

Evaluating the Effectiveness of US-imposed Sanctions on Venezuela: Fiscal Constraint and Welfare Loss

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ABSTRACT: Economic sanctions have been a prominent feature of the international political economy since their emergence as a routine instrument of coercion during the Cold War. However, despite their continued use in modern politics, their effectiveness and humanitarian consequences remain deeply contested. This review paper seeks to evaluate the effectiveness of US-led economic sanctions on Venezuela by analyzing welfare loss and the regime's fiscal capacity. This paper asks: To what extent did US-imposed sanctions meaningfully constrain the Venezuelan regime, and what was the human cost of it? The existing literature surrounding the effectiveness of US-led sanctions is deeply divided. Policy-focused literature presents the strength of fiscal constraint through reduced oil production revenues and restricted access to international markets. However, humanitarian-focused literature presents the significant welfare losses borne by the population. This paper argues that US-led economic sanctions on Venezuela constrained the regime. It offers a synthesis of economic and political economy perspectives. It will contribute to broader debates about the legitimacy of economic sanctions as a foreign policy tool.

KEYWORDS: Economics, Economic sanctions, Political economy, Venezuela, Fiscal, Welfare, Foreign.

■ Introduction

Economic sanctions remain one of the most widely used instruments of foreign policy. Sanctions are designed to impose fiscal strain on targeted nations, coercing political change without military force. Yet, their effectiveness remains deeply contested due to the unintended consequences. US-led sanctions in Venezuela have been called into question due to the economic collapse and humanitarian crisis that were observed.

The paper proceeds as follows: First, we will explore the background of the economic sanctions imposed on Venezuela. Next, fiscal constraints imposed on the state will be explored. The direct effect of the sanctions on fiscal constraint will be identified, with the effect over time also outlined. Then, we will explore the welfare loss imposed on the population. The term will be defined. The direct effect of the sanctions on welfare loss will be identified, with the effect over time also outlined.

The United States first imposed sanctions on Venezuela in 2006. Following President Hugo's accession to power, President George W. Bush banned the sale of weapons and US-made military equipment to Venezuela.¹ The United States imposed its second round of sanctions in late 2014 and early 2015; President Obama targeted top Venezuelan officials, freezing US assets and banning visas. In 2017, Trump's first administration imposed financial sanctions on top officials for undermining parliament, human rights abuses, and anti-democratic actions. Washington also froze Maduro's US assets after he created a Constituent Assembly to override the parliament. In 2019, the US tightened economic sanctions, aiming to severely restrict economic activity and to oust Maduro. Washington also began oil-focused sanctions. It imposed sanctions on Venezuela's central bank and on Petróleos de Venezuela SA (PDVSA) - the

state-owned oil and gas company of Venezuela. On April 28th of the same year, Washington further placed an oil embargo on Venezuela and froze all government assets in the US.¹

By the time the US imposed broader sanctions, Venezuela's economy was already in decline. Venezuela is highly oil-dependent, as petroleum accounts for the majority of export earnings and government revenue. Following the 2014 collapse of oil prices, Venezuela experienced a contraction in GDP. Between 2014 and 2017, inflation rose, and the government entered partial default.¹ This suggests that the economy was structurally fragile before the escalation of sanctions. Post-2017 measures likely intensified, rather than produced, existing economic conditions.

This paper will focus on the sanctions of 2017, which targeted oil production. These sanctions resulted in declining oil production as reflected in a 2021 report by the US Government Accountability Office, which found that oil production had declined 46% from 2010 levels, before the 2017 sanctions, and fell another 89% in the 18 months following the 2019 sanctions.² However, these sanctions have intensified declining humanitarian conditions. Over 300,000 Venezuelans have no access to life-saving medications and treatments, and food imports dropped by 78% in 2018 (compared to 2013); these health-assistance programs were funded by PDVSA.³

Figure 1 demonstrates that oil production had begun declining before major US-imposed sanctions. However, the declining trend accelerated after 2014, which shows the vulnerability of Venezuela's oil-dependent economy.

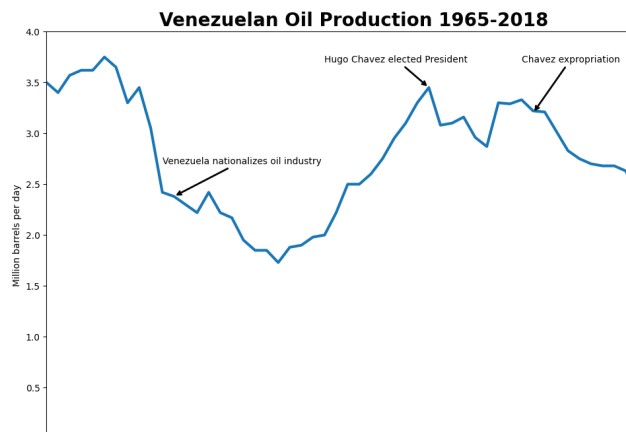


Figure 1: Venezuela's oil production 1965-2018.⁴

Figure 2 shows a dramatic fall in oil production following the 2017 US-imposed sanctions on Venezuela. This suggests that sanctions intensified existing weaknesses in the oil sector.

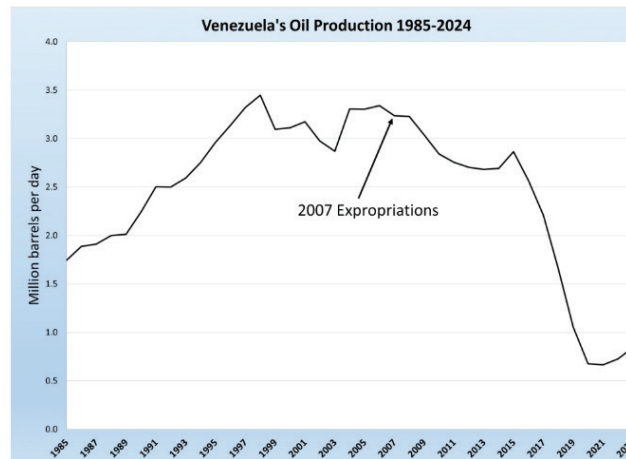


Figure 2: Venezuela's oil production 1985-2024.⁴

Therefore, this paper seeks to evaluate the effectiveness of US-led economic sanctions on Venezuela by evaluating the regime's fiscal capacity and the subsequent human costs incurred.

The existing literature on the US-led sanctions on Venezuela remains deeply divided. Fiscal constraint is emphasized as a form of economic coercion, while some sources suggest that welfare loss undermines the effectiveness of the sanctions. Literature focused on policy and law suggests that economic sanctions are purely instruments intended to constrain fiscal capacity.^{1,5,6} This is confirmed through empirical findings of oil production contraction, export earnings, and access to international markets.⁷⁻⁹ However, Kaempfer and Lowenberg also argue that sanctions lead to unintended consequences.¹⁰ Literature focused on the humanitarian dimension of sanctions suggests that these sanctions failed to translate into fiscal pressure and rather resulted in high social cost. Quantitative evidence reinforces this belief through projections of declining health services, increasing mortality rates, and food insecurity.^{3,11} Several sources caution against attributing welfare loss to the 2017 sanctions, citing pre-sanctions mismanagement and a declining oil sector.^{12,13} Additionally, Levy argues that the actual impact of sanctions may be limited and may ineffective-

ly constrain regimes.¹⁴ Therefore, there is a lack of consensus across the literature, which raises the critical need to evaluate these sanctions through a lens of fiscal constraint achieved and welfare loss results.

This paper identifies US-imposed sanctions as the independent variable, specifically looking at post-2017 conditions. This paper looks at two dependent variables: welfare loss and fiscal constraint. Welfare loss is a reduction in overall societal well-being. It will be illustrated by socioeconomic indicators, including rates of poverty, rates of education, and access to healthcare. Fiscal constraint is defined as a reduction in a state's capacity to generate revenue. Economic sanctions are intended to influence state behavior through fiscal constraint. Indicators will include declines in oil export revenues, contractions in GDP, and increased limitations on public spending. This paper seeks to identify the consequences of US-imposed economic sanctions on these two variables.

This research question holds important significance in political economy literature, expanding beyond the Venezuelan case study. The United States employs economic sanctions as a central instrument of its foreign policy. This continued use assumes that they are effective. By outlining direct impacts on fiscal constraint and welfare loss, this paper highlights how the regime was constrained.

■ Discussion

Fiscal Constraint:

Economic sanctions impose fiscal pressure on the target state by restricting access to international markets, revenue generation, and trade. Constraining the fiscal capacity of the state can limit its ability to sustain governance and therefore incentivize regime change. Fiscal constraint refers to limitations on government spending and taxing policies. In resource-dependent economies, fiscal constraint is salient as government revenue is concentrated in a narrow export base. Venezuela's economy has been historically dependent on oil revenues; sanctions, therefore, explicitly restricted the state's primary revenue stream.

This section finds that US-led sanctions generated significant fiscal pressure; this is most notable in the short term through restrictions on oil exports. However, the government has adapted over time, and as a result, the effect of sanctions has weakened.

The 2017 US-led sanctions produced sharp and measurable fiscal constraint, most visibly seen in reductions in oil export revenue and government spending.

The Venezuelan economy has been dependent on oil revenue. Before the sanctions, oil accounted for 95% of export revenue and 50-60% of government revenue.¹⁵ The sanctions targeted Petróleos de Venezuela S.A (PDVSA) and restricted the company's access to international markets. As a result, oil exports declined sharply. OPEC and the IMF detail that crude oil exports fell by 46% from 2016 to 2018, falling from 2.4 million barrels per day to 1.3 million barrels per day. In 2019, production dropped further to less than 800,000 barrels per day - the lowest level in decades. Oil exports to the USA fell from over 500,000 barrels per day in 2017 to near zero in

2019.¹⁶ The decline in export capacity resulted in immediate government revenue shortfalls. Government oil revenues fell by an estimated annual USD \$30–35 billion between 2016 and 2019. This restricted the state's ability to finance imports, fund public spending, and service debt. The direct sanctions on PDVSA restricted the company's access to international payment systems, shipping services, and refinery inputs, compounding revenue loss beyond the initial export decline.¹⁶

Figure 3 shows that oil production declined after sanctions targeted PDVSA. This suggests that sanctions constrained the Venezuelan regime's primary source of export revenue.

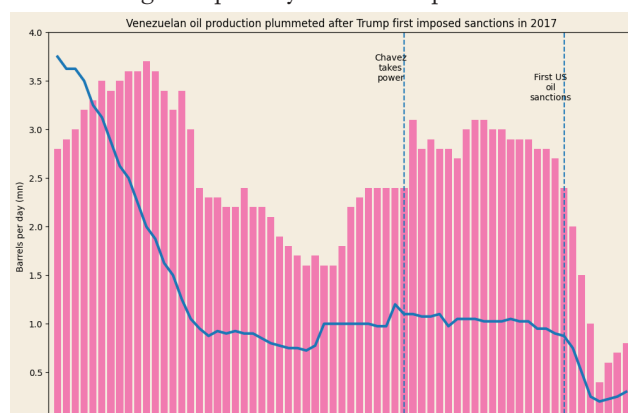


Figure 3: Venezuela's oil production plummeted after Trump's first imposed sanctions in 2017.¹⁷

The reduction in oil exports constrained the government budget and, in turn, government spending. In 2017, government expenditure fell by over 30%; steep cuts were seen in social and investment sectors. Social programs, including food subsidies (CLAP), infrastructure maintenance, and healthcare service access, experienced shortfalls due to their funding being derived from oil revenue.^{18,19} Public sector wages also declined due to inflation and delayed payments. Public investment also collapsed by more than 70%, showing how the sanctions constrained the state's ability to fund infrastructure, maintenance, and development projects.^{18,19} However, it can be observed that public spending contraction was not uniform across the economy. Regime-preserving activities such as selective subsidies and security subsidies were protected. This reallocation suggests that while sanctions reduced fiscal capacity, the state directed available resources to preserve core aspects of the regime, such as the armed forces.

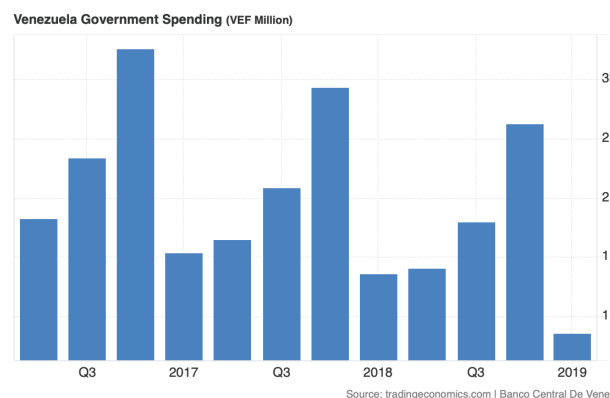


Figure 4: Venezuela government spending in vef million 2017–2019.²⁰

Figure 4 shows that government expenditure fell dramatically following the decline in oil revenues caused by US-imposed sanctions. The state had reduced fiscal capacity, which limited its ability to finance public services and investment projects.

Concept	Cumulative percent decline, 2012–2020	Percentage contribution
Change in per capita GDP	-71.5%	100.0%
Oil GDP	-8.2%	11.3%
Sanctions effect	-4.1%	5.7%
Other causes	-4.1%	5.7%
Non-oil GDP	-63.4%	88.7%
Import capacity	-32.9%	45.9%
Oil exports	-30.0%	42.0%
Oil prices	-12.7%	17.8%
Oil production	-17.3%	24.2%
Sanctions effect	-8.7%	12.2%
Other causes	-8.6%	12.0%
Permanent loss of access to credit	-2.8%	3.9%
TPP	-23.5%	32.9%
Sanctions and toxification effects	-18.7%	26.2%
Other causes	-4.8%	6.7%
Factor Accumulation	-7.0%	9.8%
Sanctions and toxification effects	-5.6%	7.8%
Other causes	-1.4%	2.0%
Aggregates		
Change in per capita GDP	-71.5%	100.0%
Sanctions and toxification effects	-39.9%	55.8%
Other causes	-31.6%	44.2%

Note: Table decomposes Venezuela's 2012–2020 contraction into the contribution of sanctions and other politically induced restrictions on the country's insertion into global markets.

Figure 5: Decomposition of 2012–2020 economic growth.²¹

Figure 5 shows that Venezuela's GDP per capita declined by 71.5% from 2012 to 2020. It attributes sanctions and toxification effects to contributing 55.8% of this total contraction. This suggests that sanctions fiscally constrained the regime and were one of the major drivers of its economic contraction.

In the long-term, these sanctions have resulted in GDP contraction and state adaptation. Trade partnerships with China, Russia, and other regional actors illustrate that the sanctions did not achieve regime change despite imposing significant fiscal constraints.

The sustained effects of the sanctions on fiscal constraint are reflected in the trajectory of the economy's GDP. Following 2017, the GDP contracted severely. Venezuela's real GDP fell by 35% between 2017 and 2019.^{22,23} This follows a near 50% decline between 2013–2017. The steep decline can be attributed to reduced oil revenues, government spending, and limited investment. Shrinking GDP reduced the tax base and constrained the government's ability to provide public services and finance imports. Inflation stabilized from its 800% peak, but fiscal capacity remained limited.²⁴ Government spending as a share of GDP fell below 15% by 2021.²⁵ This shows the persistent constraint on the state's ability to provide public services, even as macroeconomic indicators are moderated.

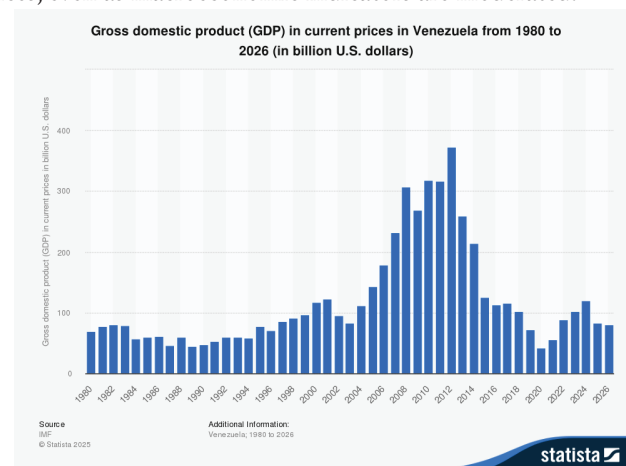
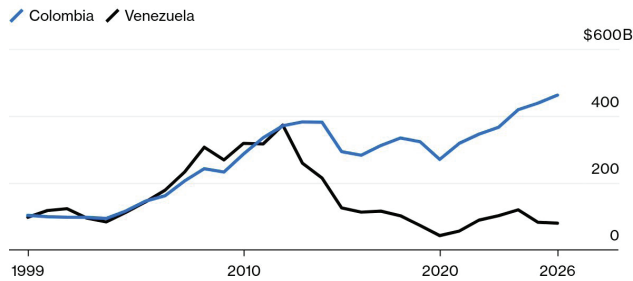


Figure 6: Venezuela gdp 1980–2026.²²

Figure 6 illustrates the scale of Venezuela's economic collapse. GDP fell sharply following 2012 and has continued to remain below previous levels. The economy is seen to have a modest recovery, but has not returned to pre-2012 levels.

Venezuela's Economic Collapse Stands Alone

GDP at current prices for Venezuela and Colombia since 1999



Source: International Monetary Fund
Note: Figures for 2026 are estimates

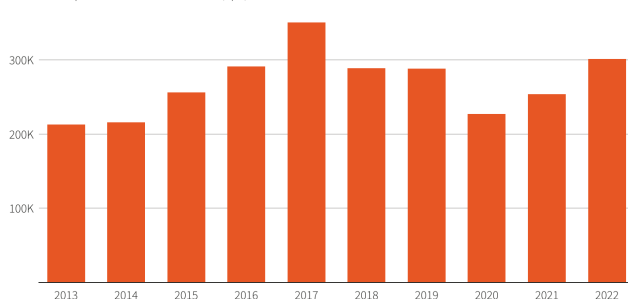
Figure 7: Venezuela's economic collapse stands alone - gdp from 1999 to 2026.²⁶

Figure 7 compares GDP between Venezuela and Colombia. Venezuela's GDP seems to persist at low levels, despite signs of recovery. This shows the long-term economic impacts of US-imposed sanctions.

Despite fiscal constraints, the state has adapted by establishing alternative trade relationships. China emerged as a key partner. It has provided loans and oil-for-loans agreements, which have enabled Venezuela to maintain essential imports and hence stabilize sections of public spending. Between 2007 and 2016, China provided over USD \$60 billion in loans to Venezuela; to contextualize, in 2016, Venezuela's GDP was at USD \$112.91B.^{22,27,28} By 2020, China had provided USD \$50 billion in oil-backed loans; this has facilitated continued fiscal operations; these loans exceeded Venezuela's GDP of USD \$50B.^{22,27,28} Venezuela has also developed oil-for-goods deals and bilateral trade agreements. These have allowed the state to restore certain revenue flows. This explains the partial recovery of the economy as domestic sectors are supported. These agreements do not fully compensate for the lost oil revenue, but they portray the state's adaptive capacity under fiscal constraint.

Unofficial shipments of Venezuelan crude to China remain high despite US sanctions

Chinese imports of Venezuelan crude oil (bpd)



Note: Kpler estimates based off shiptracking data as at 11 September 2023
Source: Kpler

Figure 8: Unofficial shipments of Venezuela's crude to China remain high despite sanctions 2013-2022.²⁷

Figure 8 indicates that Venezuela has continued exporting to China through unofficial channels. This highlights the regime's adaptation to offset restricted access to Western markets, due to US-imposed sanctions.

Chinese independent refineries' Venezuelan feedstock imports

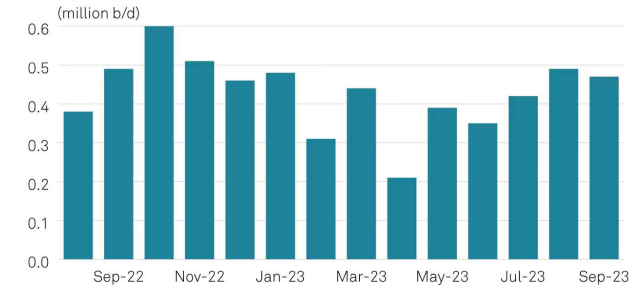


Figure 9: Chinese independent refineries' Venezuelan feedstock imports (September 2022 - September 2023).²⁸

Figure 9 shows that Chinese independent refineries imported Venezuelan crude products after the US imposed its sanctions on Venezuela. This shows that alternative trade agreements weakened the fiscal constraint of the sanctions.

Welfare Loss:

Welfare loss refers to a reduction in the overall well-being of individuals or households. This is often reflected in declining income, health, consumption, and access to essential services.

In this paper, welfare loss pertains to the erosion of living standards and economic security through rising poverty, food insecurity, increased mortality, and deteriorating health outcomes. This aligns with Amartya Sen's 'The Capability Approach', which emphasizes individuals' freedoms to achieve wellbeing as a primary importance in society.²⁹ This is an important framework to apply when evaluating sanctions, as monetary indicators often understate harm in economies experiencing informalisation, rationing, or shortages. It is important to note that welfare loss is very rarely evenly distributed. Sanctions can be regressive and therefore disproportionately affect low-income households and those reliant on public services.¹⁹ Ordinary citizens face price shocks and public service collapse. Analyzing welfare loss, hence, requires aggregate indicators but also distributional consequences. Measuring welfare loss in sanctioned economies is accompanied by methodological challenges. Official statistics may be incomplete or politicized, and market prices can be distorted by subsidies. This paper employs a combination of human development, labor market, and macroeconomic indicators to assess welfare loss in Venezuela.

Inflation serves as a primary indicator. Rapid rises in prices distort real incomes, thus reducing disposable income and purchasing power. This disproportionately affects households with fixed and informal earnings. In extreme cases, i.e., hyperinflation, money can fail to function as a reliable medium of exchange - this forces households into subsistence strategies. Inflation is, therefore, a macroeconomic variable that can be treated as an indicator of declining welfare. Employment outcomes present labor-market transmission channels. Rising unemployment and underemployment reduce household disposable income, making households more susceptible to

poverty. Employment losses are often concentrated in public employment and trade-exposed sectors in sanctioned economies. Health-related indicators such as access to healthcare services and infant mortality rates also assess sustained welfare loss. These variables are non-reversible welfare losses. Income shocks can be partially recovered; however, excess mortality and long-term health deterioration can present permanent losses to societal welfare. Infant mortality is one of the most important indicators as it captures systemic welfare failure because it represents healthcare access, sanitation, nutrition, and maternal health.

In the short-term, one of the most notable effects of the sanctions was the dramatic acceleration of inflation. Before the 2017 sanctions, Venezuela was already experiencing hyperinflation, with a rate of 800% in 2016.³⁰ This figure increased in subsequent years due to restricted access to foreign financial systems, currency depreciation, import restrictions, and exchange controls. Hyperinflation resulted in the unaffordability of staple goods. The minimum wage lost any purchasing power; the cost of food, medicine, and other essentials increased beyond the means of most households. In August 2017, Venezuelans on minimum wage failed to afford their daily caloric intake – a family of five could only afford approximately 6,132 calories per day, which is only 56% of the minimum dietary requirement.¹³ Compared to 2010, the sanctions induced a 92% decline in calorie affordability.¹³

Figure 10 indicates that the inflation rate rose to extreme levels from 2019 to 2020. This eroded household purchasing power and demonstrated severe welfare consequences.

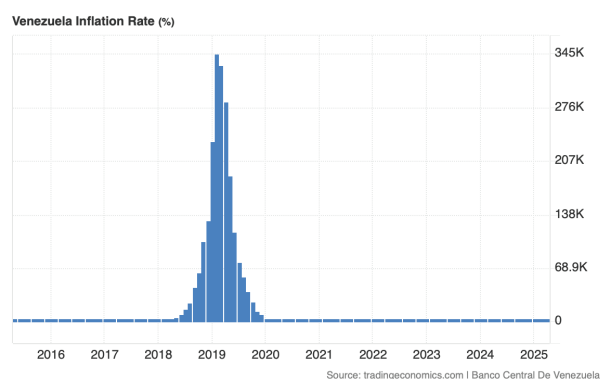


Figure 10: Venezuela's inflation rate.³¹

Sanctions impacted the labor market due to intensified contraction in economic activity. The comprehensive labor statistics are limited in sanctioned economies; however, multiple reports indicate widespread job losses and shrinking employment opportunities.^{32,33} This is most notable in formal sector industries, which consequently pushed many workers into the informal sector. The US Senate noted that Venezuela had the lowest levels of labor force participation in the region.¹² Informalisation of labor represents a shift in employment status but also a shift in economic security. Workers in the informal sectors earn volatile and lower incomes and lack social protection.³⁴

Figure 11 shows that the proportion of Venezuelans living below the poverty line has dramatically increased following

US-imposed sanctions. This indicates deterioration in living standards experienced by many citizens.

Population living below the poverty line

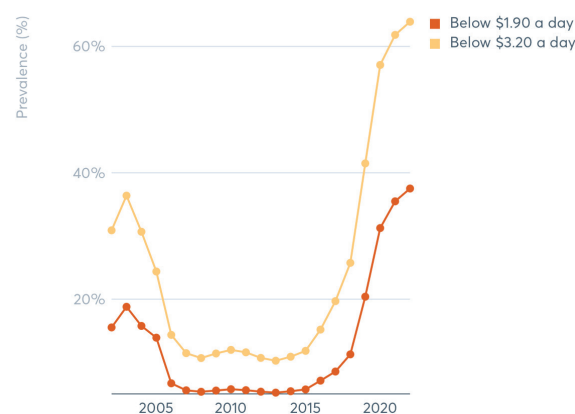


Figure 11: Population living below the poverty line.³⁵

Rising prices reduce household income and diminish the ability of households to purchase enough food. Data from the immediate period of the 2015 sanctions demonstrate that food imports fell by 71% between 2013 and 2016; in 2013, food imports stood at an estimated \$11.2 billion before dropping to \$2.46 billion in 2016.¹² This trend predates further sanctions of 2017 and 2019. This indicates that sanctions likely exacerbated existing shortages and reduced food availability by restricting access to imports. This resulted in reduced dietary diversity, forcing households to reduce meal frequency, substitute certain foods for cheaper but less nutritious options, or skip meals altogether. These behaviors degrade population health in the short-term and have significant impacts on the long-term health of the state. The 2019 UN Report 'Venezuela Overview of Priority Humanitarian Needs' states that ENCOVI surveys find that 22% of children under 5 are stunted due to lack of food.³⁶

Prevalence of undernourishment

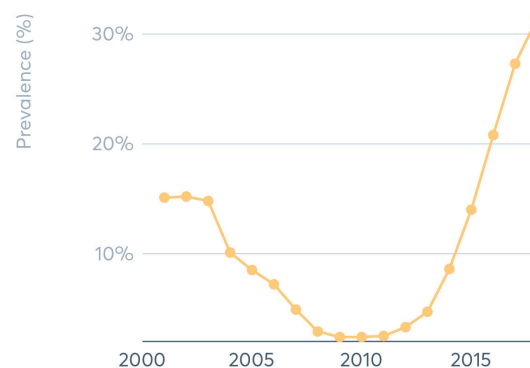


Figure 12: Prevalence of undernourishment.³⁵

Figure 12 shows that the prevalence of undernourishment has continued to rise following 2015. This indicates worsening

food security and access to nutrition, suggesting worse health outcomes for Venezuelans.

Health outcomes provide the clearest indicators of immediate welfare loss. Infant mortality rate and life expectancy integrate several welfare dimensions, including healthcare access, nutrition, and sanitation. Infant mortality rates reflect economic development, living conditions, and the quality of healthcare. Infant mortality rose by 44% between 2013 and 2016, before the 2017 sanctions.¹¹ Following the sanctions, the infant mortality rate has been constant at 21.5 deaths per 1,000 live births.^{37,38,19} An estimated 40,000 Venezuelans died due to the lack of access to basic commodities between 2017–18 – this reflects a 31% increase in general mortality. Access to healthcare also denotes the deteriorating quality of healthcare. In 2018, the Venezuelan Pharmaceutical Federation reported that shortages of essential medicines were at 85%. The lack of access to healthcare also resulted in over 300,000 people being at risk, including: 16,000 who need dialysis, 16,000 people with cancer, 4 million with hypertension and diabetes, and 80,000 people with HIV who require antiretroviral treatment.^{13,39}

Welfare loss can be seen to grow in severity in the long term. Welfare indicators suggest that deterioration in health, nutrition, and living standards continues rather than dissipating. Certain macroeconomic indicators, such as inflation, have shown stabilization; however, welfare outcomes for the civilian population remain depressed.

The Venezuelan labor market remains highly informalized.³³ Economic activity has recovered in dollarized sectors, but this has contributed to unevenly distributed gains. Low-income households have minimal access to such recovery. Therefore, informality undermines welfare by reducing income stability and increasing vulnerability to economic shocks.

Food insecurity remains widespread. Hyperinflation has slowed, yet real wages remain low. Resultantly, access to affordable food continues to be constrained. Household caloric intake remains significantly below the minimal dietary requirements. The persistence of undernourishment reflects structural weakness in food distribution, import financing, and agricultural production. Prolonged nutritional stress has a cumulative effect. Chronic undernourishment, especially within children, reduces educational attainment, cognitive development, and long-term productivity. These losses are not easily reversible and significantly diminish human capital. This extends welfare loss beyond the immediate crisis period.⁴⁰

Deteriorating health outcomes also remain persistent. Infant mortality rates remain elevated as health services maintain deficiencies in maternal care, nutrition, and neonatal services. Mortality levels continue to exceed pre-sanction levels. Life expectancy changes occur gradually as prolonged nutritional deficits and inadequate healthcare contribute to health stagnation over time. In 2021, former UN special rapporteur Alfred de Zayas estimated that 100,000 Venezuelans died as a direct result of the US-led sanctions.⁴¹ Welfare loss is not a static condition but an accumulating deficit. These collectively suggest that sanctions have negatively impacted Venezuelan human development, extending beyond the immediate period.

Under-5 mortality rate per 1,000 live births

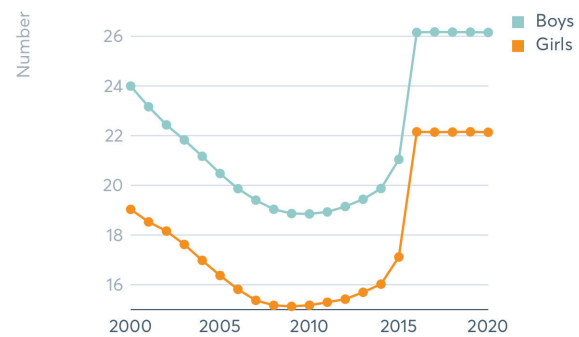


Figure 13: Under-5 mortality rate per 1,000 live births in Venezuela (2000–2020).³⁵

Figure 13 shows that there is a rise in under-5 mortality rates from 2015. This reflects declining access to healthcare and nutrition. Mortality is a non-reversible welfare loss and shows the extent of humanitarian loss associated with US-imposed sanctions.

Healthcare access represents sustained welfare loss under sanctions. Venezuela's healthcare system remains constrained due to consistent shortages of medical equipment, trained personnel, and essential medicines. Imports of pharmaceuticals and supplies remained inconsistent and insufficient due to high transaction costs and trade uncertainty. Alena Douhan, the UN Special Rapporteur, reported that Venezuela was experiencing 85% shortages of medicine in 2021.⁴¹ Households, in turn, face out-of-pocket healthcare costs and resort to informal or insufficient treatment. Additionally, preventative care has decreased, which has increased the prevalence of untreated chronic conditions, whilst vital procedures such as heart surgery, dialysis, and cancer treatment remain out of reach. Migration has also exacerbated the healthcare crisis. The country experienced a loss of 45.7% of its registered doctors. This resulted in public hospitals having 50–70% shortages of qualified medical personnel.⁴¹ Medical equipment compounds this loss, as 80% of hospital equipment is in disrepair – much of it being imported from the US. Sanctions also impeded the state's ability to purchase medical equipment from other countries.

Conclusion

US-imposed sanctions on Venezuela, specifically observed through post-2017 conditions, highlight direct impacts on fiscal constraint and welfare loss. Fiscal pressure imposed on the state was immediate and adaptive. Welfare loss imposed on civilians was immediate and cumulative. It can be argued that the sanctions produced a pronounced asymmetry in which civilians received the majority of the burden whilst the regime adapted to its reduced fiscal capacity. This explains the limitations of the US-imposed sanctions in Venezuela.

The paper measures societal welfare and fiscal pressure as primary metrics of effectiveness. Whilst the 2017 sanctions were imposed in response to the government's human rights abuses and anti-democratic actions, sanctions in foreign policy

are more broadly designed to coerce political change. Therefore, using these metrics is justified.

As Venezuela's economic decline predated the 2017 sanctions, there may be concerns about the attribution of welfare loss to the sanctions. It is difficult to isolate the effects on fiscal constraint and welfare loss of the US-imposed sanctions from pre-existing economic decline. The literature presents that the escalation of welfare loss and sector-specific shocks to imports and oil revenues post-2017 amplified existing vulnerabilities rather than merely coinciding with them. Ghomi argues that vulnerable groups suffer significant welfare loss as a result of these sanctions, which informs this paper's focus on civilian welfare; however, it does not detail implications for Venezuela's elite class. Additionally, this conclusion may be context-specific.⁴² In resource-dependent economies, such as Venezuela, adaptive capacity may result in fiscal constraints failing to result in political change, while welfare losses accumulate. This suggests that the effectiveness of sanctions is contingent on the nation's political and economic structures. This limits the external validity of sanctions as general coercive instruments.

The broader implications of this research suggest that sanctions can systematically produce asymmetries due to welfare costs on civilians while failing to sufficiently constrain the fiscal regime. This calls into question the efficacy of economic sanctions as foreign policy instruments and suggests the need for more targeted policy decisions. Further research can focus on comparative analysis of sanctions regimes and improved models to address causality. Comparative analysis across different regimes could focus on comprehensive sanctions versus targeted sanctions, and can identify the conditions under which sanctions are effective. Methodological improvements can separate independent effects from political or economic shocks.

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