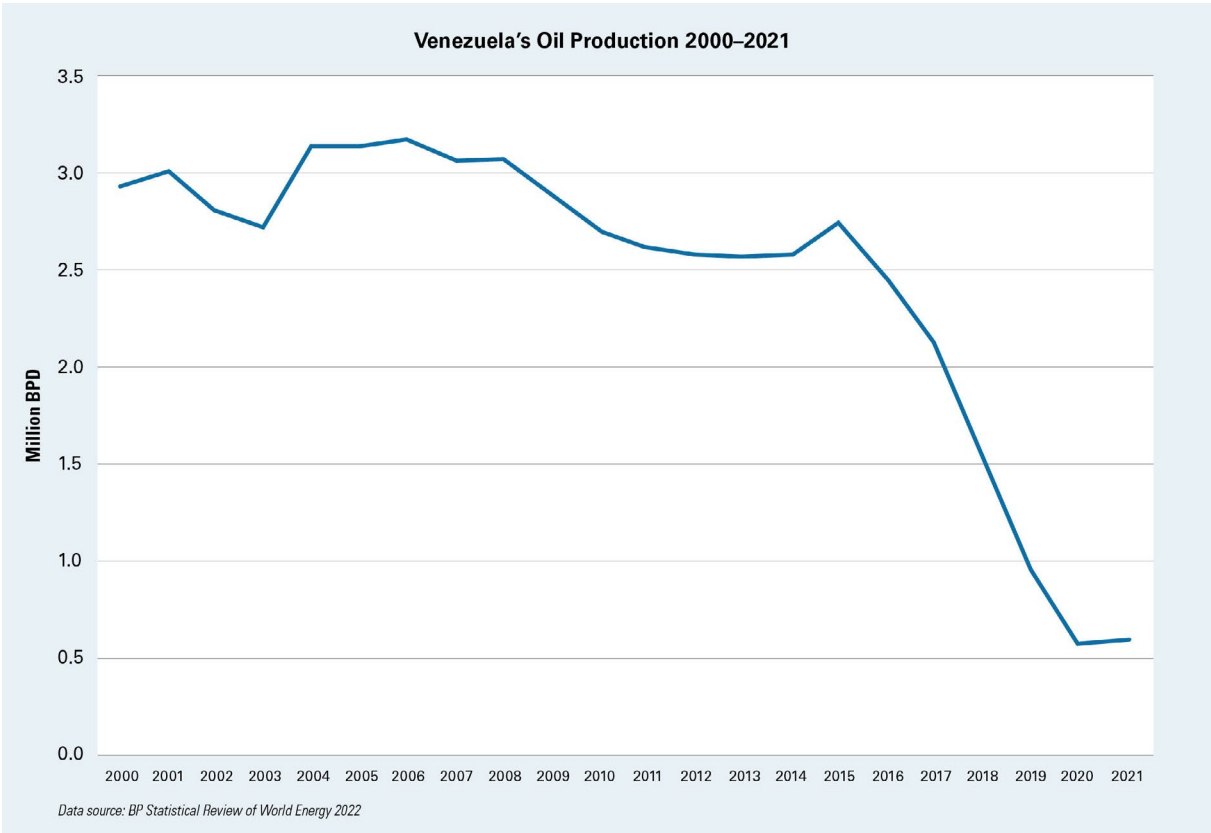
This dichotomy shows the two sides of cryptocurrency in one national experience. On one side, the Venezuelan government, which was an early adopter of a nationally issued digital currency, primarily utilized cryptocurrency with the intent of further exploiting its citizens. For years, the regime cynically pushed for the adoption of tokens and platforms that would be used to steal from its own populace. In contrast, the crumbling economy created a grassroots demand for a stable alternative to the traditional financial system. Venezuelan citizens capitalized on cryptocurrency’s innovations: its peer-to-peer payments gave people more freedom and the autonomy of cryptocurrency provided a financial safety net.

Regrettably, the autocratic and corrupt actions of the government have wasted the immense potential that cryptocurrency held for Venezuela. Instead of harnessing this innovative financial technology for the nation's benefit, billions in value have been siphoned off by kleptocratic officials while ordinary Venezuelans struggle to make ends meet. Despite the government's heavy-handed attempts to regulate and control cryptocurrencies, this new financial technology endures and plays a role throughout the country, demonstrating resilience and adaptability. Venezuela has become a clear example of the advantages and benefits as well as the risks and drawbacks inherent in the use of cryptocurrencies.

The use of cryptocurrencies, as an almost redundant metaphor, has two clear sides: like a coin.

From Oil to a Criminal Economy

Since Nicolás Maduro assumed power in 2013, the Venezuelan state has transformed from one backed by oil to one characterized by criminality, where illicit activities serve as the primary driver of government economic activity. Oil has served as the cornerstone of the Venezuelan economy, dating back to its discovery in 1914, constituting nearly 95% of its exports and accounting for about a quarter of its Gross Domestic Product.² The country has the world's largest proven oil reserves, surpassing even Saudi Arabia, with an estimated 303 billion barrels, representing approximately 17% of total oil reserves globally. Despite this resource wealth, the nation's oil production has faced significant obstacles, including corruption, government mismanagement, and the impact of international sanctions.³

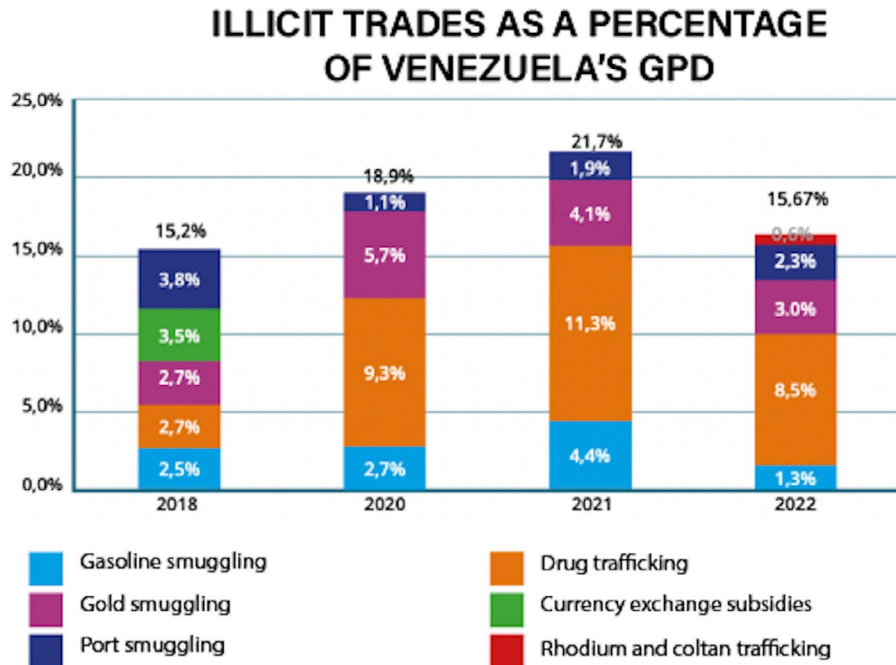


Faustian Bargains

Under President Maduro, the government has largely neglected efforts to revitalize oil production, instead gravitating toward more exploitative and kleptocratic practices. In September 2020, Maduro signed the “Anti-Blockade Law” which gave unprecedented authority to the regime, allowing it to selectively privatize state-owned enterprises while eliminating checks against corruption and patronage. Notably, it enabled unilateral decision-making for oil deals often conducted in secrecy without public bidding.⁴

The culmination of international sanctions, economic mismanagement, and the holistic degradation of Venezuela’s oil industry caused the Maduro regime to increase their dependence on “strategic partnerships,” further obfuscating the lines between state and criminal actors. These strategic partnerships were statewide enterprises created with private entities and their cronies. For instance, illegal mining in the Orinoco Mining Arc, opened in 2016 and known to be a hub for illicit activity, is characterized by these strategic partnerships. In 2022, partnerships between the Venezuelan government and criminal groups generated at least \$1.4 billion from gold mining.⁵

A more distressing example of these partnerships is the Venezuelan government’s longstanding association with international cartels and designated terrorist organizations. This trend of massive drug trafficking has only increased since Maduro assumed power in 2013. According to some estimates, drug trafficking in Venezuela generated \$5.1 billion in 2022 alone.⁶



Source: Tony Frangie Mawad, January 8, 2024, Caracas Chronicles, “State-Enabled Illicit Trades Represent More Than a Quarter of Venezuela’s Economy.” <https://www.caracaschronicles.com/2024/01/08/state-enabled-illicit-trades-represent-more-than-a-quarter-of-venezuelas-economy/>.

Highlighting the gravity of these operations, the US indicted Maduro and 14 of his associates on charges of drug trafficking, narco-terrorism, corruption, and money laundering. Key Venezuelan figures, including the Vice President for the Economy, the Defense Minister, and the Supreme Court's Chief Justice, are among those indicted.



US Attorney Geoffrey Berman of the Southern District of New York announced drug charges against Venezuela's Nicolas Maduro and other Venezuelan government officials, in New York, March 26, 2020. Source: US Attorney's Office

The Maduro regime has gone from ignoring corruption and illegal activities to being a proactive collaborator. According to Mercedes de Freitas, the executive director of Transparencia Venezuela, the government's approach can be described as either silent complicity, cooperation, or direct facilitation.⁷ The data tells the story: in 2022, illicit activities contributed \$9.4 billion to Venezuela's economy, representing more than 15% of its GDP. This included the trafficking of gold and precious metals (\$2.1 billion), drugs (\$5.1 billion), fuel (\$760 million), and port smuggling (\$1.3 billion). Remarkably, the income from these illicit trades constituted 56.4% of Venezuela's exported goods value, 56.3% of the government's total income, and 77.8% of all imports.⁸

Crypto Adoption in Venezuela

Venezuela is suffering through one of the worst economic crises in modern history, with its currency (the bolivar) becoming almost worthless, hyperinflation reaching 10,000,000% at its highest, and poverty exacerbated by these conditions.⁹ In August 2020, Moises Rendon, a Venezuela expert at the Center for Strategic & International Studies, characterized the situation as such: "This is the worst humanitarian crisis in modern Latin American history. Venezuela used to be one of the wealthiest countries in Latin America. Now, it is one of the poorest, facing

water shortages, blackouts, and hospitals with practically no supplies. This has destabilized the entire region.”¹⁰

For the citizens of Venezuela who continue to experience this decade-long financial collapse, legitimate cryptocurrency exchanges and personal wallets became a way to easily send and receive remittances, protect assets, shield hyperinflation, and provide a way to evade governmental controls and restrictions. As a result, cryptocurrency gained significant traction well before the government rolled out the petro, and by 2020, Venezuela was already a major player in the cryptocurrency space, ranking third worldwide in terms of grassroots adoption.¹¹

The Petro Ecosystem

Launched in 2018, the petro was Maduro’s ambitious attempt to tap into the global cryptocurrency wave by introducing its own sovereign digital currency, with hopes of achieving widespread acceptance both domestically and globally. However, the petro failed to establish significant momentum, primarily functioning as a channel for corruption and unlawful financial dealings rather than a legitimate economic instrument, and was officially ended by the government in January 2024 after a notably unsuccessful six-year run. Widely criticized as a sham and derided as “amateur hour” by financial experts,¹² it never achieved widespread usage within or beyond Venezuela’s borders. Despite its short lifespan, the infrastructure and organizations established for the petro still exist. The ongoing dissolution reveals the extent of corruption that was previously obscured.

In December 2017, Maduro unveiled the petro, heralded as the realization of former President Hugo Chavez’s vision for an oil-backed currency. To manage the currency’s introduction and regulate cryptocurrency usage within Venezuela, Maduro established the national authority Superintendencia Nacional de Criptoactivos y Actividades Conexas (SUNACRIP). From the outset, the petro blockchain encountered operational difficulties, leading to multiple shutdowns by the state. Despite being labeled a cryptocurrency, the petro lacked fundamental attributes such as decentralization and transparency. Government claims that the petro was oil-backed were never substantiated through verification or audit. With no public knowledge of its circulating supply and its price arbitrarily fixed by the Venezuelan government, the petro failed to embody the true qualities of either a cryptocurrency or a stablecoin.

As outlined in the petro’s whitepaper, the digital currency was initially intended for Venezuelans to use in paying taxes and public services, signaling the government’s push toward widespread adoption.¹³ Officials claimed it would garner up to \$6 billion globally at its launch. Although these figures were never independently confirmed, the government reported raising \$735 million upon release. Early potential investors engaged with the Venezuelan government, downloading the petro’s digital wallet software, which was made accessible in several languages including Spanish, English, and Russian. Interested investors were required to deposit a minimum of 1,000 euros into an official Venezuelan government account at a Russian bank.¹⁴

The government also sought international traction for the petro but Maduro was unsuccessful in his attempts to persuade the 10 nations within the Bolivarian Alliance of the Americas to adopt it.¹⁵ In a move to further integrate the petro into Venezuela’s economy, the minimum wage was linked to the petro’s price. Despite the government’s bravado, the introduction of the petro was chaotic with the government delivering nothing but confusion and unfulfilled promises for Venezuelan citizens.¹⁶

Government-Endorsed Crypto Platforms & Exchanges

To weave the petro into the fabric of Venezuelan society, the government launched various platforms designed to facilitate the everyday use of this new digital currency. Among these, the PetroApp wallet stood out, offering the ability to convert petros into local bolivars and US dollars and several more traditional cryptocurrencies like Bitcoin, Ethereum, Litecoin, and Dash. The PetroApp was also designed for everyday consumer activities, allowing users to pay for phone and cable services, and serve as a payment gateway for citizens to transact with merchants. In March 2022, the government announced a gift card option for Venezuelans within PetroApp, allowing citizens to swap their petros for bolivars.¹⁷ In a bid to infuse the petro into the tourism industry, the government also encouraged service providers to accept PetroApp payments for hotel accommodations and flight bookings.¹⁸

The Patria platform, strategically designed to push the population to adopt the petro, also emerged as a pivotal tool of the Venezuelan government. This online platform was a central gateway for Venezuelans to access a variety of social benefits, including direct government subsidies and pension payments. Individuals could easily pay for essential utilities like electricity and water through the platform, and in 2019 the government introduced the Remesas function to allow the Venezuelan diaspora to send crypto remittances back to their home country. Remesas provided a direct, government-sanctioned channel for these transactions but also allowed the government to capture a percentage of each transaction,¹⁹ as high as 15%.²⁰

The Venezuelan government touted the petro and its related initiatives as strategic measures to sidestep international sanctions and to democratize access to the burgeoning world of cryptocurrency for its citizens. However, far from empowering the populace, these ventures served to tighten the government's grip on the people under the watchful eye of SUNACRIP and the state's overarching authority. This centralized control starkly contrasted with the decentralization, transparency, and user autonomy that define cryptocurrencies. Participants in the petro system, including users of the PetroApp, found themselves without the independence and privacy typically associated with blockchain technologies. Instead, their transactions were susceptible to state surveillance and regulation. Moreover, the petro's reliability was called into question as it was repeatedly disabled due to "technical issues," further highlighting the chasm between its promise and reality.²¹



Criptolago, AFX Trade, Amberes Coin, Cave Blockchain, Cryptia Exchange, Bancar were all licensed by SUNACRIP in 2018

In April 2018, the Venezuelan government announced that sixteen cryptocurrency exchanges would be licensed to facilitate the launch of its pioneering national cryptocurrency project.²² However, by October 2018, this number had dwindled, with President Maduro asserting that the petro would be traded on six “of the most powerful [exchanges] in the world.”²³ Contrary to this assertion, these platforms were local to Venezuela and owned, operated, and/or managed by someone related to the regime, based on questionable legitimacy rather than esteemed international exchanges. Beyond trading the petro, these exchanges were permitted to engage in transactions involving prominent cryptocurrencies such as Bitcoin, Dash, and Litecoin, aiming to embed the petro within the expansive global cryptocurrency market.

A significant case is the Criptolago exchange, situated in Maracaibo, Zulia State. Notably owned by the state and managed by Zulia’s governor, Omar Prieto—a fervent Maduro supporter himself under US sanctions for impeding humanitarian aid—Criptolago exemplifies the intertwining of cryptocurrency operations with political influence. This association, highlighted by the blockchain analytics firm Chainalysis through an examination of Criptolago’s transaction patterns, points to concerning practices.

More than 75% of Criptolago’s transactions involved transfers exceeding \$1,000 USD—a stark figure when compared to the average Venezuelan’s daily earnings equivalent to 72 cents, demonstrating the unlikelihood that Criptolago is serving average Venezuelans. The platform is suspected of primarily catering to individuals closely linked to the Maduro regime or those benefiting from Venezuela’s systemic corruption, utilizing large transfers to safeguard or launder their wealth, particularly since many high-profile Venezuelans cannot access international banking due to sanctions.²⁴

Crypto Mining

Cryptocurrency mining in Venezuela epitomizes the shift from an independent economic endeavor to a domain overshadowed by governmental predation. Initially, the country’s low electricity costs enabled ordinary Venezuelans to engage in mining—using computational power to verify blockchain transactions, thereby earning cryptocurrency rewards and fees—as a viable means to augment their incomes. In 2017, one miner said, “You can feed a family with one ether [mining] rig. It’s a fact.”²⁵

This grassroots prosperity, however, was fleeting. The national intelligence services began using electricity consumption to locate and target miners, leading to equipment confiscation and arrests under spurious charges. Instances emerged of miners facing government coercion and threats, with law enforcement allegedly seizing mining equipment over purported regulatory non-compliance. Furthermore, reports surfaced of confiscated mining rigs being reactivated, suggesting that seized assets were repurposed by government officials for their own cryptocurrency gains.²⁶ A former intelligence director unveiled the government’s clandestine operation of mining farms and lambasted the petro cryptocurrency as a smokescreen for importing mining apparatus from China, while also implicating these undisclosed operations in contributing to the nation’s power outages.²⁷ This narrative underscores a grim transition from a burgeoning economic activity to one ensnared by state exploitation and control.

In September 2020, SUNACRIP announced miners needed to obtain licenses and enroll with two new entities, the

Comprehensive Registry of Cryptoactive Services (RISEC) and the Comprehensive Registry of Miners (RIM). Miners would need to disclose details about their mining operations and maintain records for a decade. Additionally, mining equipment imported into the country was to be monitored by Venezuelan authorities. In a notable shift, and a telling sign of the growing centralization and government stranglehold, all mining activities were required to participate in an official “National Digital Mining Pool”, a group of pooled miners agreeing to share block earnings and controlled by SUNACRIP, and non-participation would result in penalties.²⁸ This would allow the regime to oversee the income from mining rewards and hold the power to freeze, delay, or tax miners’ earnings.

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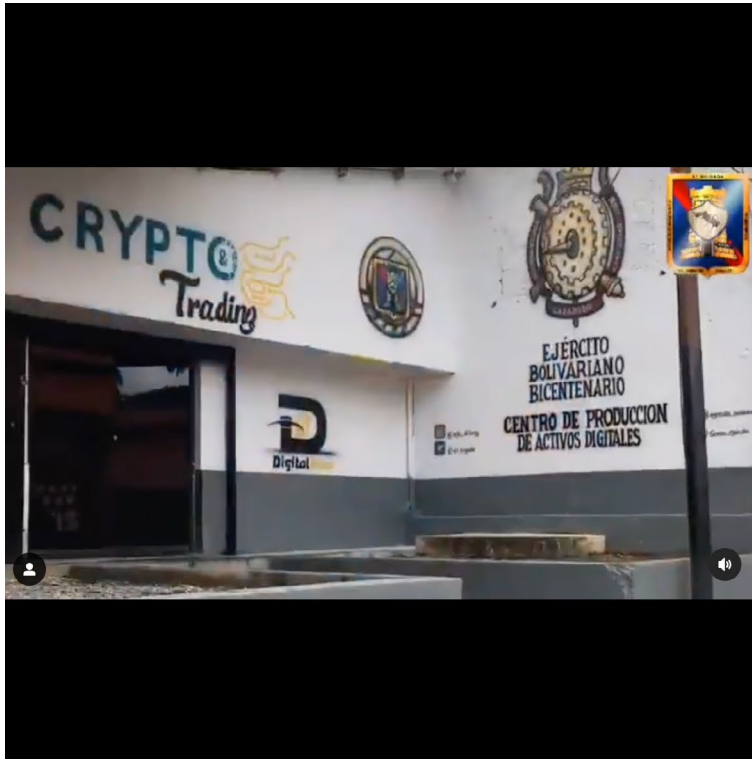
At the end of 2017, I was taken from military prison to house arrest. My home became a prison for the entire family, surrounded by dozens of officers of the political police - SEBIN. During that time, I had frequent conversations with my captors. One day, Pacheco, the director of investigations who was responsible for much of the mistreatment and torture of political prisoners in the SEBIN prison, told me that he was expanding his professional horizon and was taking a course in Bitcoin mining. I asked him why this was relevant to him, and he said that this was an easy source of funding that they [the political police] were working on: "it's easy money, we simply ask the electricity company [for the] patterns of consumption, and any indication of high irregular consumption [is] potentially a Bitcoin mine." [Knowing this] all they had to do was go to the place and take control of the machines, and that was why he was learning how they worked. I asked him what he was going to do with these mining computers, and he told me that given that they were a non-registered activity they would take control of the operation. "To shut it down?" I asked. "No," he said, "we will run the mine." He laughed, "That's why I'm learning."

That was the beginning [of] a much larger mafia state operation in Venezuela. Years later, after I escaped house arrest and eventually Venezuela, I met a Venezuelan bitcoiner who had to leave the country after his more than 6,000 mining computers were seized and then operated by the SEBIN.

- Leopoldo Lopez

”

Two months later in November 2020, the Venezuelan Army inaugurated a cryptocurrency mining center in the south of Caracas. Launched by the army’s engineering brigade in conjunction with SUNACRIP, the initiative was part of a broader effort to integrate cryptocurrency production across military units.²⁹ According to a video posted of the new center, “The era of cryptocurrency production begins in all units of the military component, which will be ‘unblockable’ income.”^{30 31}



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ejb_61brig 🇺🇵 En vanguardia y a la altura de los avances tecnológicos, fue inaugurado el Centro de Producción de Activos Digitales del Ejército Bolivariano de manos de la 61 Brigada de Acondicionamiento de Ingenieros GB Agustín Codazzi @ejb_61brig.

La inauguración, estuvo encabezada por el MG @dherandezlarez, Cmdte. Gral. del @ejercito_bolivariano, acompañado del GB @lening2, Cmdte. de la @ejb_61brig, representantes de la #Sunacrip y de la empresa privada @cryptoandtrading.

En perfecta alianza cívico militar, el proyecto que representa una fuente de ingresos imbloqueable, cuenta con granjas de minado y línea de refaccionamiento, que permiten la producción de criptomonedas en tiempo real, asegurando la generación de ingresos para el bienestar de nuestro personal.

#EnLaPatriaCodazziPresente #ejercitobolivarianobicentenario #FANB #Venezuela #YoMeQuedoEnCasa #cryptocurrency #blockchain #petros #bitcoin #granjasdeminería #alianzas #unioncivicomilitarporsiempre

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Source: Helms, Kevin. "Venezuelan Army Starts Mining Bitcoin for 'unblockable Income' – Mining." *Bitcoin News*, 30 Nov. 2020, <https://news.bitcoin.com/venezuela-army-mining-bitcoin-for-unblockable-income/>.

By 2020, the Venezuelan government solidified its dominance over the cryptocurrency mining sector, effectively sidelining smaller entities in favor of state, military, and allied business partners. Mining was overseen and encouraged by the military, according to a former Venezuelan military officer who worked in their intelligence service. The military had numerous secret government-managed mining farms throughout the country that were using internet and electricity, and was in part responsible for the daily electricity shutdowns across the country that affected millions.³² Attempts to challenge the government's control over the mining sector were struck down in a March 2021 court ruling which emphasized that the activities overseen by SUNACRIP are of "national strategic importance," highlighting that the more than 2,000 mining rigs confiscated by the state would not be returned. The ruling underscored that any entity outside of government or military wishing to engage in cryptocurrency mining within Venezuela must comply with SUNACRIP, RISEC, and RIM regulations, effectively making these organizations gatekeepers to the mining industry.³³

One of the licenses was given to CoinCoin, a group of companies that began operating in early 2018. Aside from a mining firm and an exchange, CoinCoin group included an educational initiative, a charity, and a news platform.

The ownership of CoinCoin Group was closely tied with the head of SUNACRIP, Joselit Ramirez, and former governors of Aragua state, including overlapping business interests with state companies.



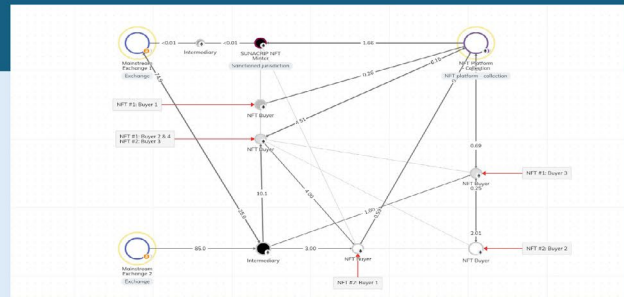
A screenshot of the Instagram account for the “Fundación Alegría Coin” lists two donations, one in Bitcoin, the other in Tether (on the TRON network).



While the USDT address does not appear to have received any funds, the Bitcoin address, held at an international cryptocurrency exchange, received over \$20 million from the end of 2017 to 2023, according to information from Chainalysis. To emphasize the suspiciousness of this “charity” over 20 of the transfers to this deposit address were between \$100,000 and under a \$1 million. Three individual transfers to this account in 2021 totaled more than 9.4 million.

Source: Guerrero, Isabel. “‘Coincoin,’ gruñen en la granja de criptomonedas de Maracay.” *Armando.info*, 26 June 2022, <https://armando.info/coincoin-grunen-en-la-granja-de-criptomonedas-de-maracay/>. @alegriacoin, Instagram, <http://instagram.com/alegriacoin>. Accessed 17 Apr. 2024.

In June 2021, SUNACRIP unveiled two Non-Fungible Tokens (NFTs), a unique digital artifact represented on the Ethereum blockchain, marking SUNACRIP's attempt to embrace one of the latest cryptocurrency trends. The NFTs were eventually "sold," however, the blockchain revealed an intriguing detail, the NFTs buyer and seller appeared to be linked to the same digital wallet. This simulated purchase gave the impression that SUNACRIP's NFT had been sold, when, in fact, it was just "purchased" by its original creator.



Chainalysis graph of SUNACRIP NFTs

Source: Ramírez, Joselit. "En El Marco de La Conmemoración Del Bicentenario de La Batalla de Carabobo, Hemos Inmortalizado En La Tecnología Blockchain Nuestro Primer NFT, Ratificando Hoy 200 Años Después La Victoria Alcanzada Por El Libertador Simón Bolívar: Nuestra INDEPENDENCIA!!" <https://t.co/gyYOX0ks7Q>. Twitter, 25 June 2021, <https://twitter.com/JoselitRamirez/status/1408422439802093577>.

SUNACRIP & PDVSA

Cryptocurrency emerged as a critical instrument for the regime to launder its most valuable natural resource: oil. With Western sanctions severing Venezuela's access to sell oil through reputable financial institutions, the regime pivoted to cryptocurrency to conduct transactions. An October 2022 US Department of Justice indictment exposed one of the many schemes used by PDVSA to maintain its oil exports. A network of five Russian nationals were accused of assisting PDVSA in sanctions evasion, money laundering, and oil smuggling. Central to PDVSA's approach was the use of stablecoins, or cryptocurrencies that attempt to minimize price volatility by pegging the coin to a cryptocurrency, fiat money, exchange-traded commodities, or through an algorithmic process designed to increase and decrease the supply of tokens to stabilize the price. These intermediaries not only facilitated the financial transactions necessary to sustain oil sales but also arranged for the discrete transfer of oil using ship-to-ship transfers in international waters.

One of the defendants explained in very clear terms why he preferred to use cryptocurrency:

“

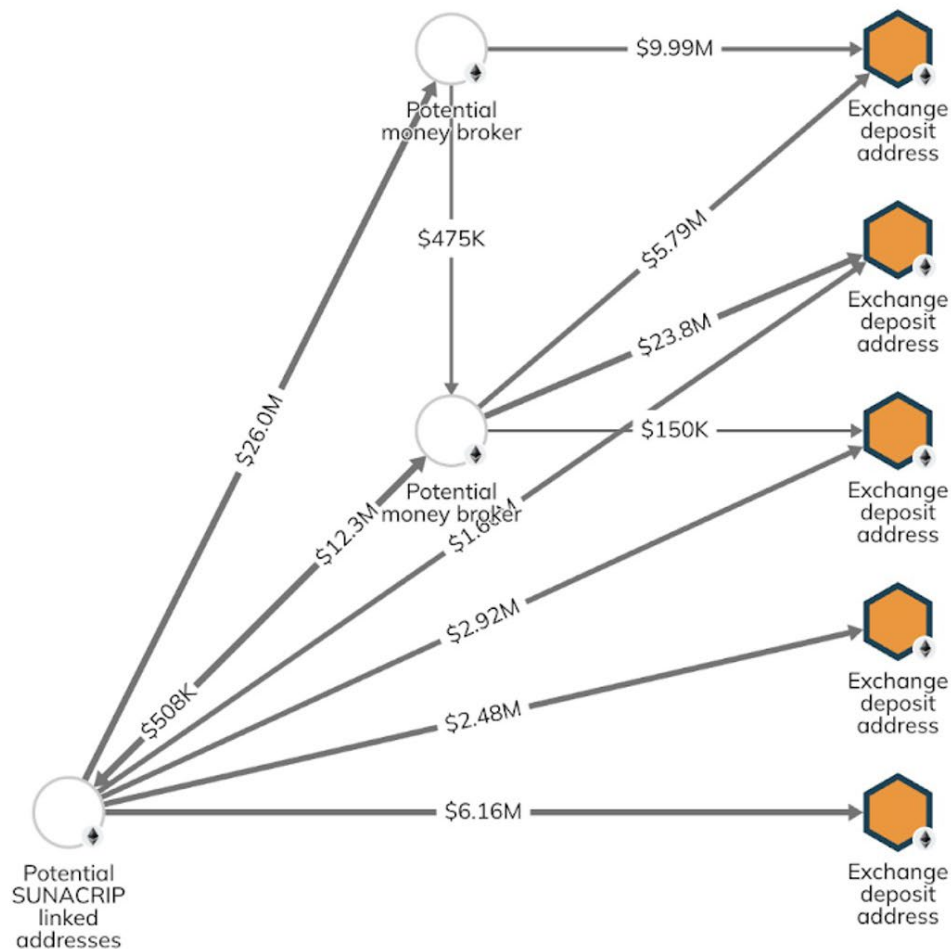
No worries, no stress. As soon as we start berthing, we will immediately transfer. [Stablecoin] works quick like SMS. They have the cash - I already arranged. I have to send the money in a few hours, and after a few hours they are going to have [stablecoin]. Then you, with PDVSA people, or whoever has to take the cash, let's say you come to the bank, check the money, confirm for me: 'Yury [OREKHOV], this is 7 million, 10 million.' Every day it's a different amount. '10 million,' I confirm, 'transfer them.' And I immediately take the number and transfer them. It's like SMS, and they tell you 'yes, Juan [FERNANDO SERRANO PONCE] everything is ok, this money is yours.' It's quicker than telegraphic transfer, [stablecoin]. That's why everyone does it now. It's convenient, it's quick.

”

Source: US Department of Justice, US Attorney's Office, Eastern District of New York, 19 OCT 2022 <https://www.justice.gov/usao-edny/pr/five-russian-nationals-and-two-oil-traders-charged-global-sanctions-evasion-and-money>

Those involved in the scheme weren't just moving oil for PDVSA; they were also trying to obtain advanced US military technology for Russia's defense industry. In addition to cryptocurrency, the oil smugglers used a complex system of fake companies, large cash deposits, and international bank transfers to clean the money they earned.³⁴

To reinforce the assertion that the regime was leveraging stablecoins for its operations, blockchain evidence demonstrates that SUNACRIP was consistently transferring significant amounts of stablecoins across a multitude of accounts within various cryptocurrency services. Blockchain activity showed a set of addresses potentially controlled by SUNACRIP or an individual close to SUNACRIP that processed more than \$70 million in various stablecoins. These potential SUNACRIP-linked addresses interacted heavily with other entities that appear to operate as money movers of some kind, transferring millions to accounts at various global cryptocurrency exchanges, including the now infamous failed exchange FTX. The graph below depicts transaction paths from addresses potentially associated with SUNACRIP to various potential money movers and exchanges.



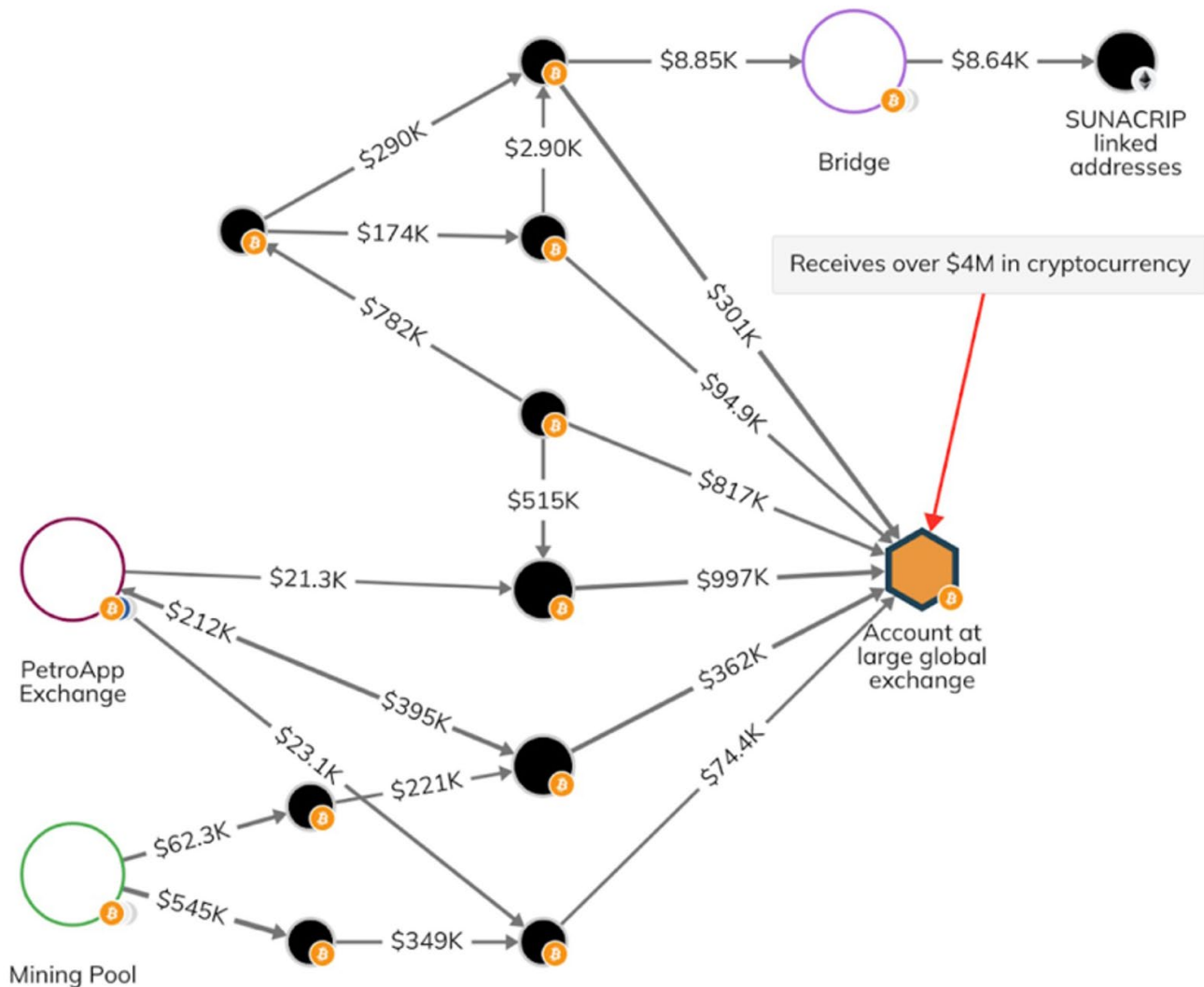
Source: Chainalysis Data and Reactor graph

Another striking illustration of the complex entanglement between the cryptocurrency and oil sectors can be found in corporate ownership records. Joselit Ramirez, the leader of SUNACRIP, was identified as a part-owner of a company registered in both Venezuela and Panama, which owns two oil tankers. This company, PANAVENTLOT, owns the oil tankers Yare and Terepaima, drawing scrutiny from the US Government for their role in transporting Venezuelan oil. In July 2019, the US spotlighted these vessels for their involvement in shipping oil from Venezuela to Cuba, with the operations allegedly facilitated by a Russian bank. The intricate linkages between Ramirez, PANAVENTLOT, and these tankers suggest the existence of a comprehensive, yet largely hidden, financial network.

Following the imposition of sanctions on Venezuela's oil sector in 2019, PDVSA transformed its daily operations. Initially, PDVSA collaborated with Russian operators to circumvent these sanctions, resorting to tactics such as disabling ship radars.³⁵ However, as sanctions extended to Russian entities and complications emerged from Russia's actions in Ukraine, PDVSA adjusted its strategies. This led to the arbitrary, unregulated, and opaque assignment of oil cargoes to a growing network of individuals close to regime officials. These individuals sold oil in the black market, often requiring transatlantic oil transshipment and payment in cryptocurrency. Consequently, PDVSA used intermediaries and inexperienced companies for oil sales, complicating revenue traceability and payment collection further.³⁶

Cryptocurrency Bridges

As the Maduro regime engaged in various facets of the cryptocurrency ecosystem, blockchain evidence indicates they also attempted to utilize cryptocurrency cross-train bridges, a protocol that lets a user transfer digital assets from one blockchain to another. These bridges, essential for transferring assets and information between different blockchains, facilitated the regime's ability to navigate across multiple blockchains. The below graphic shows how Bitcoin from state-run PetroApp and a mining pool deposited more than \$4 million in an account at a global cryptocurrency exchange. Wallets associated with the deposit address also used a cryptocurrency bridge to convert \$8,640 from Bitcoin to Ethereum.



Source: Chainalysis Data and Reactor graph

Collapse of the Petro & Closure of SUNACRIP

In March 2023, a seismic shift happened within the Venezuelan cryptocurrency ecosystem, a meltdown that is still unraveling to this day. The head of SUNACRIP was arrested and the Minister of Petroleum stepped down. Initial reports indicated that anywhere between \$3 and 20 billion went missing from PDVSA financial accounts, smuggled out with the help of SUNACRIP officials.³⁷ The Maduro regime forced cryptocurrency miners to shut down their machines. More than 500 workers from SUNACRIP were sent home. Venezuelan citizens inundated social media with complaints that their cryptocurrency was inaccessible at government-run platforms or exchanges.³⁸ The government announced an initial six-month “restructuring” of the cryptocurrency sector, a move that was later extended another six months to March 2024. Forced to publicly acknowledge this massive widespread scandal, Maduro tried to shift the blame to outside forces and stated he was implementing the SUNACRIP restructuring “to protect the Venezuelan people from the negative effects of the multiform aggression that is being carried out against the country.”³⁹

The scandal earned its own moniker, the “PDVSA-Crypto Case.” More than 100 shell companies throughout the world were used to help launder the funds, including in the US, Panama, Colombia, UAE, and Hong Kong, to name a few.⁴⁰ Those detained included senior lawmakers, members of the judiciary, officials from PDVSA, and regional governments. The head of SUNACRIP, Joselit Ramirez, was also detained along with the head of the national digital mining registry.⁴¹ The scandal had a more chilling side: at least two people associated with the criminal activity died while in custody.⁴² Notably, one of them, recognized for his adeptness at hacking and cryptocurrency, allegedly died from cirrhosis while under house arrest.⁴³

One year after the scandal came to light, the Venezuelan cryptocurrency system remains in shambles. While SUNACRIP “restructures” under an interim board, government-registered exchanges have ceased operation and miners registered with the government have been cut off from the national electricity grid. According to Alejandro Blanco, the legal director of the National Cryptocurrency Association, the SUNACRIP intervention board “seeks to play collective amnesia” through silence and lack of communication with the Venezuelan mining industry, placing Venezuelan families who “invested their savings, time, and knowledge in complying with the current legal system” at “serious risk.” He also stated that SUNACRIP’s silence puts thousands of jobs and the credibility of Venezuela as a pioneer in the regulation of cryptocurrencies at risk.⁴⁴

On January 15, 2024, the Venezuelan government officially ended its backing of the petro, the final stop in its tumultuous journey. The ultimate verdict on the program was one of failure, with its costs quantified by the billions of dollars that flowed out of the country, channeled into purchasing real estate, luxury items, aircraft, and yachts that were part of the PDVSA-Crypto case, a staggering amount looted where half the population lives on less than \$100 a month.⁴⁵ Yet it was not cryptocurrency that caused the massive plundering, instead it was the regime and its quest to find new avenues for illicit income.

Cryptocurrency has faced its share of scandals, with misuse by nefarious actors tarnishing its reputation. However, it is crucial to understand that blockchain technology, like all other technologies, is inherently neutral. Financial instruments are inherently impartial, and it is the purpose behind any transaction that determines its legitimacy. Transactions involving cryptocurrency, even if not inherently nefarious, remain under scrutiny due to

the continued interest of authorities to use it in high-risk or illicit activity and facilitation networks. In Venezuela, where the economy is deeply entangled with criminal activities, cryptocurrency has unfortunately been harnessed as a mechanism within extensive money laundering schemes, contributing to the nation's financial degradation.

Critics of digital currencies might point to Venezuela as a prime example of how these platforms can facilitate illegal operations, such as money laundering and corruption. Yet, adopting a more nuanced view reveals a different facet of cryptocurrency. Beyond the corrupt practices of the Venezuelan regime lies the potential of digital currencies to offer alternative financial pathways. This perspective unveils the positive aspects of cryptocurrency, even amidst widespread deceit and exploitation.

The Bright Side of the Coin

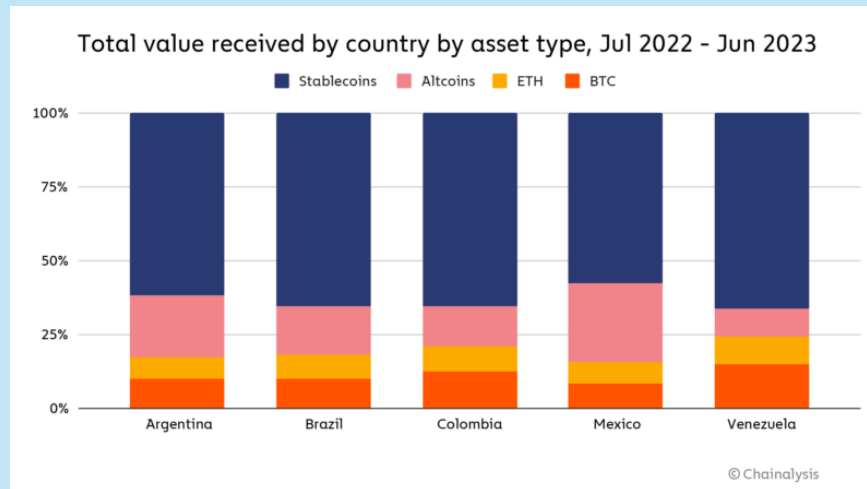
Maduro's corrupt and short-sighted experiment with the petro is certainly not the entire story of cryptocurrency in Venezuela; another side of this innovation deserves attention. Beyond the political narratives and misuses of power, cryptocurrencies herald a technological breakthrough in finances, offering unparalleled security, transparency, and efficiency in digital transactions. Importantly, it holds immense promise for those traditionally marginalized by the financial system—the unbanked and the poor, especially in low and middle-income countries. By enabling access to secure and direct financial transactions without the need for traditional banking infrastructure, cryptocurrencies can empower these communities, offering opportunities for economic participation and growth previously out of reach. Thus, while their use by certain regimes may draw criticism, the broader benefits of cryptocurrencies and their underlying technology offer hope for more inclusive and equitable global financial systems.

Shielding Hyperinflation

For more than a decade, Venezuelans have grappled with the crushing burden of runaway inflation. In 2023, annual inflation was estimated at 360%, which was alarmingly high, but still not as high as in previous years.⁴⁶ This continuous erosion of the bolivar has significantly diminished the real value of wages and savings, pushing millions of households into poverty. The impact of inflation, however, is not uniformly distributed. Households in the lower and middle-income brackets have been at a greater disadvantage than their wealthier counterparts who can stash assets outside of the country, and the poorest households disproportionately bear the weight with no end in sight.

Fortunately, Venezuelans have used cryptocurrencies, particularly stablecoins, to help shield against further devaluation. Decentralized cryptocurrencies are independent of government control. Some are pegged to more stable assets, such as the US dollar, thus maintaining a more consistent value. In Venezuela, where the value of the bolivar has declined, individuals and businesses may opt to convert their holdings into stablecoins. Unlike traditional currencies, stablecoins offer a predictable and transparent alternative, bringing stability amidst economic turmoil. Other cryptocurrencies like Bitcoin provide a hedge against inflation due to their limited supply and deflationary nature, offering a secure store of value independent of governmental control or economic instability. Through this mechanism, individuals can preserve their purchasing power and financial autonomy, mitigating the detrimental effects of hyperinflation on their wealth and economic stability.

Cryptocurrencies such as bitcoin, ether, and dash remain popular in Venezuela, but the ecosystem is evolving and stablecoins are growing in popularity. Dollar-denominated stablecoins provide price stability. Much of the Venezuelan economy is already de-facto dollarized and stablecoins provide a way to safeguard wealth and facilitate transactions for common goods.



Source: Chainalysis, October 11, 2023. "Latin America: Venezuela and Argentina Stand Out as Examples of Crypto's Unique Utility." <https://www.chainalysis.com/blog/latin-america-cryptocurrency-adoption/>

The Maduro regime undertook many initiatives to try and curb inflation, issuing new banknotes, devaluing the currency, even blaming criminal gangs and the United States for its failed economic policies. Even the introduction of the petro began with promises it would be backed by the country's reserves of oil, gasoline, diamonds and gold. Despite the petro's failure, Venezuelans see the potential of other cryptocurrencies to carve a path through the economic challenges of hyperinflation, demonstrating adaptability and resilience from the negative effects of inflation.

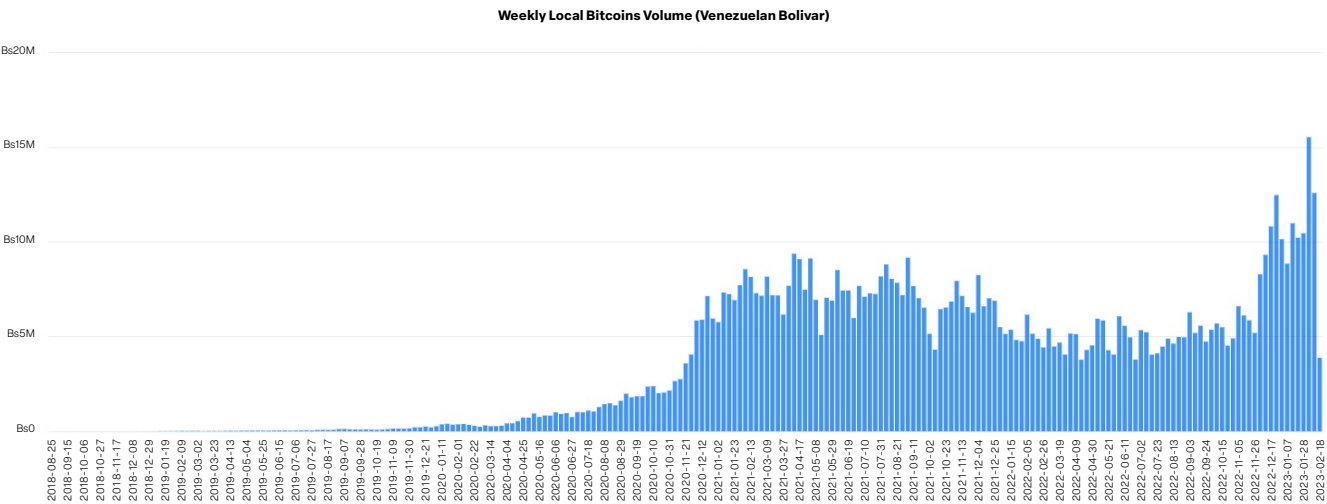
Freedom from Government Interference

Bitcoin, the first cryptocurrency, emerged in 2009 out of a profound distrust in traditional banking systems amidst a global financial crisis that shook the world's confidence in central banks. This distrust of centralized power led to a cryptocurrency that offered a form of financial sovereignty to cryptocurrency users, empowering them to own and control their assets without fear of government confiscation or inflationary policies that could erode their savings. Unlike conventional currencies that are issued by a government, cryptocurrencies operate on a blockchain, a distributed ledger technology that ensures transactions are secure, transparent, and unchangeable. This decentralization means that no single entity, including governments, has the power to manipulate the currency's value, freeze accounts, or impose sanctions on transactions.

For Venezuelans living under a repressive and predatory regime, cryptocurrencies allow an avenue to bypass government controls, access global markets, and maintain privacy over their financial dealings. This ability

to transact freely, without fear of unwarranted oversight or confiscation, upholds individual liberties and opens pathways for economic growth and development. By providing a platform for unencumbered financial transactions, cryptocurrencies challenge the traditional power dynamics between governments and citizens.

As we explored in the previous section, the Maduro regime set up exchanges and platforms that were the antithesis of transparency, instead creating a system that accelerated the squandering of oil resources with no benefit to the Venezuelan population. Unlike the petro, the peer-to-peer (P2P) functionality of true cryptocurrencies enables users to conduct transactions directly with one another, bypassing the need for government exchanges, banks, and other middlemen. One platform that enabled P2P transactions, LocalBitcoins, processed more than \$700 million of transactions in Venezuelan currency in 2019.⁴⁷



Source: “Coin Dance.” Coin.Dance, <https://coin.dance/volume/localbitcoins/VED>. Accessed 9 Apr. 2024.

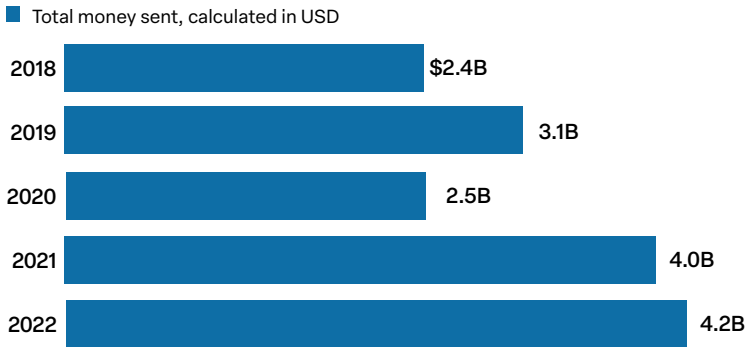
The rapid adoption of cryptocurrencies, fueled by financial crisis, has empowered Venezuelans with unparalleled control of their money, bypassing traditional banks and third-party intermediaries. The ability to convert bolivars into digital currencies, even in minimal amounts, has enabled Venezuelans to preserve the value of their earnings and access an alternative form of foreign currency.⁴⁸ These features mean that digital currencies play a significant role in providing Venezuelans with viable solutions to navigate their economic hardships.⁴⁹

Remittances: Enabling Support to Relatives

Within a remarkably short span, Venezuela has transitioned into one of the primary remittance-dependent nations in the Western hemisphere. In 2022, Venezuela was projected to receive more than \$4.2 billion in remittances, constituting at least 5% of the country’s GDP, according to a study by the Inter-American Dialogue. These funds reach approximately 2.5 million Venezuelan households, encompassing 29% of Venezuela’s total households, as support from Venezuelans abroad becomes increasingly vital amidst the economic implosion. While the United States is the source of 38% of these remittances, they host only 12% of Venezuelan migrants, with nearly 7.7 million migrants and refugees leaving Venezuela as of August 2023.⁵⁰ The capacity to transmit and receive remittances has emerged as a crucial lifeline with the country receiving more than \$4 billion in remittances in 2022.⁵¹

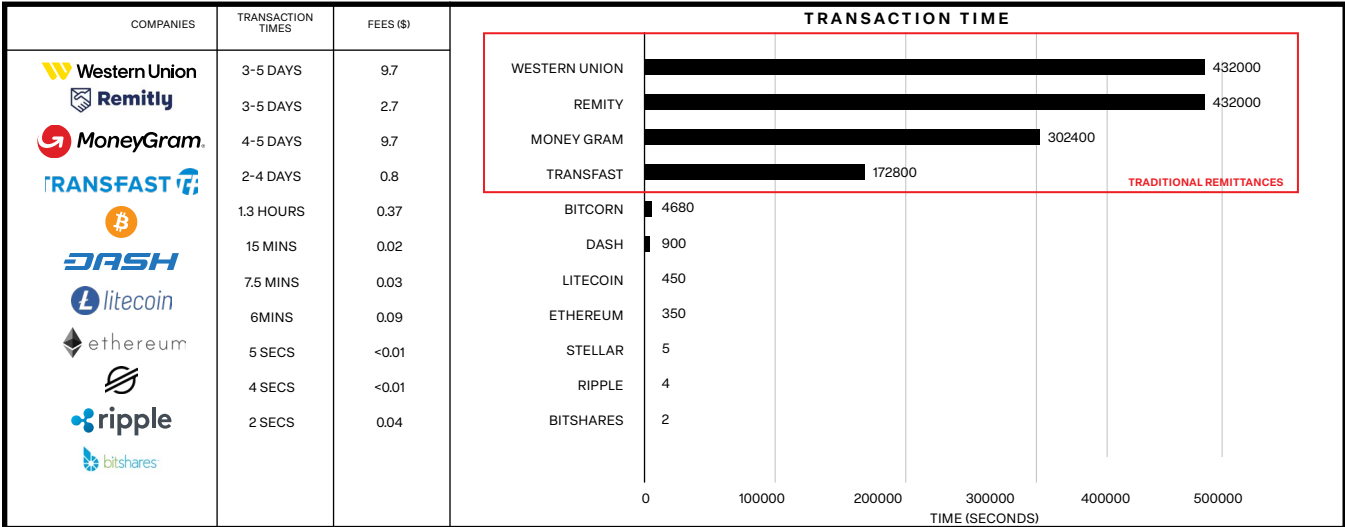
Cryptocurrencies have become a part of this financial lifeline, offering a swift, cost-efficient alternative to cumbersome and often expensive traditional remittance processes. This evolution has been particularly transformative for families dependent on financial support from relatives working overseas, enabling them to access vital funds efficiently. Due to the volatility of Venezuelan hard currency, restrictions on foreign exchange, and the ongoing migration trends, remittances are a crucial asset for the country, constituting the second largest source of foreign income after oil.⁵²

Remittances to Venezuela
 The amount has grown in recent years as more people have migrated



Source: Manuel Orozco, May 2, 2023, *Inter-American Dialogue*, "Venezuela: Remittances as a Source of Foreign Exchange and Economic Survival"

As the mass migration of Venezuelans continues, these remittance corridors are vital for those who remain in the country. Distrust of the domestic banking system, government-operated remittance pathways, and international sanctions have bottlenecked traditional remittance flows. Expatriates have opted for cryptocurrencies due to their low transaction fees and rapid transfer speeds that stand in stark contrast to sanctions-affected, traditional methods, allowing them to sidestep government sanctions and controls to deliver crucial financial relief to their families.



Source: Burak Uyduran, December 2020, *Financial Internet Quarterly* 16(4):12-23, "The Crypto Effect on Cross Border Transfers and Future Trends of Cryptocurrencies." https://www.researchgate.net/figure/Cryptocurrencies-and-traditional-remittance-transaction-time-fees_fig1_353522432.

Digital & Remote Job Opportunities

Increased remote working opportunities along with the rise of cryptocurrencies has transformed the job market, enabling Venezuelans to access remote work opportunities that pay in digital currencies. Cryptocurrencies help Venezuelans bypass financial constraints and connect them with the global economy, ensuring financial stability and inclusion in the worldwide workforce.

The use of cryptocurrencies for payment among remote workers in Latin America increased from 61% to 64% between January and December of 2022. Latin America leads in this regard compared to other regions.⁵³ However, interest in cryptocurrency payments slightly declined due to a volatile market, and experts predict that cryptocurrency exchanges will face increased regulation in the coming years. Despite this, the use of cryptocurrencies for payments among remote workers in Latin America continues to grow as they seek financial flexibility and protection against economic instability.⁵⁴

For Venezuelans, cryptocurrencies can unlock access to global digital platforms that offer micro-jobs in a burgeoning digital economy. Graphic designers, coders, writers, and even musicians have worked remotely earning income in cryptocurrency.⁵⁵ This helps to alleviate unemployment and contributes to skill development in high-demand professions such as AI, coding, and digital design. This is crucial in a country where the local economy is unstable and traditional job markets are constrained.

Case Study: Health Heroes

One example of real-world usage of cryptocurrency in Venezuela occurred during the COVID-19 pandemic. Already reeling from its economic meltdown, the pandemic amplified the national humanitarian crisis with more than 90% of Venezuelans living in poverty in 2019 and 2020.⁵⁶ Public services did not have enough resources to function pre-pandemic, much less to meet the needs of COVID-19. At the time of the Health Heroes program's implementation, the monthly wage of doctors and healthcare workers in Venezuela was alarmingly low due to the country's economic collapse, making the \$100 monthly allocation it provided a substantial support. Health Heroes sought to unlock funds frozen by US sanctions and deploy them to benefit healthcare workers as direct aid that bolstered this monthly wage. This initiative was notably financed by funds previously frozen in the United States due to sanctions against the Maduro regime, marking a significant achievement as it received the first cryptocurrency OFAC license, a crucial part of the ability to free up frozen funds.

A key component of the program's success was its reliance on a decentralized peer-to-peer (P2P) payment platform that operated with stable cryptocurrency pegged to the US dollar. This approach bypassed the regime's financial control and significantly reduced transaction costs, ensuring that the maximum amount of aid reached the beneficiaries. The selection process for aid recipients involved a detailed application where healthcare workers disclosed their socioeconomic status, followed by an evaluation to identify those most in need. To maintain transparency and ensure aid reached its intended recipients, the program conducted Know Your Customer (KYC) procedures, verifying identities against records from doctor and nurse unions recognized by the interim government.⁵⁷ This screening process was designed to direct support solely to healthcare professionals, avoiding any diversion of funds to sanctioned parties.

Over the course of three months, this initiative reached a vast number of frontline healthcare workers, with a total of 77,840 candidates applying for the aid. The program's efficient verification process, managed by a call center, facilitated the approval of 115,404 records for potential aid recipients.

Once beneficiaries were approved, crypto wallets were then utilized to transfer funds to “human ATMs,” trusted individuals who then distributed aid directly to the healthcare workers.⁵⁸ This process was effective in reaching medical professionals and indirectly benefited hundreds of thousands of citizens during the pandemic.⁵⁹

The program's impact was profound, with 98.21%, 98.17%, and 98.13% of beneficiaries receiving their first, second, and third contributions respectively. This high success rate underscored the effectiveness and reliability of using cryptocurrency and digital payment solutions to deliver humanitarian aid in where traditional financial channels are obstructed or compromised.

Challenges Ahead for Citizen Adoption

State-Imposed Digital Restrictions

One of the biggest challenges preventing cryptocurrency adoptions in Venezuela is the restricted access to the internet, due to the extensive control Maduro's administration exerts. This regime's governance extends to the systemic limitation of access to reliable information sources, characterized by state-led propaganda and disinformation campaigns.

The government's imposition of internet blockages is a significant factor exacerbating this challenge with restrictions placed by both state-operated and private internet service providers on a range of online content. This censorship spans news outlets, non-governmental organization websites, and financial services platforms. Techniques to enforce these blockages continue to evolve, making it harder to circumvent without advanced anonymization technologies, including VPNs and other methods to mask server traffic.⁶⁰ Such digital restrictions have the potential to extend to essential applications needed for cryptocurrency transactions, including wallet and exchange services, presenting substantial barriers to accessibility.

Network & Power Infrastructure

Consistent internet access in Venezuela is part of the country's socioeconomic crisis, negatively impacting economic opportunities. The electrical and telecommunications sectors do not provide quality and accessible internet service to the country's poor. Deterioration of service infrastructure is amplified by the lack of maintenance and further compounded by vandalism and theft, resulting in frequent outages and inconsistent connectivity.

In 2022 Venezuela experienced 138,200 electrical failures within the first nine months, a trend that grew through the remainder of the year and into 2023.⁶¹ In February 2023, significant disruptions were recorded when damage to the fiber-optic network resulted in an 18-hour internet outage that affected users in three states, serviced by the state-owned provider CANTV.⁶² To allow the benefits of cryptocurrency to take hold, the woeful state of Venezuelan infrastructure cannot be ignored.

Cryptocurrency Literacy

Cryptocurrency is a groundbreaking yet complex technology that has a significant learning curve. To effectively engage with it one needs a basic grasp of how its underlying technology works. Despite the widespread availability of entry points like digital wallets and exchanges, the average user often struggles to understand the fundamental mechanics of cryptocurrencies and how to make informed and secure transactions. This challenge is not unique to any one country; it is a global issue. However, the economic challenges faced by Venezuelans create a unique opportunity to bridge this educational divide, offering a crucial financial lifeline to those in need.

Addressing the literacy gap is vital for unlocking the full potential of cryptocurrency in Venezuela. High technological literacy unlocks people's ability to hold their own crypto assets, eliminating the reliance on third parties like exchanges, which might be vulnerable to bankruptcy, fraud, or corruption. Self-custody empowers users to manage their assets directly, using reliable wallets. However, this approach also comes with its own set of risks, such as the irreversible loss of private keys or falling prey to counterfeit platforms established by scammers. These risks underscore the need for comprehensive educational opportunities to fully leverage the technology.

Conclusions & Recommendations

Updated Sanctions & Asset Recovery

Now, more than ever, democratic governments must take decisive action to counter Maduro's attempts to exploit cryptocurrency to move illicit proceeds into the international financial system. Other autocratic leaders subject to international sanctions, such as those in Iran and Russia, have initiated cryptocurrency-related programs aimed at evading financial systems denominated in dollars or euros, which are susceptible to sanctions. Western governments, especially the United States, must ensure the continued effectiveness of sanctions by preventing autocratic regimes from leveraging cryptocurrencies to bypass these measures. Moreover, a concerted global effort should be undertaken to engage new cryptocurrency platforms as key stakeholders in this endeavor, ensuring their commitment to excluding autocrats from this emerging financial technology.

To effectively counter Venezuela's attempts to launder money through cryptocurrencies, concerted action from both the public and private sector is essential. Key governments, including the United States, the United Kingdom, and the European Union, must rigorously enforce existing restrictions to prevent the Maduro regime's exploitation of digital currencies. Financial institutions and cryptocurrency exchanges also play a critical role; they must establish robust compliance measures to ensure the Maduro regime cannot transfer, launder, or hide its assets within the international financial system. In addition, multilateral organizations like the Financial Action Task Force (FATF) and the Egmont Group should intensify their efforts to address and seal regulatory loopholes that currently allow kleptocratic regimes to move billions in cryptocurrency. This collective approach is crucial to stem the flow of illicit funds and uphold global financial integrity.

Western countries have begun to incorporate cryptocurrency addresses and enterprises into their international sanctions frameworks, exemplified by the US Treasury Department's Office of Foreign Assets Control's Specially Designated Nationals List (OFAC SDN). Despite the extensive inclusion of Russian, Iranian, and Chinese entities

and individuals, Venezuelan cryptocurrency players remain conspicuously absent from any Western sanctions list. This situation places a significant responsibility on democratic Western nations to actively confront and counteract the overtly autocratic and kleptocratic governance of Maduro's regime. Imposing sanctions against the blatant plundering of their nation represents one of the actions the West can take in response.

Every dollar misappropriated by the Maduro regime rightfully belongs to the Venezuelan people. The billions that have vanished in recent years represent a grotesque sum, which could have been pivotal in revitalizing the country's faltering economy. Instead, Maduro's embrace of cryptocurrency exploited an emerging technology to carve out a new pathway for diverting the nation's riches, further impoverishing its citizens. A significant portion of these funds found their way into jurisdictions like the US, EU, and UK. It is imperative for these governments to ensure that these funds are restored to their legitimate owners: the people of Venezuela. In the absence of a democratic breakthrough within the country, these funds should be held in escrow, with provisions in place for their legal distribution to the victims.

The industry dedicated to crypto asset recovery has seen significant growth, propelled by the increasing adoption of cryptocurrencies and the corresponding rise in crypto-related crimes such as fraud and hacking. Despite the perceived anonymity of digital currencies, advancements in blockchain technology and forensic analysis have made it increasingly possible to trace and recover lost or stolen cryptocurrencies. This burgeoning field, which melds expertise in cybersecurity, legal frameworks, and blockchain forensics, offers victims of crypto crimes a viable path to reclaim their digital assets, reflecting the evolving landscape of digital asset security and recovery.

Overcoming Challenges & Need for Partnerships

Access to cryptocurrency and understanding its long-term value remain significant hurdles in Venezuela. Financial literacy in cryptocurrency, a concept foreign to many, compounds the challenge of effective saving and investing. Moreover, the pervasive skepticism fueled by scams, misinformation, and skepticism further impedes adoption. Yet, within this landscape of uncertainty, there are ways to tackle this issue and work with those dedicated to bridging this knowledge gap.

More than 7 million Venezuelans currently reside outside their homeland, and there is a pressing need to prioritize educating them about the advantages of decentralized finance. Many of these individuals find themselves in countries where workshops and digital literacy classes can readily be provided to empower them with the knowledge of cryptocurrency. Moreover, a significant portion of these emigrants are likely to seek avenues for sending money to their relatives still residing in Venezuela. By elucidating the benefits of utilizing cryptocurrency for remittances, we aid those outside Venezuela and pave the way for grassroots adoption within the country itself.

The complexity and steep learning curve of cryptocurrency shouldn't deter engagement; rather, it presents an opportunity for educational initiatives. Financial working groups and outreach programs can be launched to demystify cryptocurrency, showcasing its benefits. Initiatives like the Health Heroes case study exemplify how cryptocurrency can offer innovative solutions to empower civil society. To bridge the knowledge gap, the international development community and cryptocurrency enthusiasts should unite, and spearhead a collective

effort to illuminate the potential of cryptocurrency and ensure its advantages are accessible to all Venezuelans.

The cryptocurrency industry boasts some of the most dedicated, creative, and entrepreneurial minds. Many self-proclaimed maximalists passionately advocate for Bitcoin's potential to revolutionize the world and serve as an anti-censorship tool for those championing freedom. Nowhere is this sentiment more palpable than in present-day Venezuela. These enterprising entrepreneurs and evangelists should be embraced as valuable voices in fostering cryptocurrency adoption in Venezuela. The lessons learned from the petro experiment and the rampant misuse of cryptocurrency by the Maduro regime serve as a rallying cry for these innovators to lend their expertise in rebuilding the crypto currency system within Venezuela. Their partnership and ideas are urgently needed by the Venezuelan people, who crave solutions amidst dire circumstances.

The example demonstrated by the Health Heroes program only a fraction of the potential for this technology to benefit the most vulnerable communities and sectors of the population. Furthermore, in a system controlled and monitored by repressive forces, the financing of democratic organizations, human rights defenders, and activists in the resistance for freedom becomes a challenge. Cryptocurrencies can help erode autocrats' influence.

Looking to the Future

At the 2022 Bitcoin Amsterdam conference, López discussed how crypto enabled him and others to deliver much-needed COVID assistance to Venezuelans. López ended the discussion with an important reminder for cryptocurrency users of the so-called first world. "I hope this community sees beyond the United States and beyond Europe, where this innovation is happening. Look to Africa, look to Latin America, look to Southeast Asia, look to Eastern Europe—places where [cryptocurrency] is not a luxury, but a need." Venezuela's embrace of cryptocurrency is an important reminder of the potential this still-young technology must foster freedom and improve quality of life for those who need it most.⁶³ As Venezuela navigates through the complexities of technological evolution and financial shifts, Bitcoin's decentralized promise emerges as an inevitable force, offering hope in the face of adversity.

In the long history of Venezuela's crisis, cryptocurrencies have proven to be both a beacon of hope and a method used by autocrats to siphon money away from the population. Originally embraced by citizens seeking financial stability in the face of economic collapse, these digital assets became indispensable for remittances and asset protection. Yet the government's exploitation of cryptocurrency for corruption and money laundering underscores the dual-edged nature of this financial innovation. Venezuela serves as a stark illustration of the potential benefits and risks inherent in cryptocurrency use.

The Maduro government leveraged cryptocurrency to circumvent global sanctions, perpetuating its kleptocratic practices at the expense of its citizens. It is responsible for funneling substantial amounts of illicit funds into the global economy, and it has largely evaded significant international pushback or opposition. However, as with many advances in human history, we cannot condemn tools just because a few misuse them. The right instrument, in the right hands, can do more than we can imagine. The bright side of the use and adoption of cryptocurrencies shines with the promise of a better future for a hopeful population.

Bibliography

- Alcalde, Carolina. "Fiscalía revela detalles de trama de corrupción en Venezuela." *Voz de América*. March 25, 2023. https://www-vozdeamerica-com.translate.goog/a/fiscalia-revela-detalles-trama-corrupcion-venezuela/7021415.html?_x_tr_sl=es&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc.
- Alper, Tim. "Confusion Reigns as Venezuela's Petro Goes Offline for 'Maintenance.'" *Cryptonews*. May 7, 2020. <https://cryptonews.com/news/confusion-reigns-as-venezuela-s-petro-goes-offline-for-maint-6489.htm>.
- Andara Meza, Albany. "Fallas eléctricas y racionamiento en Venezuela: cómo se ha apagado el país en 2022." November 7, 2022. <https://efectococuyo.com/la-humanidad/fallas-electricas-y-racionamiento-en-venezuela-como-se-ha-apagado-el-pais-en-2022/>.
- Armas, Mayela. "'The boom is over': Venezuelans lament end of brief dollarization boost."
- Reuters. September 1, 2023. <https://www.reuters.com/world/americas/the-boom-is-over-venezuelans-lament-end-brief-dollarization-boost-2023-09-01/>,
- Bastardo, Javier. "Bitcoin Miners Trapped in Alleged \$20 Billion Corruption Scheme in Venezuela." *Forbes*. February 20, 2023. <https://www.forbes.com/sites/digital-assets/2023/04/20/bitcoin-miners-trapped-in-alleged-20-billion-corruption-scheme-in-venezuela/?sh=59f843d96b65>.
- Bastardo, Yenderzon. "AN citó a comparecer a presidentes de los bancos vinculados a Interbanex." *Transparencia Venezuela*. February 18, 2019. https://transparenciave-org.translate.goog/an-cito-a-comparecer-a-presidentes-de-los-bancos-vinculados-a-interbanex/?_x_tr_sl=es&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc.
- Bitcoin Magazine. "The Struggle for Freedom w/ Leopoldo Lopez, Alex Gladstein," Youtube Video, 39:26. October 13, 2022. <https://www.youtube.com/watch?v=bTM8ZC7WJOI>.
- Cant, Joeri. "Crypto News From the Spanish-Speaking World: Oct. 21–27 in Review." *Cointelegraph.com*. October 27, 2019. <https://cointelegraph.com/news/crypto-news-from-the-spanish-speaking-world-oct-2127-in-review>.
- Castellanos, Daniel Salazar. "Trabajadores remotos en LatAm aún son fieles a las criptomonedas pese al desplome." *Bloomberg Línea*. February 16, 2023. <https://www.bloomberglinea.com/2023/02/16/trabajadores-remotos-en-latam-aun-son-fieles-a-las-criptomonedas-pese-al-desplome/>.
- Castillo, Julián. "Quienes deseen minar criptomonedas en Venezuela deberán estar registrados en el Rísec y el RIM." *El Diario*. March 12, 2022. <https://eldiario.com/2022/03/11/minar-criptomonedas-venezuela-risec-rim/>.
- Coin, Amberes (@amberescoin). "Estimado usuario, Sunacrip debe autorizar el reembolso de fondos a @PDVSA para realizar los retiros pendientes. Confiamos en la debida diligencia de nuestro ente regulador y pronta solución para dicha incidencia. @sunacrip_ve @JoselitRamirez." X (Formerly Twitter), February 8, 2023, 10:23PM. <https://x.com/AmberesCoin/status/1623522963084419073?s=20>
- Crnogatić, Ivan. "Here's Why Venezuela's Failed Cryptocurrency Could Not Fix 359.99% Yearly Inflation." *Nasdaq.com*. January 20, 2024. <https://www.nasdaq.com/articles/heres-why-venezuelas-failed-cryptocurrency-could-not-fix-359.99-yearly-inflation>.
- Di Salvo, Mathew. "Why Are Venezuelans Seeking Refuge in Crypto-Currencies?" *BBC News*. March 19, 2019. <https://www.bbc.com/news/business-47553048>
- De La Cruz, Antonio and Corream, Hector. "The Anti-Blockade Law: A Change in Venezuela's Economic Model." *Center for Strategic and International Studies*. December 2, 2020. <https://www.csis.org/analysis/anti-blockade-law-change-venezuelas-economic-model>.
- Deniz, Roberto. "Pdvsas dio patente de corso a unos intermediarios que le quedaron debiendo." *Armando.info*. November 20, 2022. <https://armando.info/pdvsas-dio-patente-de-corso-a-unos-intermediarios-que-le-quedaron-debiendo/>.
- DePersio, Greg. "How Does the Price of Oil Affect Venezuela's Economy?" *Investopedia*. March 25, 2015. <https://www.investopedia.com/ask/answers/032515/how-does-price-oil-affect-venezuelas-economy.asp>.
- Ellsworth, Brian. "Special Report: In Venezuela, New Cryptocurrency Is Nowhere to Be Found." *Reuters*. August 30, 2018. www.reuters.com/article/idUSKCN1LF18F/.
- Ferrer, Elias. "Venezuela's Crypto Rebirth: Interview with Enrique De Los Reyes." *Forbes*, 6 Mar. 2024, <https://www.forbes.com/sites/eliasferrerbreda/2024/03/06/venezuelas-crypto-rebirth-interview-with-enrique-de-los-reyes/?sh=362780c65d78>.
- "Freedom on the Net: Venezuela 2023 Country Report." *Freedom House*. 2023. <https://freedomhouse.org/country/venezuela/freedom-net/2023#A>.

Goodman, Joshua. "Russia Bank Helps Venezuela Defy US Cryptocurrency Sanctions." AP News. May 14, 2018. <https://apnews.com/general-news-b745c5132a544735a71e9480582240f4>

Gomez, Eduardo. "Venezuelan Freelancers Are Using Bitcoin to Survive the Economic Crisis." *themerkele.com*. June 10, 2016. <https://themerkele.com/venezuelan-freelancers-are-using-bitcoin-to-survive-the-economic-crisis/>

Goschenko, Sergio. "Supreme Tribunal in Venezuela States Sunacrip Has Strategic Role, Voids Earlier Sentence." *Bitcoin.com*. March 13, 2022. <https://news.bitcoin.com/supreme-tribunal-in-venezuela-states-sunacrip-has-strategic-role/>.

Goschenko, Sergio. "Crypto Dominates as Payment Method for Remote Workers in Latam." *Bitcoin.com*. February 20, 2023. <https://news.bitcoin.com/crypto-dominates-as-payment-method-for-remote-workers-in-latam/>.

Helms, Kevin. "Venezuelan Army Starts Mining Bitcoin for 'unblockable Income' – Mining." *Bitcoin News*, November 30, 2020, <https://news.bitcoin.com/venezuela-army-mining-bitcoin-for-unblockable-income/>.

Helms, Kevin. "Venezuela Authorizes 6 Exchanges to Start Selling National Cryptocurrency Petro – Regulation." *Bitcoin News*. October 18, 2018. <https://news.bitcoin.com/venezuela-exchanges-selling-national-cryptocurrency-petro/>.

Herrera, Jesús. "Mineros de Bitcoin llevan 6 meses apagados en Venezuela, y la Sunacrip sigue en silencio." *CriptoNoticias - Noticias de Bitcoin, Ethereum y criptomonedas*, *CriptoNoticias*, 21 Sept. 2023, <https://www.criptonoticias-com.translate.goog/regulacion/mineros-bitcoin-6-meses-apagados-sunacrip-venezuela/>.

Holman, Trevor. "Venezuela to Introduce Cryptocurrency Remittance Remesas Service." *CryptoNewsZ*. March 9, 2019. <https://www.cryptonews.com/despite-crisis-venezuela-launches-crypto-remittance-platform-supporting-bitcoin-and-litecoin-payments/>.

"Hyperinflation and Sanctions Evasion: What On-Chain Data Tells Us About Venezuelans' Trust in Cryptocurrency." *Chainalysis*. August 20, 2020. <https://www.chainalysis.com/blog/venezuela-cryptocurrency-market-2020/>.

Karsten, Jack. and West, Darrell "Venezuela's 'Petro' Undermines Other Cryptocurrencies – and International Sanctions." *Brookings*. March 9, 2018. <https://www.brookings.edu/articles/venezuelas-petro-undermines-other-cryptocurrencies-and-international-sanctions/>.

"La Institucionalidad Frente A Las Economías Ilícitas." *Transparencia Venezuela*. September, 2023. <https://transparenciave.org/economias-ilicitas/wp-content/uploads/2023/09/La-institucionalidad-frente-a-las-economias-ilicitas.pdf>

Lanz, Jose Antonio. "Venezuela's petro cryptocurrency now accepted at nearly 100 stores, officials claim." *Yahoo News*. October 14, 2019. <https://www.yahoo.com/news/venezuelas-petro-cryptocurrency-now-accepted-204955527.html>.

"Latin America: Venezuela and Argentina Stand out as Examples of Crypto's Unique Utility." *Chainalysis*. October 11, 2023. <https://www.chainalysis.com/blog/latin-america-cryptocurrency-adoption/>.

Leal, Andrea. "Legalizada la minería de Bitcoin en Venezuela; habrá un Pool Nacional." *CriptoNoticias*. September 23, 2020. <https://www.criptonoticias.com/mineria/legalizada-mineria-bitcoin-venezuela-habra-pool-nacional/>.

María Vargas Ponce, Jose. "Programa de bonos al personal de salud "heroes de la salud" informe de cierre." In *Plan Jose María vargas de Emergencia Nacional*. Accessed April 9, 2024. <https://asambleanacional-media.s3.amazonaws.com/documentos/documentos/informe-de-cierre-programa-heroes-de-la-salud-20210302143512.pdf>.

Mawad, Tony Frangie. "State-Enabled Illicit Trades Represent More Than a Quarter of Venezuela's Economy." *Caracas Chronicles*. January 8, 2024. <https://www.caracaschronicles.com/2024/01/08/state-enabled-illicit-trades-represent-more-than-a-quarter-of-venezuelas-economy/>.

Muñoz-Pogossian, Betilde and Winkler, Alexandra. "The Persistence of the Venezuelan Migrant and Refugee Crisis." *Center for Strategic and International Studies*. November 27, 2023. <https://www.csis.org/analysis/persistence-venezuelan-migrant-and-refugee-crisis#:~:text=The%20outflow%20of%20refugees%20and>.

Orozco, Manuel, and Klaas, Kathryn. "Money Transfers to Venezuela: Remittance Flows Amidst Evolving Foreign Exchange." *The Dialogue*. May, 2020. <https://www.thedialogue.org/analysis/money-transfers-to-venezuela-remittance-flows-amidst-evolving-foreign-exchange/>.

P., Maru Morales, "Comisión de Contraloría citará al presidente del BCV, la directiva de Interbanex y al dueño del BOD." *Crónica Uno*. February 6, 2019. <https://cronica.uno/comision-de-contraloria-citara-al-presidente-del-bcv-la-directiva-de-interbanex-y-al-dueno-del-bod/>.

Parashar, Shrikar. "Bitcoin (BTC) and Litecoin (LTC) Approved for Venezuelan Remittance Service." *Blockmanity*. March 5, 2019. <https://blockmanity.com/news/bitcoin/bitcoin-btc-and-litecoin-ltc-approved-for-venezuelan-remittance-service/>.

Paraskova, Tsvetana. "The Black Market For Oil Is Booming." *OilPrice.com*. December 11, 2022. <https://oilprice.com/Energy/Crude-Oil/The-Black-Market-For-Oil-Is-Booming.html>.

Parraga, Marianna. "Exclusive: Middlemen have left Venezuela's PDVSA with \$21.2 billion in unpaid bills." Reuters. March 21, 2023. <https://www.reuters.com/business/energy/middlemen-have-left-venezuelas-pdvsa-with-212-billion-unpaid-bills-2023-03-21/>.

Pearson, Jordan. "Venezuela's 'Petro' Launch Was Amateur Hour." VICE. February 21, 2018. <https://www.vice.com/en/article/qvewyv/venezuelas-petro-launch-was-amateur-hour-nem-ethereum?ref=hackernoon.com>.

"Percentage of households in poverty and extreme poverty in Venezuela from 2002 to 2021." Statista. November 15, 2023. <https://www.statista.com/statistics/1235189/household-poverty-rate-venezuela/>.

"PDVSA-CRYPTO An Unprecedented Fraud with Tremendous Economic and Social Impact." Transparency Venezuela. 2021. <https://transparenciave.org/home-petroleo/>.

Ramos, Alejandra. "Familiares de exfuncionario venezolano que murió mientras lo investigaban por corrupción piden protección y explicaciones." CNN, April 22, 2023. <https://cnnespanol.cnn.com/2023/04/21/familiares-de-leoner-azuaje-urrea-que-murio-mientras-lo-investigaban-piden-proteccion-y-explicaciones-venezuela-orix/>.

Rojas, Eligio. "Presidente Maduro removió al jefe de la Sunacrip." Últimas Noticias. March 18, 2023. <https://ultimasnoticias.com.ve/noticias/politica/presidente-maduro-removio-al-jefe-de-la-sunacrip/>.

Rojas, Ezio. "Venezuela: Se podrán comprar boletos aéreos con el Petro." Cointelegraph. August 20, 2019. <https://es.cointelegraph.com.translate.goog/news/venezuela-petro-will-be-able-to-buy-air-tickets>.

Rojas, Ezio "Exdirector de inteligencia de Venezuela: el país está lleno de granjas de minería secretas impulsadas por el gobierno." Cointelegraph. October 26, 2019. <https://es.cointelegraph.com/news/venezuelas-former-intelligence-director-country-full-of-government-powered-secret-mining-farms>.

Rosas, Ronny Rodríguez. "Quién era Juan Almeida, el hacker N33, segundo fallecido en trama de corrupción en Pdvsa." Efecto Cocuyo. May 17, 2023. https://efectococuyo.com.translate.goog/la-humanidad/quien-era-juan-almeida-el-hacker-n33-segundo-fallecido-por-trama-de-corrupcion-en-pdvsa/?_x_tr_sl=es&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc.

Sigalos, Mackenzie. "This Is One of the World's Most Dangerous Places to Mine Bitcoin." CNBC. September 2, 2017. <https://www.cnbc.com/2017/08/30/venezuela-is-one-of-the-worlds-most-dangerous-places-to-mine-bitcoin.html>.

"Transcripción - Adiós, bolívar." Radio Ambulante, Radio Ambulante Studios. January 22, 2019. <https://radioambulante.org/transcripcion/transcripcion-adios-bolivar>.

US Attorney's Office. Eastern District of New York. Five Russian Nationals and Two Oil Traders Charged in Global Sanctions Evasion and Money Laundering Scheme. New York, 2022. <https://www.justice.gov/usao-edny/pr/five-russian-nationals-and-two-oil-traders-charged-global-sanctions-evasion-and-money>.

US Energy Information Administration, International Energy Statistics; the International Energy Agency, "World Energy Statistics 2022; and Energy Institute, Statistical Review of World Energy 2023." 2023. <https://www.eia.gov/international/analysis/country/VEN>

"Venezuela: Remittances as a source of foreign exchange and economic survival." The Dialogue. November, 2022. <https://www.thedialogue.org/wp-content/uploads/2023/04/Venezuela%E2%80%8B-Remittances-as-a-source-of-foreign-exchange-and-economic-survival.pdf>.

Endnotes

- 1 Javier Bastardo, “Bitcoin Miners Trapped in Alleged \$20 Billion Corruption Scheme in Venezuela,” Forbes, April 20, 2023, <https://www.forbes.com/sites/digital-assets/2023/04/20/bitcoin-miners-trapped-in-alleged-20-billion-corruption-scheme-in-venezuela/?sh=4eae83006b65>.
- 2 Greg DePersio, “How Does the Price of Oil Affect Venezuela’s Economy?” Investopedia, March 25, 2015, <https://www.investopedia.com/ask/answers/032515/how-does-price-oil-affect-venezuelas-economy.asp>.
- 3 US Energy Information Administration, International Energy Statistics; the International Energy Agency, “World Energy Statistics 2022; and Energy Institute, Statistical Review of World Energy 2023,” (2023), <https://www.eia.gov/international/analysis/country/VEN>. Accessed 9 Apr. 2024.
- 4 Antonio De La Cruz and Hector Corream, “The Anti-Blockade Law: A Change in Venezuela’s Economic Model,” Center for Strategic and International Studies, December 2, 2020, <https://www.csis.org/analysis/anti-blockade-law-change-venezuelas-economic-model>
- 5 Tony Frangie Mawad, “State-Enabled Illicit Trades Represent More Than a Quarter of Venezuela’s Economy,” Caracas Chronicles, January 8, 2024, <https://www.caracaschronicles.com/2024/01/08/state-enabled-illicit-trades-represent-more-than-a-quarter-of-venezuelas-economy>
- 6 “La Institucionalidad Frente A Las Economías Ilícitas,” Transparencia Venezuela, September, 2023, <https://transparenciave.org/economias-ilicitas/wp-content/uploads/2023/09/La-institucionalidad-frente-a-las-economias-ilicitas.pdf>
- 7 “La Institucionalidad Frente A Las Economías Ilícitas,” Transparencia Venezuela, September, 2023, <https://transparenciave.org/economias-ilicitas/wp-content/uploads/2023/09/La-institucionalidad-frente-a-las-economias-ilicitas.pdf>
- 8 Tony Frangie Mawad, “State-Enabled Illicit Trades Represent More Than a Quarter of Venezuela’s Economy,” Caracas Chronicles, January 8, 2024, <https://www.caracaschronicles.com/2024/01/08/state-enabled-illicit-trades-represent-more-than-a-quarter-of-venezuelas-economy/>
- 9 “Hyperinflation and Sanctions Evasion: What On-Chain Data Tells Us About Venezuelans’ Trust in Cryptocurrency,” Chainalysis, August 20, 2020, <https://www.chainalysis.com/blog/venezuela-cryptocurrency-market-2020/>.
- 10 Ibid.
- 11 Ibid.
- 12 Jordan Pearson, “Venezuela’s ‘Petro’ Launch Was Amateur Hour,” VICE, February 21, 2018, <https://www.vice.com/en/article/qvewyv/venezuelas-petro-launch-was-amateur-hour-nem-ethereum?ref=hackernoon.com>
- 13 Darrell West and Jack Karsten. “Venezuela’s ‘Petro’ Undermines Other Cryptocurrencies – and International Sanctions,” Brookings, March 9, 2018, <https://www.brookings.edu/articles/venezuelas-petro-undermines-other-cryptocurrencies-and-international-sanctions/>
- 14 Joshua Goodman, “Russia Bank Helps Venezuela Defy US Cryptocurrency Sanctions.” AP News, May 14, 2018, <https://apnews.com/general-news-b745c5132a544735a71e9480582240f4>.
- 15 Rico, Yuliana Alejandra Martínez. “Maduro propone a los gobiernos del Alba sumarse a la criptomoneda.” El Tiempo, 12 Jan. 2018, <https://www.eltiempo.com/mundo/venezuela/maduro-propone-al-alba-unirse-al-petro-venezolano-170548>.
- 16 Brian Ellsworth, “Special Report: In Venezuela new cryptocurrency is nowhere to be found,” Reuters, August 30, 2018, <https://www.reuters.com/article/us-cryptocurrency-venezuela-specialreport/special-report-in-venezuela-new-cryptocurrency-is-nowhere-to-be-found-idUSKCN1LF15U/>.
- 17 Jose Antonio Lanz, “Venezuela’s petro cryptocurrency now accepted at nearly 100 stores, officials claim,” Yahoo News, October 14, 2019, <https://www.yahoo.com/news/venezuelas-petro-cryptocurrency-now-accepted-204955527.html>.
- 18 Ezio Rojas, “Venezuela: Se podrán comprar boletos aéreos con el Petro,” Cointelegraph. August 20, 2019. <https://es-cointelegraph.com.translate.goog/news/venezuela-petro-will-be-able-to-buy-air-tickets>
- 19 Trevor Holman, “Venezuela to Introduce Cryptocurrency Remittance Remesas Service,” CryptoNewsZ, March 9, 2019, <https://www.cryptonews.com/despite-crisis-venezuela-launches-crypto-remittance-platform-supporting-bitcoin-and-litecoin-payments/>.
- 20 Shrikar Parashar, “Bitcoin (BTC) and Litecoin (LTC) Approved for Venezuelan Remittance Service,” Blockmanity, March 5, 2019, <https://blockmanity.com/news/bitcoin/bitcoin-btc-and-litecoin-ltc-approved-for-venezuelan-remittance-service/>.
- 21 Tim Alper, “Confusion Reigns as Venezuela’s Petro Goes Offline for ‘Maintenance,’” Cryptonews, May 7, 2020, <https://cryptonews.com/news/confusion-reigns-as-venezuela-s-petro-goes-offline-for-maint-6489.htm>.
- 22 Brian Ellsworth, “Special Report: In Venezuela, New Cryptocurrency Is Nowhere to Be Found.” Reuters, August 30, 2018, www.reuters.com/article/idUSKCN1LF18F/.
- 23 Kevin Helms, “Venezuela Authorizes 6 Exchanges to Start Selling National Cryptocurrency Petro – Regulation,” Bitcoin News, October 18, 2018, <https://news.bitcoin.com/venezuela-exchanges-selling-national-cryptocurrency-petro/>.
- 24 Hyperinflation and Sanctions Evasion: What On-Chain Data Tells Us About Venezuelans’ Trust in Cryptocurrency,” Chainalysis, August 20, 2020, <https://www.chainalysis.com/blog/venezuela-cryptocurrency-market-2020/>.
- 25 Mackenzie Sigalos, “This Is One of the World’s Most Dangerous Places to Mine Bitcoin,” CNBC, September 2, 2017, <https://www.cnbc.com/2017/08/30/venezuela-is-one-of-the-worlds-most-dangerous-places-to-mine-bitcoin.html>.

- 26 “Transcripción - Adiós, bolívar.” Radio Ambulante, Radio Ambulante Studios. January 22, 2019. <https://radioambulante.org/transcripcion/transcripcion-adios-bolivar>.
- 27 Joeri Cant, “Crypto News From the Spanish-Speaking World: Oct. 21–27 in Review,” [Cointelegraph.com](https://cointelegraph.com/news/crypto-news-from-the-spanish-speaking-world-oct-2127-in-review), October 27, 2019, <https://cointelegraph.com/news/crypto-news-from-the-spanish-speaking-world-oct-2127-in-review>.
- 28 Andrea Leal, “Legalizada la minería de Bitcoin en Venezuela; habrá un Pool Nacional,” [CriptoNoticias](https://www.criptonoticias.com/mineria/legalizada-mineria-bitcoin-venezuela-habra-pool-nacional/), September 23, 2020, <https://www.criptonoticias.com/mineria/legalizada-mineria-bitcoin-venezuela-habra-pool-nacional/>.
- 29 Kevin Helms, “Venezuelan Army Starts Mining Bitcoin for ‘unblockable Income’ – Mining,” [Bitcoin News](https://news.bitcoin.com/venezuela-army-mining-bitcoin-for-unblockable-income/), November 30, 2020, <https://news.bitcoin.com/venezuela-army-mining-bitcoin-for-unblockable-income/>.
- 30 Ibid.
- 31 Julián Castillo, “Quienes deseen minar criptomonedas en Venezuela deberán estar registrados en el Risec y el RIM,” [El Diario](https://eldiario.com/2022/03/11/minar-criptomonedas-venezuela-risec-rim/), March 12, 2022, <https://eldiario.com/2022/03/11/minar-criptomonedas-venezuela-risec-rim/>.
- 32 Ezio Rojas, “Exdirector de inteligencia de Venezuela: el país está lleno de granjas de minería secretas impulsadas por el gobierno,” [Cointelegraph](https://es.cointelegraph.com/news/venezuelas-former-intelligence-director-country-full-of-government-powered-secret-mining-farms), October 26, 2019, <https://es.cointelegraph.com/news/venezuelas-former-intelligence-director-country-full-of-government-powered-secret-mining-farms>.
- 33 Sergio Goschenko, “Supreme Tribunal in Venezuela States Sunacrip Has Strategic Role, Voids Earlier Sentence,” [Bitcoin.com](https://news.bitcoin.com/supreme-tribunal-in-venezuela-states-sunacrip-has-strategic-role/), March 13, 2022, <https://news.bitcoin.com/supreme-tribunal-in-venezuela-states-sunacrip-has-strategic-role/>.
- 34 US Attorney’s Office, Eastern District of New York, Five Russian Nationals and Two Oil Traders Charged in Global Sanctions Evasion and Money Laundering Scheme, (New York, 2022), <https://www.justice.gov/usao-edny/pr/five-russian-nationals-and-two-oil-traders-charged-global-sanctions-evasion-and-money>.
- 35 Tsvetana Paraskova, “The Black Market For Oil Is Booming,” [OilPrice.com](https://oilprice.com/Energy/Crude-Oil/The-Black-Market-For-Oil-Is-Booming.html), December 11, 2022, <https://oilprice.com/Energy/Crude-Oil/The-Black-Market-For-Oil-Is-Booming.html>.
- 36 “PDVSA-CRYPTO An Unprecedented Fraud with Tremendous Economic and Social Impact,” [Transparency Venezuela](https://transparenciave.org/home-petroleo/), 2021, <https://transparenciave.org/home-petroleo/>.
- 37 Marianna Parraga, “Exclusive: Middlemen have left Venezuela’s PDVSA with \$21.2 billion in unpaid bills,” [Reuters](https://www.reuters.com/business/energy/middlemen-have-left-venezuelas-pdvsa-with-212-billion-unpaid-bills-2023-03-21/), March 21, 2023, <https://www.reuters.com/business/energy/middlemen-have-left-venezuelas-pdvsa-with-212-billion-unpaid-bills-2023-03-21/>.
- 38 Javier Bastardo, “Bitcoin Miners Trapped in Alleged \$20 Billion Corruption Scheme in Venezuela,” [Forbes](https://www.forbes.com/sites/digital-assets/2023/04/20/bitcoin-miners-trapped-in-alleged-20-billion-corruption-scheme-in-venezuela/?sh=59f843d96b65), February 20, 2023, <https://www.forbes.com/sites/digital-assets/2023/04/20/bitcoin-miners-trapped-in-alleged-20-billion-corruption-scheme-in-venezuela/?sh=59f843d96b65>.
- 39 Eligio Rojas, “Presidente Maduro removió al jefe de la Sunacrip,” [Últimas Noticias](https://ultimasnoticias.com.ve/noticias/politica/presidente-maduro-removio-al-jefe-de-la-sunacrip/), March 18, 2023, <https://ultimasnoticias.com.ve/noticias/politica/presidente-maduro-removio-al-jefe-de-la-sunacrip/>.
- 40 Roberto Deniz, “Pdvs dio patente de corso a unos intermediarios que le quedaron debiendo,” [Armando.info](https://armando.info/pdvsa-dio-patente-de-corso-a-unos-intermediarios-que-le-quedaron-debiendo/), November 20, 2022, <https://armando.info/pdvsa-dio-patente-de-corso-a-unos-intermediarios-que-le-quedaron-debiendo/>.
- 41 Carolina Alcalde, “Fiscalía revela detalles de trama de corrupción en Venezuela,” [Voz de América](https://www.vozde-america-com.translate.goog/a/fiscalia-revela-detalles-trama-corrupcion-venezuela/7021415.html?_x_tr_sl=es&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc), March 25, 2023, https://www.vozde-america-com.translate.goog/a/fiscalia-revela-detalles-trama-corrupcion-venezuela/7021415.html?_x_tr_sl=es&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc.
- 42 Alejandra Ramos, “Familiares de exfuncionario venezolano que murió mientras lo investigaban por corrupción piden protección y explicaciones.” [CNN](https://cnnespanol.cnn.com/2023/04/21/familiares-de-leoner-azuaje-urreea-que-murio-mientras-lo-investigaban-piden-proteccion-y-explicaciones-venezuela-orix/), April 22, 2023, <https://cnnespanol.cnn.com/2023/04/21/familiares-de-leoner-azuaje-urreea-que-murio-mientras-lo-investigaban-piden-proteccion-y-explicaciones-venezuela-orix/>.
- 43 Ronny Rodríguez Rosas, “Quién era Juan Almeida, el hacker N33, segundo fallecido en trama de corrupción en Pdvsa,” [Efecto Cocuyo](https://efectococuyo-com.translate.goog/la-humanidad/quien-era-juan-almeida-el-hacker-n33-segundo-fallecido-por-trama-de-corrupcion-en-pdvsa/?_x_tr_sl=es&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc), 17 May 2023, https://efectococuyo-com.translate.goog/la-humanidad/quien-era-juan-almeida-el-hacker-n33-segundo-fallecido-por-trama-de-corrupcion-en-pdvsa/?_x_tr_sl=es&_x_tr_tl=en&_x_tr_hl=en&_x_tr_pto=sc.
- 44 Jesús Herrera, “Mineros de Bitcoin llevan 6 meses apagados en Venezuela, y la Sunacrip sigue en silencio,” [CriptoNoticias](https://www.criptonoticias-com.translate.goog/regulacion/mineros-bitcoin-6-meses-apagados-sunacrip-venezuela/), September 21, 2023, <https://www.criptonoticias-com.translate.goog/regulacion/mineros-bitcoin-6-meses-apagados-sunacrip-venezuela/>.
- 45 Mayela Armas, “‘The boom is over’: Venezuelans lament end of brief dollarization boost,” [Reuters](https://www.reuters.com/world/americas/the-boom-is-over-venezuelans-lament-end-brief-dollarization-boost-2023-09-01/), September 1, 2023, <https://www.reuters.com/world/americas/the-boom-is-over-venezuelans-lament-end-brief-dollarization-boost-2023-09-01/>.
- 46 Ivan Crnogatić, “Here’s Why Venezuela’s Failed Cryptocurrency Could Not Fix 359.99% Yearly Inflation,” [Nasdaq.com](https://www.nasdaq.com/articles/heres-why-venezuelas-failed-cryptocurrency-could-not-fix-359.99-yearly-inflation), January 20, 2024, <https://www.nasdaq.com/articles/heres-why-venezuelas-failed-cryptocurrency-could-not-fix-359.99-yearly-inflation>.
- 47 Elias Ferrer, “Venezuela’s Crypto Rebirth: Interview with Enrique De Los Reyes,” [Forbes](https://www.forbes.com/sites/eliasferrerbreda/2024/03/06/venezuelas-crypto-rebirth-interview-with-enrique-de-los-reyes/?sh=362780c65d78), March 6, 2024, <https://www.forbes.com/sites/eliasferrerbreda/2024/03/06/venezuelas-crypto-rebirth-interview-with-enrique-de-los-reyes/?sh=362780c65d78>.
- 48 Mathew Di Salvo, “Why Are Venezuelans Seeking Refuge in Crypto-Currencies?” [BBC News](https://www.bbc.com/news/business-47553048), March 19, 2019, <https://www.bbc.com/news/business-47553048>.
- 49 Ibid.
- 50 Betilde Muñoz-Pogossian and Alexandra Winkler, “The Persistence of the Venezuelan Migrant and Refugee Crisis,” [Center for Strategic and International Studies](https://www.csis.org/analysis/persistence-venezuelan-migrant-and-refugee-crisis#:~:text=The%20outflow%20of%20refugees%20and), November 27, 2023, <https://www.csis.org/analysis/persistence-venezuelan-migrant-and-refugee-crisis#:~:text=The%20outflow%20of%20refugees%20and>.
- 51 “Venezuela: Remittances as a source of foreign exchange and economic survival,” [The Dialogue](https://www.the-dialogue.org/wp-content/uploads/2023/04/Venezuela%E2%80%8B-Remittances-as-a-source-of-foreign-exchange-and-econom), November, 2022, <https://www.the-dialogue.org/wp-content/uploads/2023/04/Venezuela%E2%80%8B-Remittances-as-a-source-of-foreign-exchange-and-econom>

ic-survival.pdf.

- 52 Manuel Orozco and Kathryn Klaas, “Money Transfers to Venezuela: Remittance Flows Amidst Evolving Foreign Exchange,” The Dialogue, May, 2020, <https://www.thedialogue.org/analysis/money-transfers-to-venezuela-remittance-flows-amidst-evolving-for-foreign-exchange/>.
- 53 Sergio Goschenko, “Crypto Dominates as Payment Method for Remote Workers in Latam,” [Bitcoin.com](https://news.bitcoin.com/crypto-dominates-as-payment-method-for-remote-workers-in-latam/), February 20, 2023, <https://news.bitcoin.com/crypto-dominates-as-payment-method-for-remote-workers-in-latam/>.
- 54 Daniel Salazar Castellanos, “Trabajadores remotos en LatAm aún son fieles a las criptomonedas pese al desplome,” Bloomberg Línea, February 16, 2023, <https://www.bloomberglinea.com/2023/02/16/trabajadores-remotos-en-latam-aun-son-fieles-a-las-criptomonedas-pese-al-desplome/>.
- 55 Eduardo Gomez, “Venezuelan Freelancers Are Using Bitcoin to Survive the Economic Crisis,” [themerkle.com](https://themerkle.com/venezuelan-freelancers-are-using-bitcoin-to-survive-the-economic-crisis/), June 10, 2016, <https://themerkle.com/venezuelan-freelancers-are-using-bitcoin-to-survive-the-economic-crisis/>.
- 56 “Percentage of households in poverty and extreme poverty in Venezuela from 2002 to 2021,” Statista, November 15, 2023, <https://www.statista.com/statistics/1235189/household-poverty-rate-venezuela/>.
- 57 “Latin America: Venezuela and Argentina Stand out as Examples of Crypto’s Unique Utility,” Chainalysis, October 11, 2023, <https://www.chainalysis.com/blog/latin-america-cryptocurrency-adoption/>.
- 58 Ibid.
- 59 Jose María Vargas Ponce, “Programa de bonos al personal de salud “heroes de la salud” informe de cierre,” in Plan Jose María vargas de Emergencia Nacional, accessed April 9, 2024, <https://asambleanacional-media.s3.amazonaws.com/documentos/documentos/informe-de-cierre-programa-heroes-de-la-salud-20210302143512.pdf>.
- 60 “Freedom on the Net: Venezuela 2023 Country Report,” Freedom House, 2023, <https://freedomhouse.org/country/venezuela/freedom-net/2023#A>
- 61 Albany Andara Meza, “Fallas eléctricas y racionamiento en Venezuela: cómo se ha apagado el país en 2022,” November 7, 2022, <https://efectococuyo.com/la-humanidad/fallas-electricas-y-racionamiento-en-venezuela-como-se-ha-apagado-el-pais-en-2022/>.
- 62 “Freedom on the Net: Venezuela 2023 Country Report,” Freedom House, 2023, <https://freedomhouse.org/country/venezuela/freedom-net/2023#A>
- 63 Bitcoin Magazine, “The Struggle for Freedom w/ Leopoldo Lopez, Alex Gladstein,” Youtube Video, 39:26, October 13, 2022, <https://www.youtube.com/watch?v=bTM8ZC7WJOI>.








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