

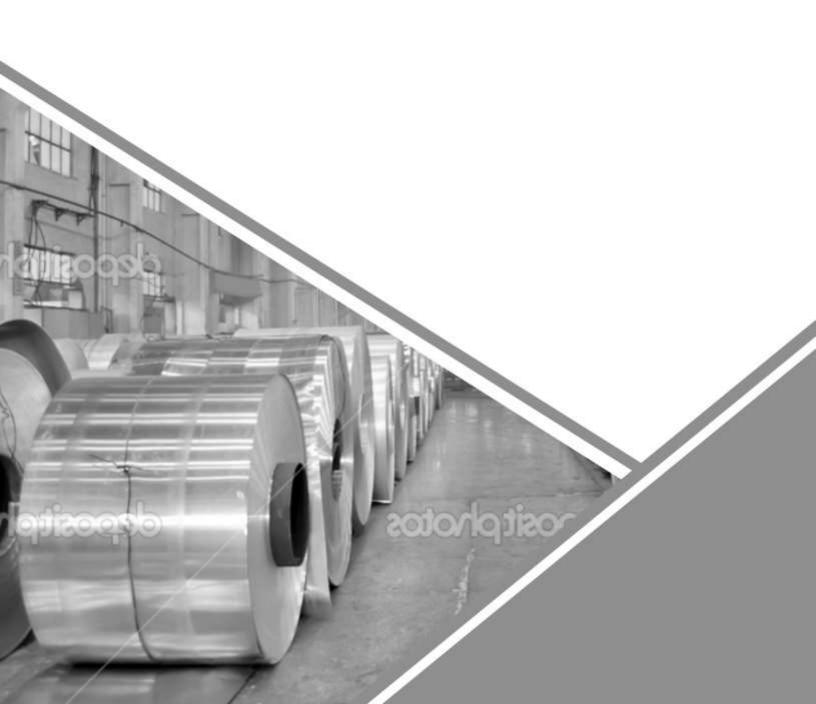






MARKET SURVEY

The Iron and Steel Industry in the Bolivarian Republic of Venezuela

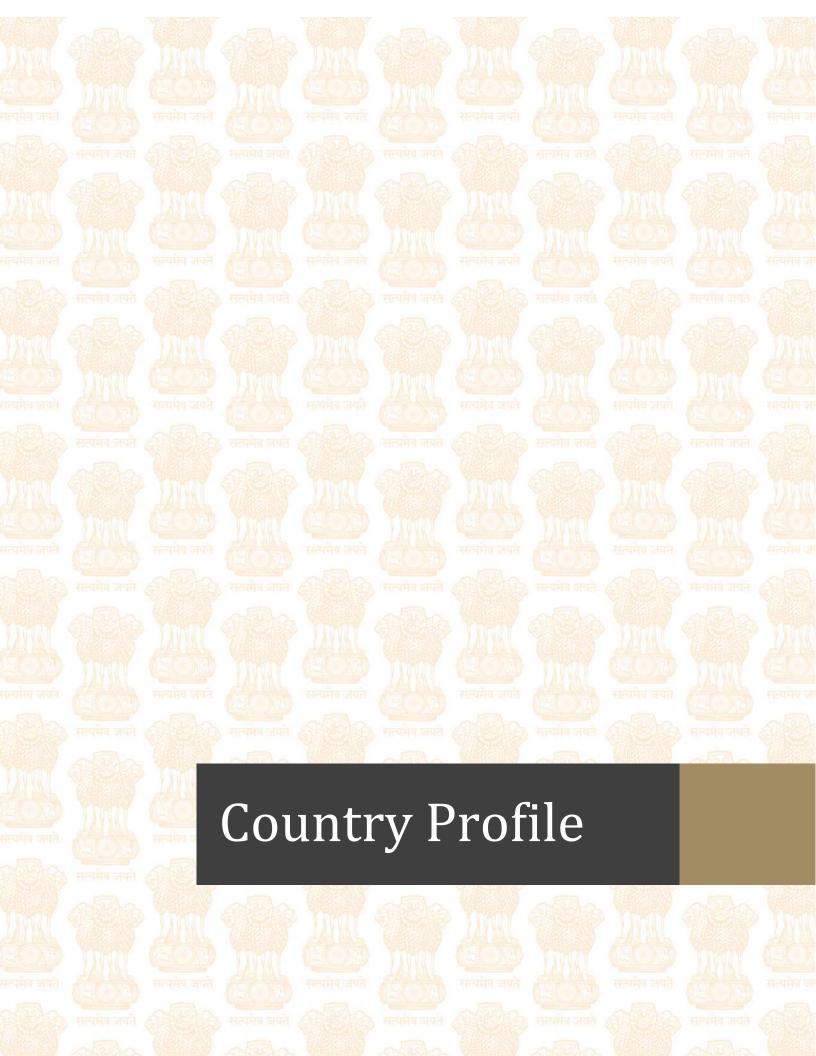


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Introduction

The Bolivarian Republic of Venezuela is a sovereign and independent form of political organization, constituted under a republican and democratic model, characterized by principles of justice and equality and a stable union of states in which the different constitutional powers are distributed between a central government and the individual states that comprise it.

The established form of government is the federation, in which the relationship between the member states is organized under the principles of unity, autonomy, hierarchy and participation. This form of government is exercised through the administration of public finances and the execution of each of the legal instruments established for compliance with the law. This exercise of government is a product of the attributions established in the national constitution for each of the branches of public power.

The Public Power, according to the Constitution of the Bolivarian Republic of Venezuela, is distributed among the Municipal Power, the State Power and the National Power. The National Public Power is divided into Legislative, Executive, Judicial, Citizen and Electoral, while the State and Municipal Public Power is divided into Legislative, Executive and Citizen, the latter represented by the State or Municipal Comptroller's Office, as the case may be.

Geographical aspects.

Astronomical Geography

The territory of the Bolivarian Republic of Venezuela is astronomically located at 12° 11' 46" North latitude, 0° 38' 53" South latitude, 59° 47' 30" East longitude and 73° 23' 00" West longitude; the distance East - West is 1,493 Km and North - South is 1,271 Km. It covers a continental and insular surface of 916,445 Km2 and a continental platform of 98,500 Km2 with a coastline of 4006 Km to the north.

Physical Geography

The territory enjoys a mostly temperate climate typical of a tropical region, although due to its characteristics it is divided into natural regions. These regions are differentiated by climates that vary from dry to rainy depending on the location. It has been determined the existence of approximately 9 natural regions, and in general terms the average temperature of the territory is 28° C.

Political Geography

The Bolivarian Republic of Venezuela maintains a border in its northern part with the insular territories of the United States of America (Puerto Rico and U.S. Virgin Islands), the Kingdom of the Netherlands (Aruba, Curaçao and the Dutch Caribbean), the Dominican Republic, France (Guadeloupe and Martinique), and Trinidad and Tobago. Remaining to delimit part of the border with Colombia (430 km), the islands of St. Kitts and Nevis (80 km), the United Kingdom (Montserrat) (45 km), Dominica (80 km), St. Lucia (10 km), St. Vincent and the Grenadines (90 km) and Grenada (300 km).

Likewise, it maintains a border in its southern part with the Federative Republic of Brazil of 2,199 km, to the east with the Cooperative Republic of Guyana of 743 km (subject to change by claim) and to the west with the Republic of Colombia of 2,219 km.

The territory is divided into 23 Federal Entities, a Capital District, 89 Federal Dependencies and 2 Federal Territories, formed by the territories of Amazonas and Delta Amacuro, which re a special political division. In turn, the 23 Federal Entities are organized into 335 Municipalities and 1136 parishes.

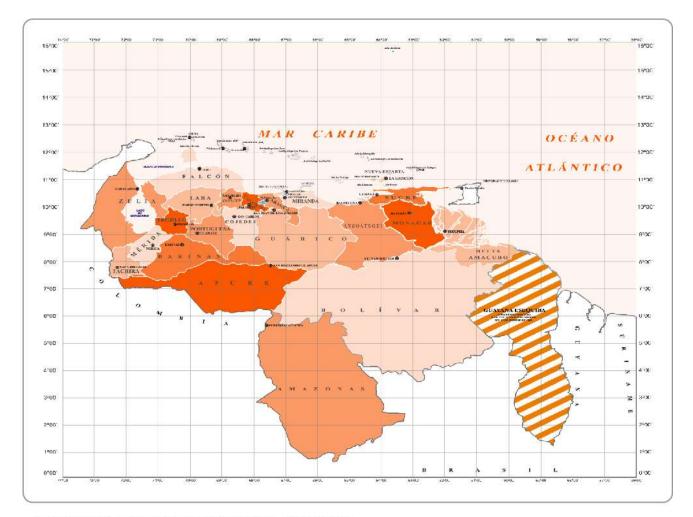


Figure 1 - Astronomical and geographic position of Venezuela

Source: Simón Bolívar Geographic Institute of Venezuela

Demographic aspects

Structural

The Bolivarian Republic of Venezuela has a population of 31,028,637 people, of which 15,554,863 are men and 15,473,774 are women. Venezuelan life expectancy is 74.1 years with a birth rate of 20.1 births per 1,000 inhabitants and a neonatal mortality rate of 8.9 per 1,000 live births.

Dynamics

The schooling expectation is 14.2 years per inhabitant, with an average schooling of 8.9 years and a public expenditure on education of 6.9% of GDP. The employment rate at age 15 and older is 60.2%, with a labour force participation rate of 51.1% for women and 79.2% for men.

Economic Aspects

Summary

According to the data submitted by the Venezuelan National Bank (or Banco Central de Venezuela - BCV), the Venezuelan economy shows deep trouble with regard to economic growth, with high rates (5%) in 2012, while a sharp drop occurred since 2014 and economy is contracting for the seventh year running.

Despite being an oil economy, the oil sector is contributing less to the national productive apparatus, representing only 11% of the Gross Domestic Product (GDP); a worrying situation because this is the only economic productive sector participating in international trade, and it contributes 98% of income in foreign currency. Consequently, the rest of the non-oil productive sectors, representing a non-tradable (89%) sector of the economy, is not working under criteria of efficiency and competitiveness. Additionally, the collapse of the oil market

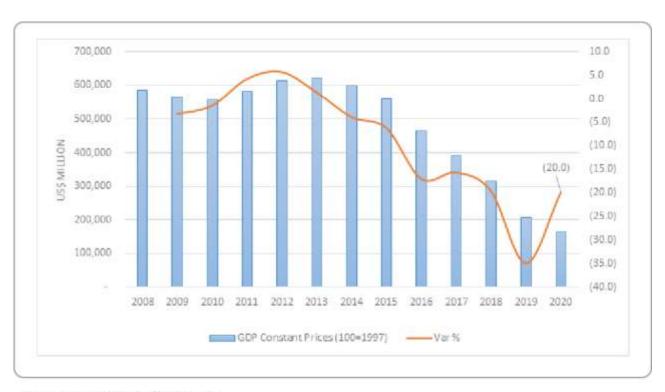
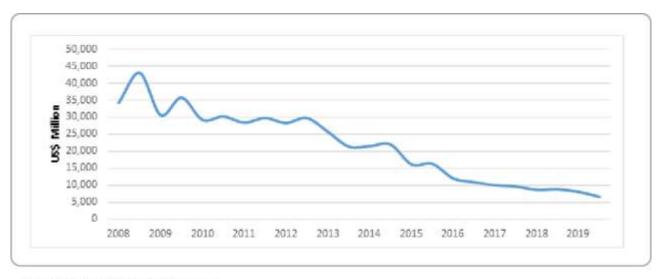


Figure 2. 2008-2020 GDP Constant Prices

Source: Central Bank of Venezuela

prices and the lack of investment has shortened the external revenues for all the Venezuelan economy. Additional U.S. sanctions have discouraged foreign investment in the oil sector.

Figure 4. Venezuela | International Reserves (US\$ Million) 2008-2019



Source: Central Bank of Venezuela

Figure 3 Balance of Payments (US\$ Million)



Source: Central Bank of Venezuela

The variation of prices is expected to remain at higher levels since the beginning of the hyperinflation period, changing exponentially. Nevertheless, the speed of price changes has relented and the inflation rate will be 5,000%, due to the partial dollarization of the economy which has encouraged economic activity and reduced scarcity levels.

The Iron and Steel Industry in the Bolivarian Republic of Venezuela

In the period 2008-2018, international reserves fell to less than a quarter, reaching lower levels similar to those experienced 40 years ago. This creates a strong pressure on external balances.

The growth of the foreign debt and the drop in international reserves, make the current coverage be less than 5%, meaning that the amount of the international reserves only pays 5% of the total foreign debt. By 2017, the country has declared default over most debt bonds.

The balance of payments remained negative during the period 2008-2018, with the characteristic feature of maintaining surplus trade balances, but capital outflows exceeded this surplus. By 2015, for the first time in 20 years, the third and the fourth quarters are shown with negative trade balances, mainly due to the fall in oil prices.

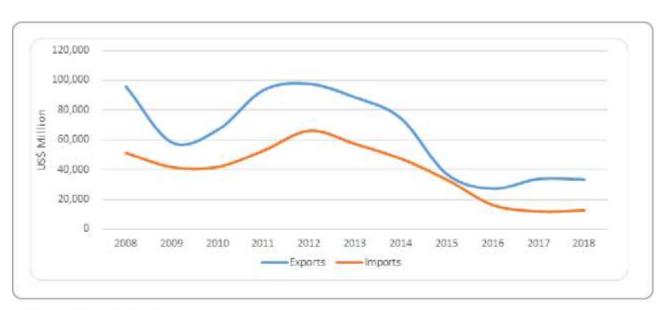


Figure 5 Trade Balance (US\$ Million)

Source: Central Bank of Venezuela

Table 1 Indicators | Labour

Labour			
Unemployment Rate	6.4	percent	Dec/2018
Employed Persons	15.011.108		Dec/2018
Unemployed Persons	1.018.421		Dec/2018
Population	32.98	Million	Dec/2021

Table 2 Indicators | GDP

GDP			
GDP Annual Growth Rate	-1.5	percent	Dec/2021
GDP	112	USD Billion	Dec/2021

Table 3 Indicators | Prices

Prices			
Inflation Rate	156	percent	Oct/22
Inflation Rate MoM	6.2	percent	Oct/22
Consumer Price Index CPI	5.654.207	million points	Oct/22
Food Inflation	158	percent	Oct/22
CPI Transportation	6.389.439.307	thousand points	Oct/22

Table 4 Indicators | Health

Health			
Coronavirus Vaccination Rate	134	doses per 100 people	Dec/22
Coronavirus Vaccination Total	37.860.994	doses	Dec/22
Coronavirus Cases	551.666	Persons	Feb/23
Coronavirus Deaths	5741	Persons	Jul/22

Table 5 Indicators | Money

Money			
Interest Rate	57.97	percent	Dec/22
Money Supply M0	13.93	VES Million	Dec/22
Money Supply M1	18.752	VES Million	Dec/22
Money Supply M2	18.806	VES Million	Dec/22
Money Supply M3	18.806	VES Million	Dec/22
Banks Balance Sheet	93.339.224	VES Thousand	Nov/22
Foreign Exchange Reserves	9.880	USD Million	Jan/23
Deposit Interest Rate	36	percent	Feb/23
Central Bank Balance Sheet	686.240.818	VES Thousand	Dec/22

Table 6 Indicators | Trade

Trade			
Balance of Trade	5.680	USD Million	Mar/19
Current Account	2.533	USD Million	Mar/19
Current Account to GDP	-2.1	percent of GDP	Dec/21
Exports	8627	USD Million	Mar/19
Imports	2947	USD Million	Mar/19
External Debt	0	USD Million	Dec/22
Gold Reserves	161	Tonnes	Dec/22
Crude Oil Production	669	BBL/D/1K	Dec/22
Foreign Direct Investment	105	USD Million	Mar/19
Terrorism Index	4.01	Points	Dec/21

Table 5 Indicators | Trade

Government			
Government Debt to GDP	241	percent of GDP	Dec/21
Government Budget	-4.5	percent of GDP	Dec/21
Credit Rating	11		Feb/23
Military Expenditure	0.4	USD Million	Dec/19
Corporate Tax Rate	34	percent	Dec/22
Personal Income Tax Rate	34	percent	Dec/22
Sales Tax Rate	16	percent	Dec/22
Social Security Rate	23	percent	Dec/22
Social Security Rate for Companies	17	percent	Dec/22
Social Security Rate for Employees	6	percent	Dec/22

Table 6 Indicators | Business

Business			
Industrial Production	-20.6	percent	Jan/19
Corruption Index	14	Points	Dec/22
Corruption Rank	177		Dec/22
Crude Oil Rigs	0		Jan/23

Table 7 Indicators | Consumer

Consumer			
Retail Sales MoM	-29.6	percent	Jan/19
Retail Sales YoY	-53.5	percent	Jan/19
Consumer Spending	3.819	VEF Million	Mar/19
Private Sector Credit	80.079	VES Thousand	Dec/22
Gasoline Prices	0.02	USD/Liter	Jan/23

Table 8 Indicators | Forecast - Markets

Forecast					
Markets	Actual	Q1/23	Q2/23	Q3/23	Q4/23
Currency	24.14	25	25.89	26.82	27.77
Stock Market (points)	26.440,01	25.005	23.542	22.166	20.867
Government Bond 10Y (%)	10.43	10.43	10.43	10.43	10.43

Table 9 Indicators | Forecast - Overview

Forecast					
Overview	Actual	Q1/23	Q2/23	Q3/23	Q4/23
GDP Annual Growth Rate (%)	-1.50				1.5
Inflation Rate (%)	155.80	70	50	40	40
Inflation Rate MoM (%)	6.20	1.5	2.1		3
Interest Rate (%)	57.97	60	60	60	60
Government Budget (% of GDP)	-4.50				-5
Corporate Tax Rate (%)	34.00				34
Personal Income Tax Rate (%)	34.00				34
Government Debt to GDP (% of GDP)	241.00				260

Source: Trading Economics / https://tradingeconomics.com/venezuela/indicators

General Characteristics

Economic Crisis

The oil sector represents 95% of the nation's income, and as a consequence of its excessive dependence on oil exports, Venezuela in 2014, began to experience a slump in its economic activity due to the fall in oil prices. This is how it enters into a Balance of Payments deficit, hindering the importation of goods and services to meet the needs of the population.

By the date (2020) oil production was reduced to less than 400 thousand barrels per day, considerably decreasing the income of foreign currency and royalties from oil income.

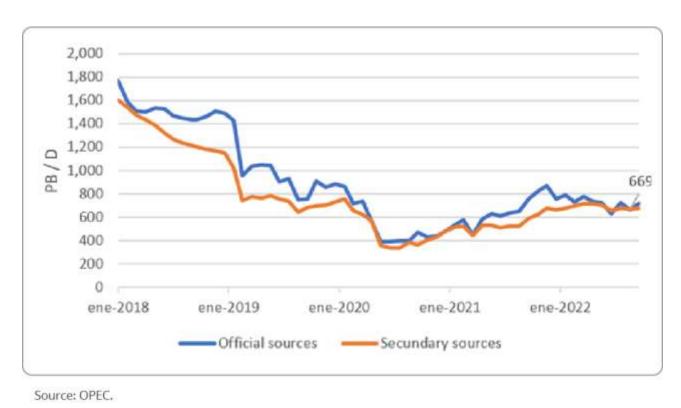


Figure 6 Oil Production in Venezuela 2018-2022

To date, oil production has seen a slight improvement. After falling from 1.8 million PB/D in 2018 to 0.4 million PB/D, production has maintained an average of 0.7 PB/D. This fact is reflected in the country's economic growth. However, there is still a long time to go before recovering the levels of GDP.

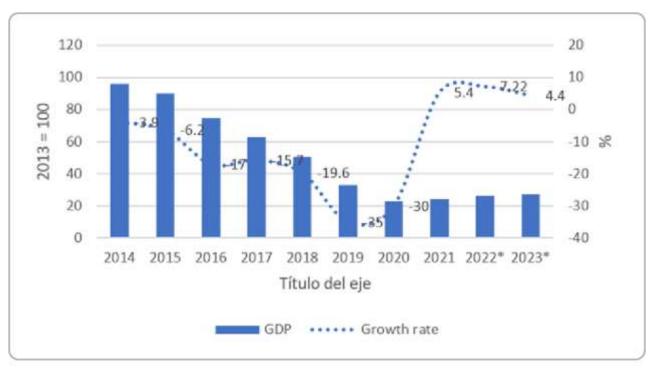


Figure 7 GDP - Venezuela.

Source: : International Monetary Found.

Changes in the Regulatory Framework

By the end of 2020, the Venezuelan government takes a set of measures aimed at reactivating the country's economy through different mechanisms. Faced with problems of inflation, falling production and shortage of products, it dictates measures in three particular sectors, the monetary system, the investment system and the import system, all measures aimed at promoting better conditions in the economic environment, both for domestic production and for foreign investors.

In order to stimulate foreign investment and generate investment opportunities, the National Executive has had to relax regulations in the national productive sector, giving way to stimulate foreign investment in the oil, mining, gas and electricity sectors, among others. Formerly public companies are privatized in order to achieve a socioeconomic boost and recover tax revenues.

Monetary flexibility

Venezuela has been characterized for having restrictions on the exchange of foreign currencies in the national territory, being its official currency the Bolivar Sovereign (BES). However, since the hyperinflation period, the use of the US dollar as an exchange currency became more and

more frequent. The government, after the economic emergency decree, allows the exchange of foreign currency as an "escape valve" against the so-called "economic war". Thus, it changes its economic line and facilitates the exchange of foreign currency in the local market and frees the exchange rate of the dollar. The economy has experienced an increasing dollarization in commercial transactions, due to the loss of value of the official currency (the sovereign bolivar).

By 2021 Nicolás Maduro announces the opening of foreign currency accounts in local banks to facilitate the payment of goods and services; although this does not indicate a total opening of a dollarization process. Dollar accounts represent on average 49.3% of total deposits in all local banks by the end of 2020.

By 2022, hyperinflation in Venezuela has ended, but the country remains with high levels of inflation (above 100%). The deceleration of inflation and the pace of bolivar depreciation in the first ten months of 2022 required an active and intense foreign exchange intervention by the BCV. Between January and October 2022, the BCV sold a net US\$2.8 billion, three times the amount sold in the whole year 2021.

Decree of Exoneration in Customs Matters

In Official Gazette No. 6,608, Decree No. 4,412 it is established the exoneration of import taxes, value added tax and the rate for determining the customs regime for the goods and sectors indicated in Chapter III of the Decree.

The validity for some sectors

- Telecommunications until 31-03-2021
- Quota until 30-04-2021
- COVID until 30-04-2021
- Automotive sector until 30-04-2021
- BK and BIT until 12/31/2021
- Full duty until 04-30-20-2021

Capital furniture, IT, telecommunications and tangible goods made by organs and entities of the national public administration to prevent the spread of Covid19 are exempted; likewise, electrical and electronic material is exempted for 90 days, and a tariff contingency regime is established for qualified goods indicated in Appendix IV of the decree.

Based on the modifications to the national regulatory framework, Venezuela is trying to position itself as an economically viable alternative through the aforementioned legal tools, where investment opportunities such as the following can be evaluated.

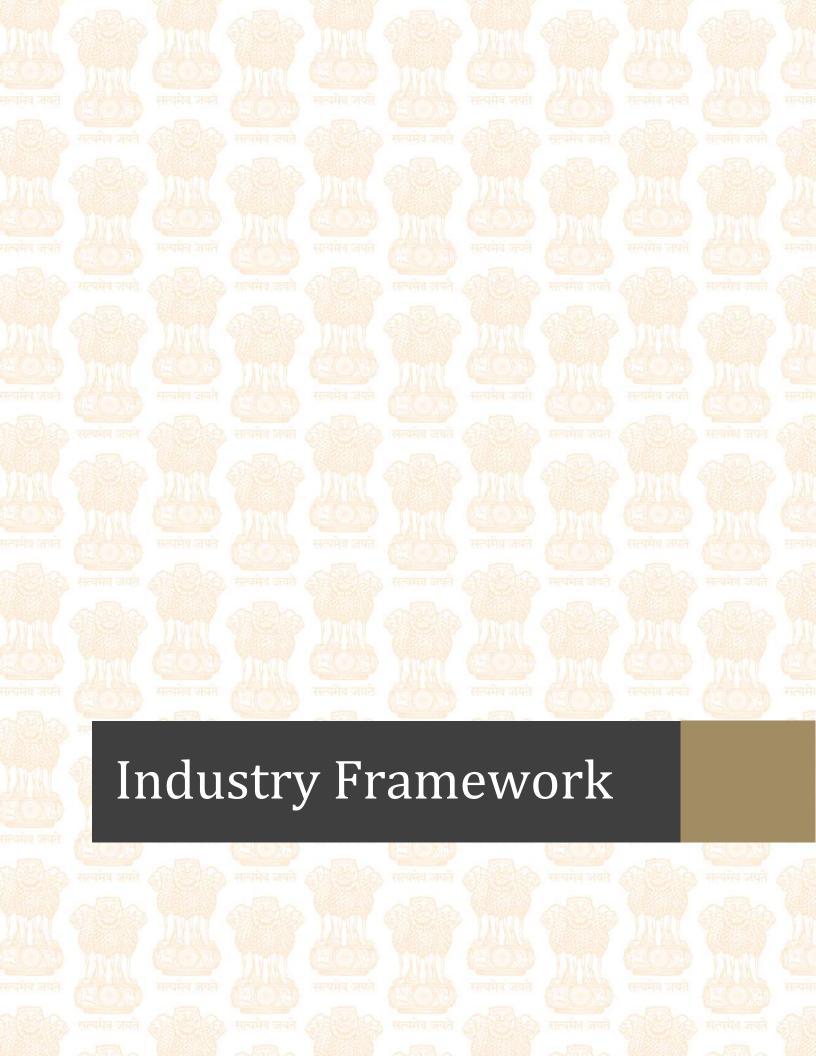
Special Economic Zones Law

In the year 2022, the national government has created the Special Economic Zones Law in order to attract Foreign Direct Investment. These economic zones comprise a more flexible regulatory framework in order to facilitate production in certain areas.

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The first five such zones are Paraguaná, in the state of Falcón; Puerto Cabello-Morón, in Carabobo; the state of La Guaira; Margarita, in Nueva Esparta, and the island of La Tortuga, which will begin to enjoy tax and customs incentives.

Due to the geographical characteristics of these five areas, the industries that will benefit are associated with the tourism sector (Margarita and La Tortuga) and the international trade sector (Paraguaná, Puerto Cabello and La Guaira). Investments related to the tourism services sector will have opportunities in these areas.



Characterization of the Venezuelan iron and steel industry.

Historical Background

The beginning of the iron and steel industry in Venezuela began at the end of the 1940s, when in 1948 the so-called Siderúrgica de Venezuela S.A. (SIVENSA) was created and the first studies on the Caroní River began, intending to take advantage of the region's iron resources. In this sense, the company began operations with a production capacity of 20,000 tons of steel bars.

During the 1950s, this sector began to undergo institutional transformations to allow a better projection of the industry and its potential. Thus, in 1953, the Ministry of Development and the Office of Special Studies of the Presidency of the Republic was created to plan and execute what would later be called the electrification of the Caroní River, the first project being the Macagua I Hydroelectric Power Plant.

Also, during this decade, the so-called large-scale commercial mining of iron ore began, which was carried out through concessions to US steel companies, specifically Bethlehem Steel and the United States Steel Corporation. These companies were able to exploit huge iron ore reserves located near exploitable hydroelectric resources. Hence, in 1955, the first steel mill was created near the confluence of the Orinoco and Caroní rivers.

At the beginning of the 1960s, an autonomous institute was created with its legal personality and assets separate and independent from the national treasury, directly attached to the Presidency of the Republic, called the Venezuelan Guyana Corporation (Corporación Venezolana de Guayana). This entity was created according to Decree No. 430 of 29 December 1960, as established in Official Gazette No. 26.445. The assets and functions corresponding to the Venezuelan Iron and Steel Institute and the Commission of Studies for the Electrification of Caroní were transferred to this entity.

The Corporación Venezolana de Guayana (CVG) was created with the purpose of planning and executing regional development through the promotion of investments, concerted development planning, and interinstitutional coordination of the territory's agents, to facilitate the processes for the implementation of projects and programs that stimulate the development of the region and its areas of influence on the northern bank of the Orinoco River and south of the states of Anzoátegui and N Monagas.

In the 1970s, mining sources other than iron were discovered, specifically, bauxite, which allowed CVG to diversify its production and establish a new branch of production in the area of aluminum through the creation of the Venezuelan Aluminium Company (VENALUM) in 1973 and Bauxilum in 1978.

This period is also known as the decade of nationalization of raw material-producing companies, which includes iron and steel. During this period, the administrations of the time focused on the construction of dozens of mining companies in their quest for heavy industrial development, and the so-called nationalization of the Orinoco Steelworks (Siderúrgica del Orinoco-Sidor) took place on 1 January 1975. This process generated an accumulation of payments as a form of compensation, which compromised the capacity to meet the production goals that the administrations established for the following decades.

As a result of the nationalization process of the 1970s, the 1980s began with an exponential increase in debt and a weakening of local demand due to the development of the industry in other developing countries. This is why, for this period, the administrations took into consideration the modification of foreign investment restriction policies through the modification of the legal framework to allow greater participation of the private sector in mining.

In this sense, sectors such as aluminum and bauxite managed to exponentially increase their production to the detriment of iron and steel, traditionally superior in production and capacity. Despite the above, it can be said that during the 1980s Venezuela achieved self-sufficiency in steel production, exceeding imports by a factor of five. Unfortunately, as a result of the debts accumulated at the beginning of the decade and the heavy capital investment for their reorganization, the steel companies managed to make a profit in the middle of the 1980s, maintaining profits and losses alternately until the end of the decade.

Other elements such as dumping complaints and subsidies at preferential exchange rates by the state characterized this period.

During the 1990s, Venezuela emerged as an important mining producer, especially of iron and steel. The investments made during the 1980s and a favorable market outlook meant that production figures could be expected to rise as expanded capacity came on stream. However, foreign competition for steel exports remained the biggest challenge for the Venezuelan steel industry during this period.

Thus, the Corporación Venezolana de Guayana began to act as a partner in joint ventures with foreign capital, accepting a minority stake in some companies. In this sense, during this decade Venezuela had the largest installed aluminum capacity in Latin America, with vast reserves of bauxite and iron, and advanced infrastructure.

The first decade of the 21st century coincides with the arrival of an administrative model characterized by the establishment of a new economic and social model for Venezuela, through the formulation of plans for the nation characterized by a strong state presence within the development model of the iron and steel industry.

Thus, from 2007 onwards, a series of acquisitions and expropriations of companies in the metallurgical sector began within the sector in pursuit of a model of productive integration of the country's iron and steel sector. This new proposal has as its strategic guideline the control of the production processes of the companies in the aforementioned chain by their workers.

It follows from the above that, for 2009, the Corporación Siderúrgica de Venezuela S.A. was created under decree No. 6.614 of 5 February 2009 and established in the official gazette No. 39.115. This entity would be under the administration of the so-called Ministry of People's Power for Basic Industries and Mining.

During the second decade of the current period and as a result of a series of unsatisfactory results, in 2015 the so-called Presidential Commission of the Guayana Socialist Plan was created, which created a new act of incorporation of the already named Corporación Siderúrgica de Venezuela. This new undertaking proposes that the corporation should draw up and implement a plan for the management of the steel sector. Within this corporation are represented the main companies of the sector, which include CVG Ferrominera Orinoco, SIDOR, Empresa de Producción Social Tubos sin Costura, Siderúrgica Nacional, Aceros del Alba, Constructora Nacional de Rieles para Vías Férreas y Estructuras Metálicas, and any other company of the iron and steel sector.

Legal and tax issues

The legal structure established within the Venezuelan territory for the exploitation of mineral resources contemplates three general aspects, which have constitutional rank and delineate how mining activity must be developed. In addition to the above, and without detriment to the particularities that may exist for each mining activity, the legislation that governs in detail the mining activity was established in the Decree with the rank and force of law No. 295 of September 5, 1999, which is called Mining Law. This instrument also has a general regulation established in 2001.

From the above, and taking into consideration the general aspects mentioned in the previous paragraph, we can establish that the first element is the capacity of self-determination granted to the State as the owner of the mining deposit, giving it the character of public property, as established in Article 12 of the Constitution of the Bolivarian Republic of Venezuela.

Independent of their nature, mining and hydrocarbon deposits that exist on land or under the sea bed within the exclusive economic zone and on the continental shelf belong to the republic are assets of the public domain and therefor are inalienable and may not be disposed of. The sea coast also belongs to the public domain.

It follows from the above that the Republic becomes the owner of the resource, which means that it can exploit it directly, or through entities that it owns or that are part of the public administration, or grant them to third parties at its discretion, through concessions or authorizations for their exploration and exploitation.

A second aspect is established in the constitutional obligation of the State to environmental protection and sustainable development. In this sense, Articles 127 and 128 of the Constitution of the Bolivarian Republic of Venezuela establish the State's obligation regarding the protection of the environment, biological diversity, genetic resources, ecological processes, national parks, natural monuments, and other areas of special ecological importance, as well as the development of land-use planning policies following ecological, geographical, population, social, cultural, economic and political realities, following the premises of sustainable development.

In this way, administrative procedures, licenses, or permits will be compulsory, up to the presentation of Environmental and Socio-Cultural Impact Studies required by the activity. These procedures will be established before, during, and after the activity.

By way of reference, the following can be mentioned as legal instruments:

- The technical, financial, and environmental feasibility study at the end of the exploratory phase.
- The Exploitation Certificate, which grants the right to carry out the activity.
- The technical accreditation, which allows the occupation of the territory. This accreditation may vary from competent authority to competent authority because the area to be exploited may be under a special administration regime.

Other instruments that can be established are the reports on resource affectation, which allow the environmental administration to carry out supervisory practices that measure the impact of the concessioned activity.

A third aspect is the so-called legal reserve in tax matters, which is established in Article 156 of the Constitution of the Bolivarian Republic of Venezuela. This article establishes the competencies of the national public power, with numeral 12 empowering the State to create, organize, collect, administer and control taxes on income, inheritance, donations and other related areas, capital, production, added value, hydrocarbons, and mines.

In this sense, there are two types of taxes that apply to mining activity. Firstly, the surface tax, which is levied on the lack of exploitation from the date of granting of the mining right, is paid quarterly and is set gradually, taking into consideration the hectares granted and the time of validity granted for the activity.

A second tax is established in the act of exploitation itself, taking into consideration the quantities of ore produced and the reference price established by the State for its sale. This tax is paid every month and its rate may vary depending on the mineral extracted.

An important figure is the so-called special advantage, which is established in the aforementioned Mining Act, and whose purpose is to include as a useful asset of the mining activity elements such as the supply of technology, internal supply, provision of infrastructure, social provision, training obligations, geological-mining training, among others.

It is important to note that there may be specific qualities for each mineral exploited.

SUMMARY OF LEGAL PROVISIONS REGULATING MINING ACTIVITY IN THE BOLIVARIAN REPUBLIC OF VENEZUELA

Legal instrument	Date of Publication	Official Journal
Constitution of the Bolivarian Republic of Venezuela. (Article 302)	December 30, 1999	N. º 30.860
Decree with the rank and force of law No. 295	September 5, 1999	N. º 39.140
Regulations General of the Mining Law	March 6, 2001	N. º 36.793
Organic Law on Decentralisation, Delimitation, and Transfer of Competences of the Public Power	March 17, 2009	N. º 39.140
Decree with the rank, value, and force of organic law that reserves to the state the activities of exploration and exploitation of gold and other strategic minerals.	December 30, 2015	N. º 6.210

Source: Desarrollo Minero. Available: http://www.desarrollominero.gob.ve/wp-content/uploads/2019/02/marco-legal-base-

Industrial Overview

The Iron Industry

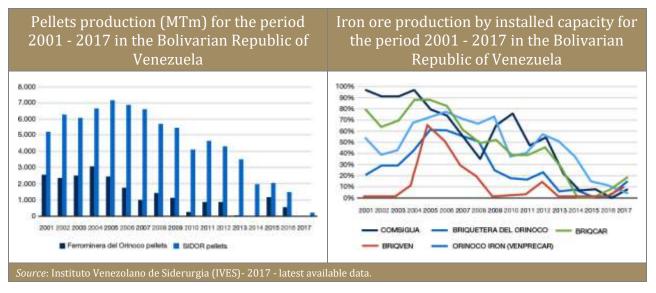
Iron is the most widely used hard metal, accounting for 95% by weight of the world's metal production. From a chemical point of view, Venezuelan iron is very well accepted worldwide, with an average high content of 64.48%, and a low content of 43% purity. At present, most of the iron ore deposits are similar to those found in countries such as Australia, where the tenor is around 44%.

Iron is the fundamental element of the Venezuelan mining industry, its extraction and transformation being fundamental for the development of the rest of the industrial conglomerate. In this sense, the state-owned company Ferrominera del Orinoco (FMO) is in charge of the exploitation and extraction of iron ore, with an installed capacity of 25 million metric tons per year.

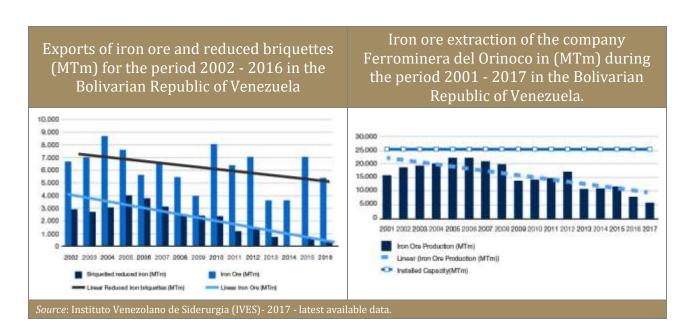
Another group of companies, established in recent decades, is in charge of the production of the so-called pellets and briquettes, which are the raw material necessary for the production of steel and other ferrous alloys. In this sense, companies such as Siderúrgica del Orinoco (SIDOR), CVG-Briquetera de Venezuela (BRIQVEN), Briquetera del Caroní (BRIQCAR, formerly Venprecar), and Briquetera del Orinoco (formerly Orinoco Iron) make up the business conglomerate dedicated to the transformation process of iron ore.

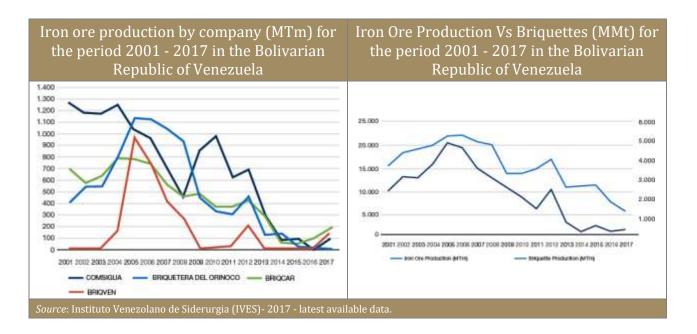
On the other hand, some qualified international organizations, such as the International Iron Metallics Association, establish that the total reserves of iron ore in Venezuela are around 14,678 million metric tons. This amount of mineral, in turn, is divided into 3,644 MMT of proven reserves, 2,323 MMT of probable reserves, and 8,711 MMT of possible reserves.

Within the context of production, it can be established that during the first decade of the 20th century, the process of iron ore extraction continued to grow steadily, exceeding 80% of N installed capacity until 2006. At present, following the nationalization process initiated in 2007, the operational level of production of Ferrominera del Orinoco covers only 23% of installed capacity.



Likewise, the behavior of pellets and briquettes production from 2006 until recent periods has been gradually decreasing until settling below 1000 metric tonnes per year.





The Steel Industry

The main purpose of the metallurgical sector is to serve as a base for the development of other industries, specifically the automotive and construction industries. In the specific case of Venezuela, the metallurgy sector is not classified as an independent economic activity but is included in the so-called manufacturing activity.

The case of mining activity is different, as it is established as an independent economic activity. Hence, it is not possible to estimate its representative volume within the economy and GDP.

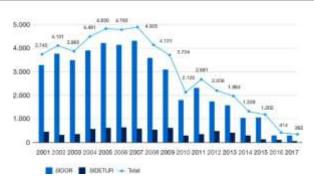
In general terms, the steel production chain in Venezuela is divided into two distinct processes. These processes depend basically on the raw material included in the transformation process and the technology used for this purpose.

In principle, the iron and steel process seek to transform the ferrous material (iron) by extruding it and adding metals such as chromium, copper, phosphorus, manganese, molybdenum, nickel, silicon, vanadium, and titanium, among others.

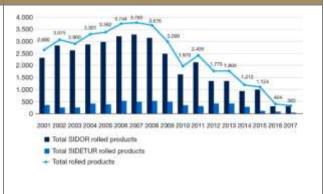
A first transformation process is given for the production of the so-called liquid steel, which solidifies to produce ingots, slabs, or billets that are the semi-finished products that will feed the next phase of the process known as rolling.

In this second phase, the steel can take its final product form, utilizing hot or cold transformation.





Production of Rolled Steel in (MTm) by companies during the period 2001 - 2017 in the Bolivarian Republic of Venezuela

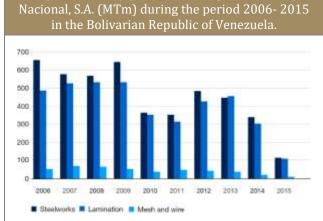


Source: Instituto Venezolano de Siderurgia (IVES) - 2017 - latest available data.

In the specific case of the Venezuelan steel industry, the products are classified into long products, which include bars, wire rods, and profiles, flat products, which include coils and steel sheets, and seamless pipes, which are manufactured specifically as supplies for the oil industry.

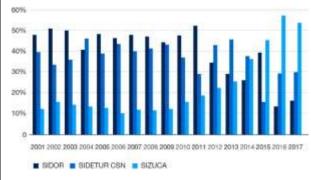
In Venezuela, steel activity is developed mostly in the southern area of the territory, specifically in the Guayana region, although there are steel companies in other states of the western region. These companies take advantage of the recycling of ferrous scrap generated by the growing oil industry in other sectors in the industrial center-west of the country.

At present, there are 3 steel producing companies, which have an installed capacity of 5.850 million metric tons per year. 97% of the installed capacity for steel production belongs to the state-owned companies Siderúrgica del Orinoco Alfredo Maneiro (SIDOR) and Complejo Siderúrgico Nacional (CSN), the remaining 3% of the capacity belongs to the private company Siderúrgica Zuliana (SIZUCA), owned by the Brazilian group GERDAU.



Total production by product of Complejo Siderúrgico

Steel bar production by companies during the period 2001 - 2017 in the Bolivarian Republic of Venezuela.



Source: Instituto Venezolano de Siderurgia (IVES) - 2015 and 2017 - latest available data.

At present, statistical data establish that during the last 10 years there has been a sustained decrease in production capacity, as a result of the paralysis of the industry responsible for the extraction of iron ore and the difficulties in obtaining the necessary elements for the maintenance of the infrastructure.

Another company's status.

In the context of the socialist economic plan initiated in 1999 and as a result of the process of nationalization of iron and steel production companies, new companies were created to diversify the sector's production process. In this sense, some companies created since 2006 remain in a state of total or partial inactivity, in some cases as a result of administrative objections and in others due to insufficient logistical conditions for their operation.

In this regard, the company called Centro Socialista de Producción de Cabillas CEPROCA, 2009 was acquired by the state-owned Siderúrgica del Orinoco (SIDOR), to expand the production capacity of various diameters of rebar with raw material from SIDOR. This company has an estimated installed capacity of 50,000 metric tons, but in recent years, due to the shortage of raw materials, it is in partial production.

Likewise, in 2006, construction began on the so-called Steel City, which would integrate a set of basic socialist enterprises. In this sense, the so-called Siderúrgica Nacional José Ignacio Abreu de Lima would form one of these companies, with an initial production target for 2011 of 1,500,000 tonnes of liquid steel per year and an employment capacity of 2,300 workers. At present, this project is 35% complete, with an investment of 2.5 billion dollars.

On the other hand, the so-called Empresa de Producción Social Siderúrgica Nacional, C.A., was created in 2005, to manufacture steel under a new concept of a socialist economy. This company can establish offices and dependencies in any other state of the country and abroad, with the previous authorization of the Parent Company, Compañía Nacional de las Industrias Básicas, C.A., and with a duration of 50 years. At present, the status of its operations and production cannot be established.

Similar is the case of the so-called Empresa de Producción Social de Tubos sin Costura C.A., which was created in 2005 to manufacture seamless steel pipes of different diameters and characteristics as a supply for the oil industry. At present, there is no data on operations or production.

Finally, in 2009, the creation of the Corporación Siderúrgica de Venezuela, S.A. was authorized, the purpose of which is to reorganize the national iron and steel system and control the operations and finances of its subsidiaries. These subsidiaries would be CVG Ferrominera Orinoco, SIDOR, Empresa de Producción Social Tubos sin Costura, Siderúrgica Nacional, Aceros del Alba, Constructora Nacional de Rieles para Vías Férreas y Estructuras Metálicas, and any other company in the iron and steel sector. At present, the official results of its purpose are not known.

Investment in Venezuela's iron and steel sector

Venezuela has enormous comparative advantages that allow for the ideal development of any extractive industry. Specifically, the Guayana region has enormous natural and geo localisation advantages that favour the development of the iron and steel industry

On the one hand, the largest conglomerate of deposits of ferrous material is located on the banks of the Orinoco River, which represents a waterway with direct access to the Atlantic Ocean. This particularity has allowed the group of companies that develop the exploration, exploitation, and transformation of minerals to be equidistant in their location, allowing the formation of industrial complexes in the form of clusters, reducing transport costs and production time.

Likewise, the geographical location of the rest of the companies dedicated to the transformation of iron into steel in the central coastal and central-western regions have access routes to the main ports with access to the Caribbean Sea.

In this context, some of the advantages of the iron and steel industry lie in the growth potential of its installed capacity. This allows the investor to project in a planned way the increase of production levels.

Likewise, the region's infrastructure and iron ore reserves allow the investor to consider new areas of production, diversifying the product portfolio to satisfy demand in nearby markets.

In this sense, both internally and regionally, there is currently a potential demand for iron and steel products that have not been met, especially in Central America, the United States, countries in the Pacific area, and the Caribbean.

Other investment opportunities can be found in trying to reverse the set of weaknesses that are currently present in the sector. In this sense, the first element that can be mentioned is an investment in the area of plant maintenance and repair assistance.

A second element to reverse would be technological obsolescence. Part of the industry's infrastructure has been in use for around 40 years, which represents a disadvantage from the production point of view, significantly increasing the cost of production. This technological obsolescence does not allow the possibility of obtaining and maintaining the certification of the production chain and the final product. Likewise, the training of human resources and their adaptation to new technology is an important investment niche, taking into consideration the reduced probabilities of investment in the area of exploitation.

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