FGV | EUROPE PROJETOS

THE BRAZILIAN CACHAÇA INDUSTRY AND THEIR INTERACTIONS WITH INTERNATIONAL TRADE

anufood brazil

FGV | EUROPE PROJETOS

THE BRAZILIAN CACHAÇA INDUSTRY AND THEIR INTERACTIONS WITH INTERNATIONAL TRADE

anufood brazil

Headquarters
Praia de Botafogo, 190, Rio de Janeiro – RJ, CEP 22250-900 ou Caixa Postal 62.591
CEP 22257-970, Tel: (21) 3799-5498, www.fgv.br

Institution of technical-scientific, educational and philanthropic character, created on December 20th, 1944, as a legal entity of private law with the objective to act, broadly, in all subjects of scientific character, with emphasis on social sciences: administration, law and economics, contributing for the socioeconomical development of the country.

CREDITS

Technical Team
Evandro Faulin
Felippe Serigati
Talita Priscila Pinto

Editorial Coordination
Manuela Fantinato

Design Coordination
Patricia Werner

Editorial Production
Talita Marçal

Graphic Design
Julia Travassos

Translation
Rodrigo Rudge Ramos Ribeiro

Proofreading
Sara Pais

Layout
Café.art.br

Photos
www.shutterstock.com

This issue is avaiable for download at FGV Projetos' website: www.fgv.br/fgvprojetos

CONTENTS

EXECUTIVE SUMMARY 05

1. THE INDUSTRY OF CACHAÇA IN BRAZIL AND IN THE WORLD 21

2. BRAZILIAN COMMERCIAL TRADE OF THE CACHAÇA SECTOR 35

3. BARRIERS TO THE COMMERCIALIZATION OF CACHAÇA FROM BRAZIL 39

ATTACHMENTS 43

ATTACHMENT 1 - PRESENTATION AND DESCRIPTION OF PRODUCTS ANALYZED ACCORDING TO ITS SOUTHERN COMMON NOMENCLATURE - NCM 43

ATTACHMENT 2 –LIST OF ABBREVIATIONS 45

EXECUTIVE SUMMARY

The Brazilian food and beverage sector has a big economic importance for Brazil, being the largest of the national processing industries. According to the Brazilian Association of Food Industries (ABIA)[1], in 2017, the food and beverage industry was responsible for generating R$ 550 billion in gross value of industrial production (VBPI)[2] and a contingent of 35.6 thousand companies; it is also the sector that employs the most, with about 1.6 million direct jobs and revenues[3] of R$ 642.6 billion, of which 81% belong to food and 19% to beverages. Only the revenues of the beverage industry, R$ 121.9 billion, were responsable, in 2017, for 3% of the value of the country's industrial production.

In this context, still according to ABIA data, the Brazilian beverage industry is divided into 2 major niches: alcoholic and non-alcoholic. Which alcoholic beverages make up 47.6% of this market. In addition, the production of alcoholic beverages in Brazil can be divided into three main groups: manufacture of spirits and other distilled beverages; manufacture of wine; and brewing and draft beer. The total volume of these beverages produced in 2014[4] was 15.9 billion liters, in which the beer and draft beer industry holds the largest fraction of this volume, 90.7%, followed by spirits and other distillates with 7.1% of the total, according to the Annual Industrial Survey - Product[5] (PIA - Product). However, according to sources like the Brazilian Cachaça Reference Center[6] (CBRC), the Brazilian production data of brandy may be underestimated, since there is a large amount of informality in the sector, which makes it more difficult to map.

Despite the existence of numerous sources that disseminate data on beverages in Brazil, there is not a single association that gathers data from the entire industry, considering the different categories of beverages. In relation to the brandy - also known as cachaça - the informality, already mentioned, makes it even more difficult to collect data from the sector. In order to map this industry the CBRC[7] presents some data[8] and justifies the reason for such informality:

1 Available at: https://www.abia.org.br/vsn/

2 Gross Value of Industrial Production (VBPI) - Includes the total transfers made plus the sales made by the unit plus the variations of inventories of: products manufactured by the unit; products in process of manufacture; and products manufactured by other units thereof.

3 Revenues - It is the sum of all sales, whether of products or services, carried out in a certain period.

4 Last available data.

5 Available at: https://sidra.ibge.gov.br/pesquisa/pia-produto/tabelas/brasil/2013

6 Available at: http://www.sitedacachaca.com.br/centro-brasileiro-de-referencia-da-cachaca-cbrc-e-sindbebidas-fiemg/

7 Available at: http://www.sitedacachaca.com.br/centro-brasileiro-de-referencia-da-cachaca-cbrc-e-sindbebidas-fiemg/

8 The latest data refer to the year 2012.

- There are 40 thousand producers, 98% of whom are small and microentrepreneurs;
- 600 thousand jobs are generated directly and indirectly;
- Annual production is about 1.4 billion liters where 70% of this volume is industrial and the remaining 30% of alembic (artisan production);
- Annual consumption in Brazil is around 11.5 liters per inhabitant;
- The productive chain moves approximately 7 billion reais;
- There are more than 4 thousand brands spread throughout the Brazilian territory;
- Only 1% of annual production is exported;
- It is the 3rd most consumed distillate in the world.

Therefore, the national production of cachaça is pulverized, has a great artisan aspect and, still, it is an essentially domestic product, little consumed outside Brazil. In addition, according to the CBRC, it is important to note that the informal market is still high in some regions, which would increase production to around 2 billion liters/year. The drink nationally holds 87% of the market share of the distillate markets, and 70% of the consumption of cachaça is made in bars and restaurants and 30% in other points of sale. The distillate is considered a Brazilian drink by Federal Decree, Cultural Heritage of Minas Gerais by State Law and Historical and Cultural Heritage of Rio de Janeiro by a Stadual Law.

Sugarcane is the most important input for the production of the beverage and can be acquired by mills, distilleries or stills. Brazil is the world leader in the production of this culture.

THE SUGARCANE CULTURE IN BRAZIL AND IN THE WORLD

According to the Ministry of Livestock and Supply (MAPA)[9], the Gross Value of Brazilian Agricultural Production (VBP) reached approximately R$ 540 billion in 2017. Brazilian plantations were responsable for 67% of this amount, approximately R$ 365 billion. The sugarcane complex, made up of sugar and alcohol, had relevant participation in this composition and accounted for approximately R$ 68.4 billion, approximately 18.7% of the total. In addition, in 2017, this comples it responsible for about 5.6% of Brazilian exports, US$ 4.2 billion, occupying the eighth place in the overall picture of the most exported products in Brazil.

9 Available at: http://www.agricultura.gov.br/assuntos/politica-agricola/valor-bruto-da-producao-agropecuaria-vbp

This performance puts Brazil as the world's leading producer of sugarcane and biggest exporter of suggar. In addition, sugarcane production has global relevance, from its cultivation it is possible to obtain the extraction of two products essential for the global economy: sugar and alcohol. In this sense, it becomes relevant to understand the advance of the world production of sugarcane over the years.

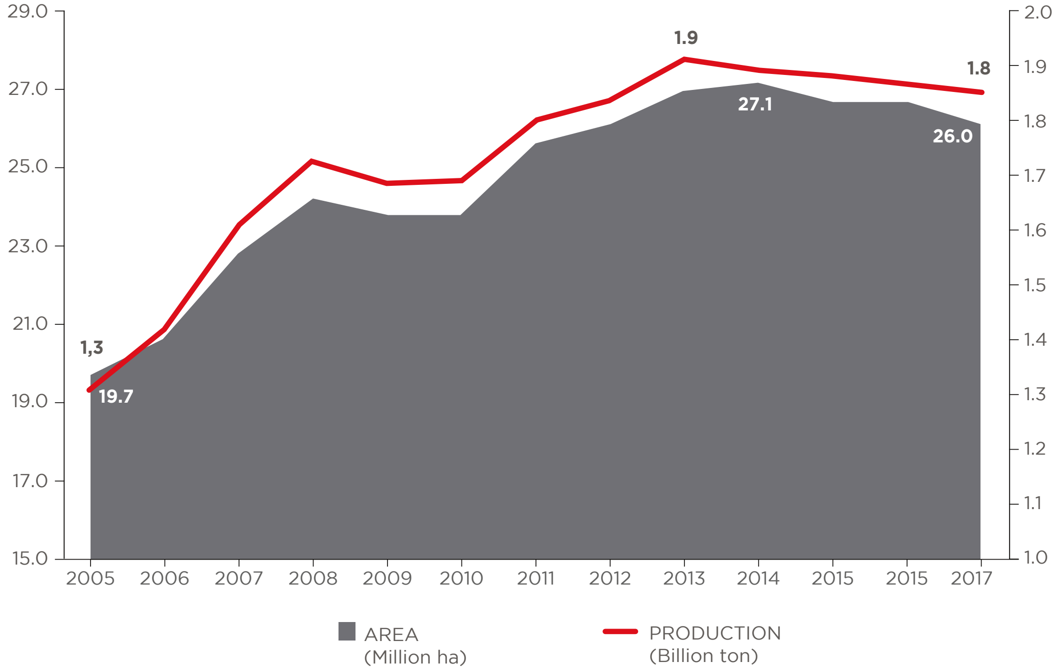
WORLD SCENARIO

The production of sugarcane is one of the main agricultural activities, practiced by several countries and responsible for generating employment and income in rural communities. Considering the world scenario for the period between 2005 and 2017:

- There was an accumulated increase of 41.0% in production, with an average growth rate of 2.9% per year;
- The volume produced jumped from 1.3 billion tons in 2005 to 1.8 billion tons in 2017;
- World production was accompanied by an increase in harvested area, which grew by 2.3% per year, totaling 32.1% in the period;
- In terms of the extension, the area increased from 19.7 million hectares in 2005 to 26.0 million in 2017.

Graph I

GLOBAL EVOLUTION OF PRODUCTION AND HARVESTED AREA OF SUGARCANE BETWEEN 2005 AND 2017 (BILLION TONS AND MILLIONS OF HECTARES)



Source: Food and Agriculture Organization of the United Nations– FAO Stat[10].

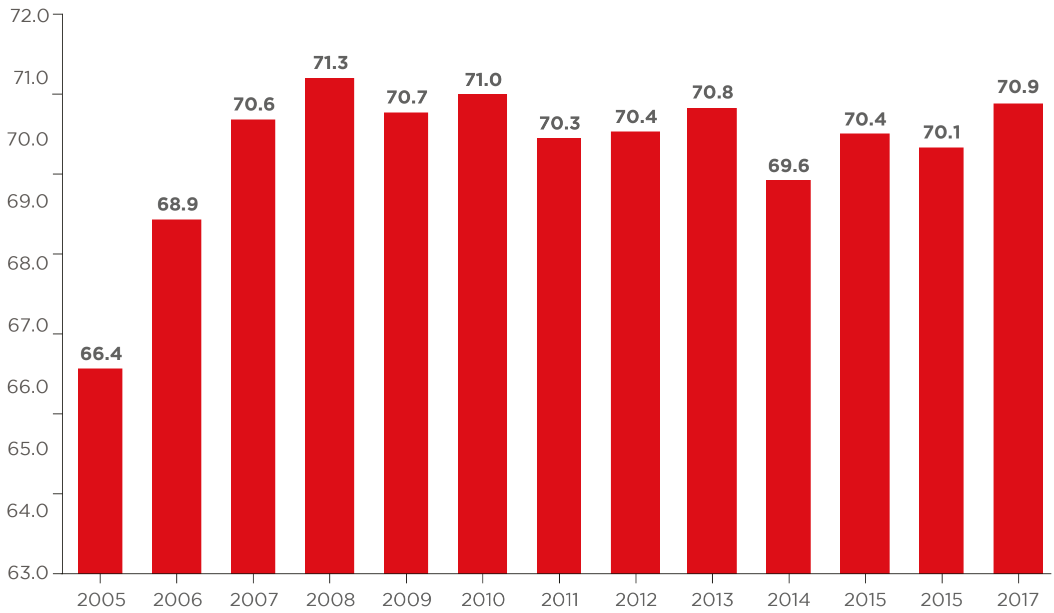
Although the harvested area has accompanied the evolution of production over the years, the growth of the area occurred at rates lower than that of production. Therefore, part of the evolution of production can be attributed to productivity gains:

- Between 2005 and 2017, there was a growth of 6.7% in world productivity, average expansion of 0.5% per year;
- While in 2005, the volume produced reached 66.4 tons of sugarcane per hectare in 2017, this amount reached 70.9 tons.

10 Available at: http://www.fao.org/faostat/en/#data

Graph II

GLOBAL EVOLUTION OF SUGARCANE PRODUCTIVITY BETWEEN 2005 AND 2017 (TONS PER HECTARE)



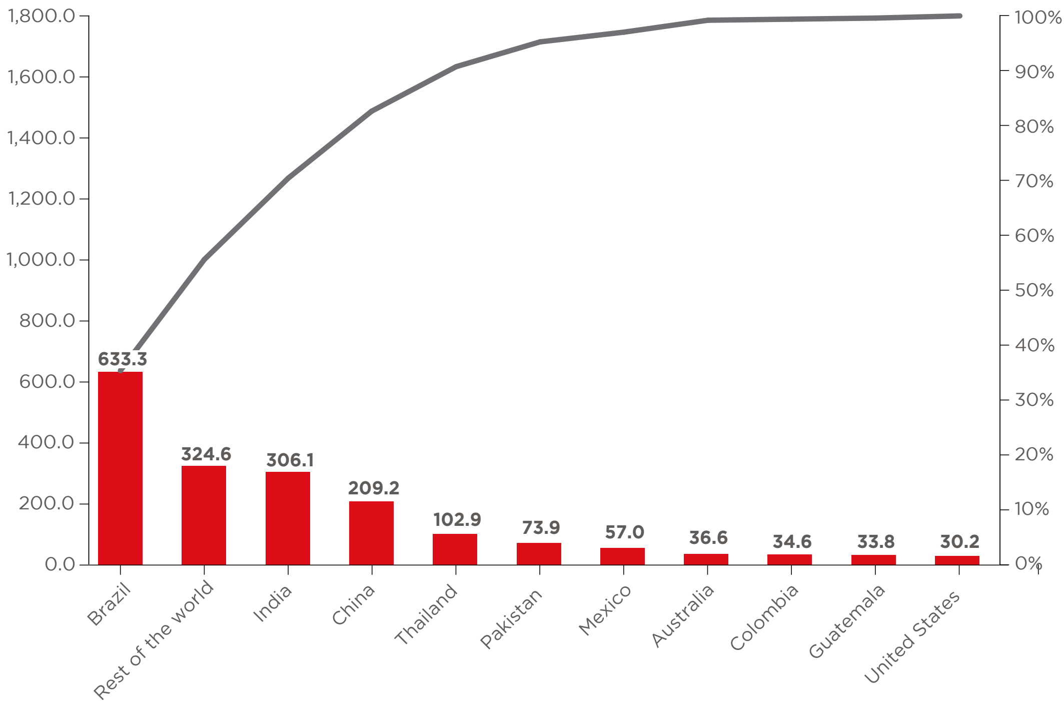
Source: Food and Agriculture Organization of the United Nations– FAO Stat[11].

Between the major world producers, Brazil stands out and is the main producer in the world, accounting for 34.4% of the total volume produced. In second place is India, with 16.6% followed by China with 11.4%. Together, these three countries account for about 62.4% of the world's total sugarcane production.

The volume produced by Brazil is more than double the second largest producer, India. Among the points that deserve mention in relation to the good national performance in the production of sugarcane, are climatic factors and, mainly, water availability. In addition, in the last decades, there were political incentives that also encouraged the national of this cultivation. In this way, Brazil is able to achieve year-on-year results that put it in the global market of sugarcane.

11 Available at: http://www.fao.org/faostat/en/#data

Graph III
GLOBAL SUGARCANE PRODUCTION IN 2017 (MILLION TONS)



Source: Food and Agriculture Organization of the United Nations– FAO Stat[12].

BRAZILIAN SCENARIO

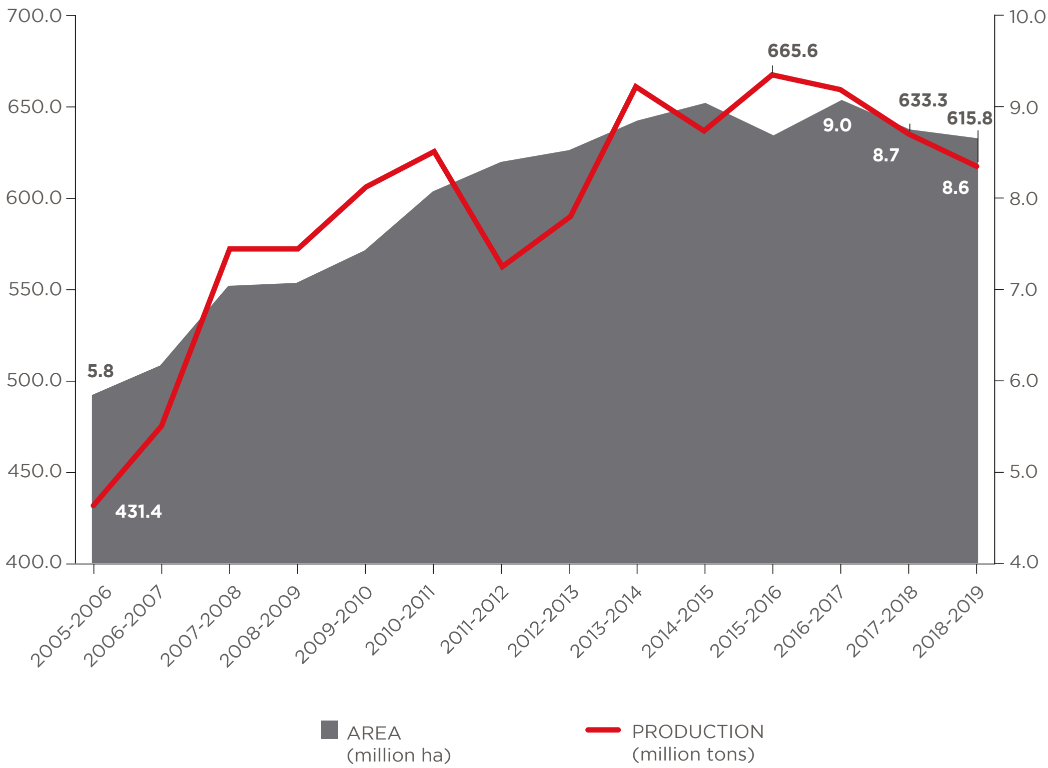
In Brazil the sugarcane sector has been expanding since 1970, when the federal government began to offer incentives to national sugarcane production. The intention was to make the country produce more alcohol, replacing the use of gasoline. Since 2003, the sector has further accelerated its investments, driven by the increased demand for sugar in the international market and the introduction of flex fuel vehicles in Brazil. Between 2005 and 2018 the sector continued to expand:

- It grew by 42.7% in the period and its production jumped from 431.4 million tons in 2005 to 615.8 million tons in 2018, with average growth of 2.8% per year;
- The harvested area increased from 5.8 million hectares in 2005 to 8.6 million in 2018. There was an increase of 47.8% in the period, about 3.1% per year.

12 Available at: http://www.fao.org/faostat/en/#data

Graph IV

BRAZILIAN EVOLUTION OF PRODUCTION AND HARVESTED AREA OF SUGARCANE BETWEEN 2005/06 AND 2018/19 (MILLIONS OF HECTARES AND MILLIONS OF TONS)



Source: National Supply Company (CONAB)[13].

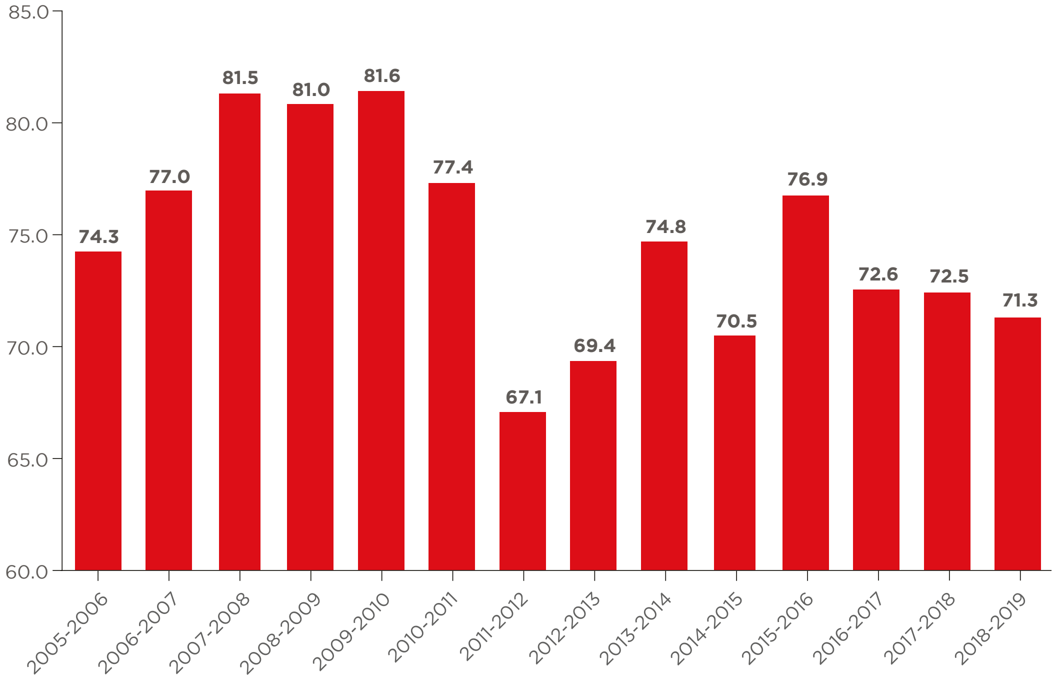
Despite the growth in the previous period, the sector has undergone oscillations, at least since the 2011/12 harvest, when there was a reduction of 10.1% decrease in production compared to the previous year. According to the Brazilian Federal Government[14] data, the factors that contributed to this performance are mainly climatic, also contributed to this reduction the lack of renovation of sugarcane plantations and the use of small scale inputs.

13 Available at: https://www.conab.gov.br/info-agro/safras/serie-historica-das-safras

14 Available at: http://www.brasil.gov.br/governo/2011/12/safra-de-cana-de-acucar-reduz-8-4-e-chega-a-571-4-milhoes-de-toneladas

Graph V

BRAZILIAN EVOLUTION OF PRODUCTIVITY OF SUGARCANE BETWEEN 2005/06 AND 2018/19 (TONS PER HECTARE)



Source: National Supply Company (CONAB)[15].

In addition, unlike the world trend, the productivity of sugarcane between the 2005/06 and 2018/19 harvests declined. This result is seen in a first moment in the strong reduction between the harvests of 2010/11 and 2011/12. As in 2011/12, average productivity has grown, but has not been restored to the point of recovering the observed performance between 2005/06 and 2009/10:

- There was a reduction of 4.0% of productivity between the accumulated period, reducing on average 0.3% per year. However, between 2011/12 and 2018/19, productivity grew by around 6.3%, with an average of 0.9% per year;
- While the 2005/06 harvest produced 74.3 tons per hectare, in the 2011/12 harvest the capacity was reduced to 67.1 tons per hectare. In the 2018/19 harvest, the volume reached 71.3 tons per hectare.

15 Available at: https://www.conab.gov.br/info-agro/safras/serie-historica-das-safras

In the harvest of 2018/19, the state of Sao Paulo concentrated almost 53.60% of all production. Goiás appears in second place, producing 11.22% of the total, Minas Gerais comes in third with 10.01% and the state of Mato Grosso do Sul accounts for 7.98% of the total.

Higher production in the state of Sao Paulo translates into positive returns. In 2015 the average income per hectare was R$ 1.8 thousand, in 2016 there was a positive fluctuation reaching R$ 2.8 thousand, remaining positive at R$ 1.9 thousand in 2017, see Table 1.

Table I

AVERAGE PROFIT YIELD PER HECTARE FOR THE SUGARCANE PRODUCED IN THE STATE OF SAO PAULO BETWEEN 2015 AND 2017 (R$/HA)

	AVERAGE INCOME	AVERAGE COSTS	PROFIT
2015	R$ 4,950.99	R$ 3,115.17	R$ 1,835.82
2016	R$ 5,915.45	R$ 3,099.19	R$ 2,816.26
2017	R$ 5,794.11	R$ 3,854.83	R$ 1,939.28

Source: CONAB[16].

Sugarcane is the main production input of the sugar and alcohol sector, whose main products are sugar and ethanol. Cachaça, although it does not account for a relatively large fraction of total sector revenue, is certainly one of the highest value-added products. In the next section, the Brazilian market for this product will be detailed.

THE BRAZILIAN INDUSTRY

Within the cachaça market, according to Sebrae[17], there are two types of drink differentiated by the way they are distilled:

- Cachaça artisanal still with distillation known as discontinuous; and
- Industrial *caninha* with continuous distillation and also known as column.

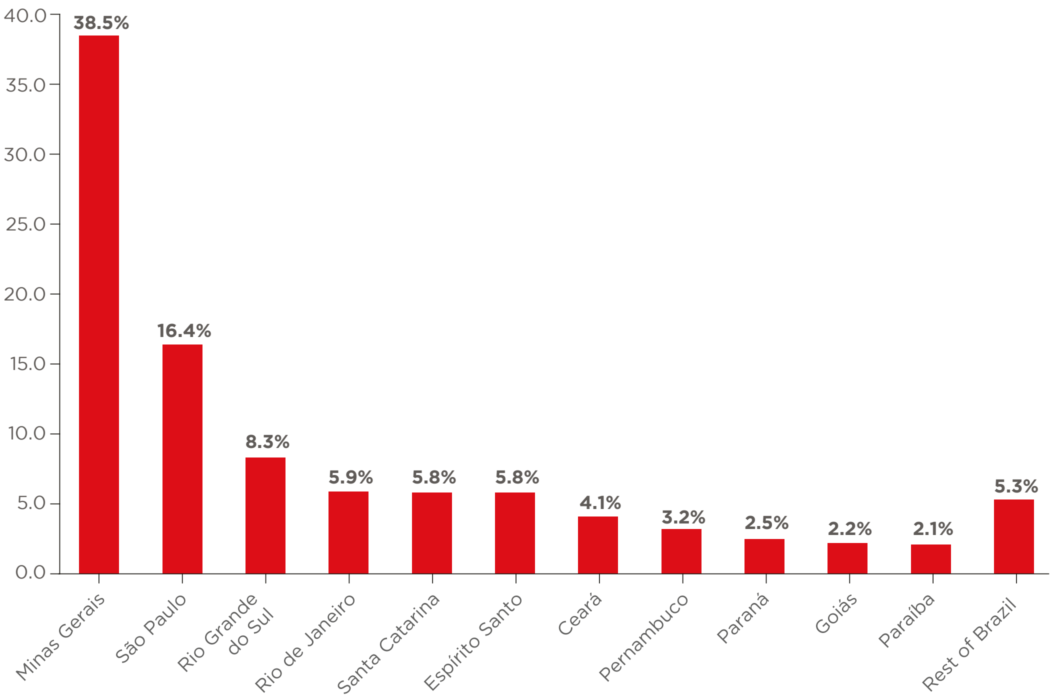
16 Available at: https://www.conab.gov.br/

17 Available at: http://www.agencia.cnptia.embrapa.br/Repositorio/ESTUDO_SEBRAE_cachaca_000fjd7aiji02wyiv809gkz514kr8pf2.pdf

About 70% of all production is made up of industrial cachaça and the remainder is still. In addition, there is a concentration of industrial production in the state of Sao Paulo, while still production is concentrated in Minas Gerais. A total of 4,124 brands of cachaça in Brazil are cataloged by the Ministry of Agriculture, Livestock and Food Supply[18] (MAPA), most of them (1,587) in Minas Gerais.

Graph VI

BRAZILIAN DISTRIBUTION OF CACHAÇA BRANDS



Source: MAPA[19].

In addition, among the products that make up the industrial production of sugarcane, cachaça occupies the third position, behind ethanol and refined sugar. The beverage accounts for approximately 3.4% of the R$ 56.35 billion that make up this industry, equivalent to 1.94 billion reais.

18 Available at: http://www.agricultura.gov.br

19 Available at: http://www.agricultura.gov.br

Table II
VALUE OF INDUSTRIAL PRODUCTION OF SUGARCANE IN 2016 (R$ BILLION)

TYPES OF INDUSTRIAL ACTIVITIES AND PRODUCTS	2016	
	VALUE	%
ETHANOL[20]	49.98	88.7%
REFINED CANE SUGAR	3.41	6.1%
SUGARCANE BRANDY (CACHAÇA OR CANINHA); RUM OR TAFIA	**1.94**	**3.4%**
SUGARCANE PULP, BEET PULP AND OTHER RESIDUES FROM THE MANUFACTURE OF SUGAR, INCLUDING FUSEL OIL	0.50	0.9%
CANE MOLASSES RESULTING FROM THE EXTRACTION OF SUGAR	0.46	0.8%
RAPADURA, MOLASSES AND SUGARCANE JUICE	0.04	0.1%
CANE MOLASSES FROM SUGAR REFINING	0.01	0.0%
TOTAL	**56.35**	**100%**

Source: IBGE - Annual Industrial Survey 20 - Product[21].

According to the Brazilian Cachaça Institute[22] (IBRAC), cachaça is a typical Brazilian beverage and is produced both by large industries - which set specific quality standards and large-scale production - and handmade by small producers and smaller quantities using family workforce.

In addition the drink has gained more and more space in bars and restaurants, being appreciated like other noble distilled drinks. There is, on the part of this industry, the expectation that consumption will gain more space in both the domestic and international markets.

Still, both industry and small producers are diversifying production to add greater value to the product. This diversification seeks to develop *premium* lines of cachaças to reach a wider variety of consumers. Yet the sector is vulnerable to economic fluctuations and declines in population income are directly reflected in declining consumption, moreover, oscillations in the final price of the product still affect its final demand.

20 They include: Ethyl alcohol (ethanol) denatured for fuel purposes; Ethyl alcohol (ethanol) denatured for non-fuel purposes; Undenatured ethyl alcohol (ethanol), of an alcoholic strength by volume of 80% or more, anhydrous or hydrated for fuel purposes; Ethyl alcohol (ethanol), undenatured, of an alcoholic strength by volume of 80% or more, for non-fuel purposes (e.g. product intended for the manufacture of beverages).

21 Available at: https://sidra.ibge.gov.br/tabela/6705

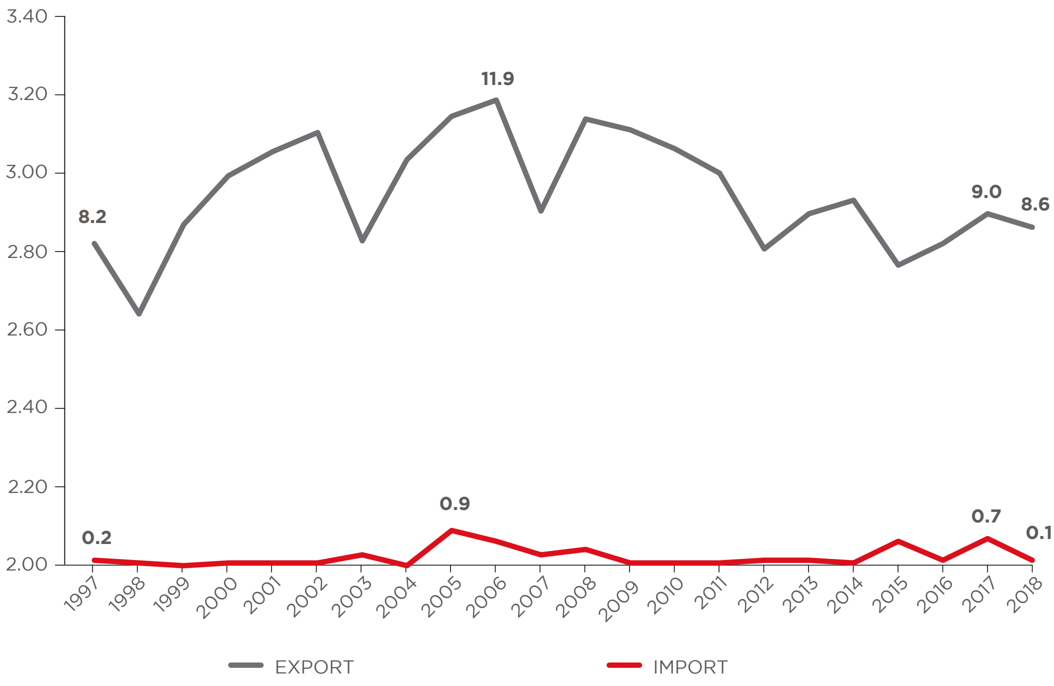
22 Available at: http://www.ibrac.net/

INTERNATIONAL TRADE

The national production of cachaça is basically focused on the domestic market, however, Brazil is a net exporter of the drink. This fact can be explained by the fact that the national market is almost totally supplied by the national production itself. In 1997, the volume of cachaça exported was 8.2 million tons, while in 2018 this number rose to 8.6 million tons. There was a growth of about 5.37% of the total exported.

Graph VII

EVOLUTION OF INTERNATIONAL TRADE OF CACHAÇA[23] BETWEEN 1997 AND 2018 (MILLION TONS)



Source: Comex Stat[24].

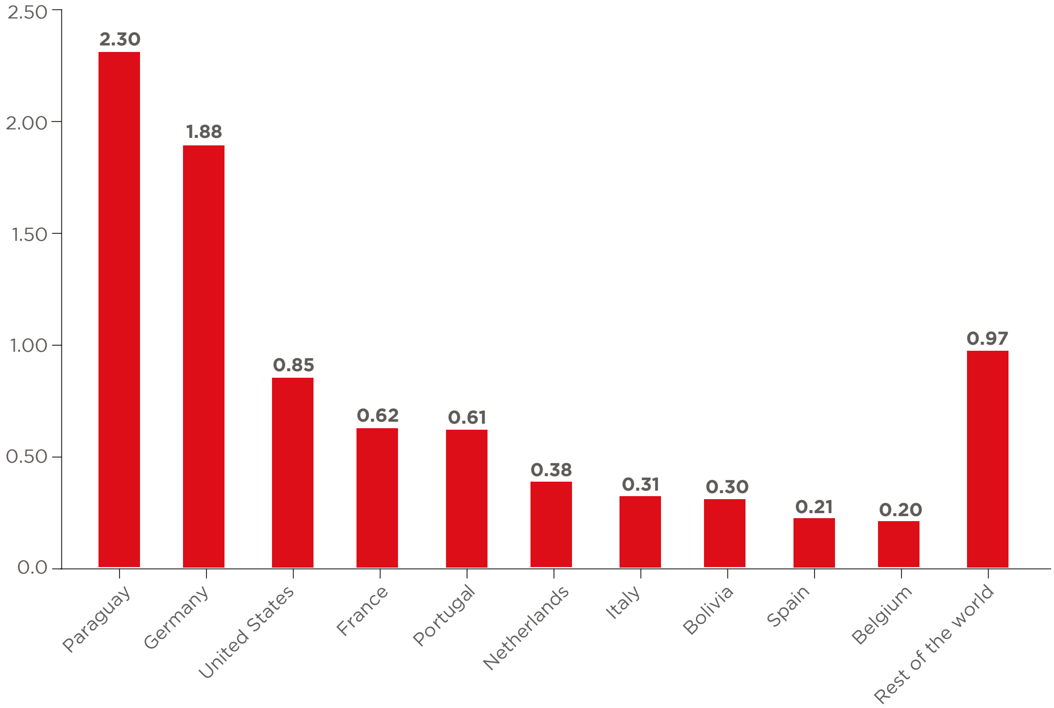
The national exports considered refer basically to a single aggregation of products: rum, cachaça and other spirits from the distillation, after fermentation, of sugarcane products, which accounted for R$ 15.6 million exported in 2018. Good part of the product goes to Paraguay, Germany and the United States, which together account for about 58% of the volume sold by Brazil.

23 The products listed in Attachment 1 has been considered.

24 Available at: http://comexstat.mdic.gov.br/pt/geral

Graph VIII

MAIN DESTINATION COUNTRIES OF BRAZILIAN CACHAÇA IN 2018 (MILLION TONS)



Source: Comex Stat (2018)[25].

Regading to imports, the same pattern occurs between the products and the import tariff is mainly composed of the aggregate "rum and other spirits obtained from the distillation, after fermentation, of sugarcane products". The main countries of origin of the beverage imported by Brazil are Cuba and the United States[26].

BARRIERS FOUND BY THE SECTOR

Cachaça is the third most consumed distillate in the world, according to Sebrae[27], and the fact that national production is practically focused on the domestic market and the possibility of informality, generates some barriers for the sector itself:

25 Available at: http://comexstat.mdic.gov.br/pt/geral

26 Available at: http://comexstat.mdic.gov.br/pt/geral

27 Available at: http://www.sebraemercados.com.br/cachaca-brasileira-os-numeros-de-um-mercado-em-expansao/

- Represents loss of opportunity;
- There is a very high number of producers, including informal and informal workers;
- There is no standardization of the product and representative organizations and entities, so that difficulties arise so that the product can position itself more expressively in the international market;
- Excessive informality damages the quality of the product and even to the health of consumers and the environment;
- Informality creates unfair competition, promotes tax evasion, and damages society as a whole.

Therefore, one of the main challenges of the sector is to reach the foreign market and combat informality. This, in turn, is justified by the tax burden on the sector, according to the Brazilian Institute of Planning and Taxation[28] (IBPT), taxes represent about 81.9% of the sale price of the drink.

In addition, with the production almost entirely for the domestic market, the industry is vulnerable to the performance of the Brazilian economy, since the level of consumer income has a direct influence on the demand for this product. In times of economic crisis, the consumption of the beverage undergoes a retraction.

Despite the challenges encountered by the sector, cachaça has great importance in the national beverage market. It contributes not only to the added value of the manufacturing industry, but also to the generation of employment and income for small and medium producers spread all over the country. In addition, the industry is an example of a traditional industry and has sought to differentiate its product, trying to eliminate the idea of a marginalized drink, in order to reach a wider range of consumers. In order to win a more diversified target audience nationally and to reach the foreign market, it is clear the need to reduce production costs, to motivate the reduction of informality in the sector and make it increasingly competitive, internally and externally.

28 Available at: https://ibpt.com.br/

1. THE INDUSTRY OF CACHAÇA IN BRAZIL AND IN THE WORLD

According to data[1] from the Brazilian Cachaça Reference Center[2] (CBRC), the cachaça industry in Brazil has about 40 thousand producers, 98% of which are small and microentrepreneurs, with the capacity to generate 600 thousand direct and indirect jobs. Annually, 11.5 liters of the drink per inhabitant are consumed, moving about 7 billion reais in its production chain. In Brazil, more than 4,000 brands of cachaça compete for the market, with 1% of its annual production exported, with 50% of these exports being of bulk cachaça.

Still according to the CBRC, the annual production of cachaça in Brazil is around 1.4 billion liters, in which about 70% is industrial and the remaining 30% still. It is important to note that the informal market is still high in some regions, which would bring production to around 2 billion liters/year. The drink is the 3rd most consumed distillate in the world, nationally holds 87% of the market share of the distillate markets, in addition 70% of the consumption of cachaça is carried out in bars and restaurants and 30% in other points of sale. The distillate is considered a Brazilian drink by Federal Decree, Cultural Heritage of Minas Gerais by State Law and Historical and Cultural Heritage of Rio de Janeiro by a Stadual Law.

The Brazilian Gross Domestic Product (GDP) closed the year 2017 at R$ 6.56 trillion, while the agribusiness ended with R$ 1.42 trillion, representing 22% of the total GDP. In addition, according to the Ministry of Livestock and Supply (MAPA), the Gross Value of Agricultural Production (VBP) in Brazil reached approximately R$ 540 billion in 2017. Brazilian crops account for 67% of this amount, approximately R$ 365 billion. The sugarcane crop has a significant share in the composition of this value, where it accounts for approximately R$ 68.4 billion, approximately 18.7% of the total.

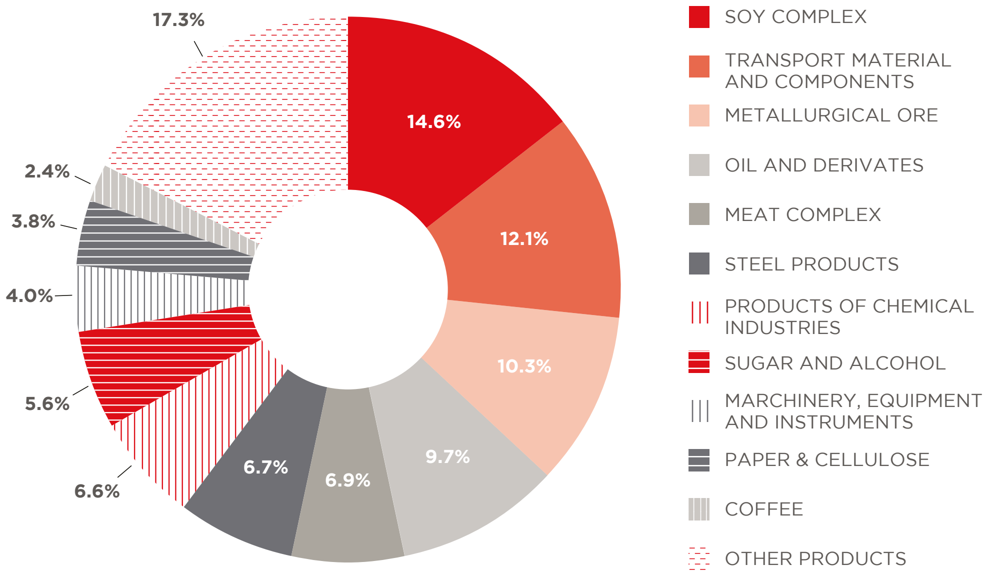
Regarding exports, despite the decline of 2016 in relation to 2015, Brazilian agriculture recovered and reached a record volume in 2017. It represented 44% of total exports, equivalent to about US$ 96 billion of the total US$ 218 billion exported for Brazil. The sugarcane complex helped to promote this result, according to Graph 1, responsable for about 5.6% of Brazilian exports, about US$ 4.2 billion, occupying the eighth place in the overall picture.

1 The latest data refer to the year 2012.

2 Available at: http://www.sitedacachaca.com.br/centro-brasileiro-de-referencia-da-cachaca-cbrc-e-sindbebidas-fiemg/

Graph 1

BRAZILIAN PARTICIPATION OF EXPORTS IN VOLUME BY GROUP OF PRODUCTS IN 2017



Source: Ministry of Development Industry and Commerce – MDIC (2018)[3].

To better understand the relevance of cachaça, it is important to determine the mapping of sugarcane production in Brazil, for which different databases are used with information at both national and regional levels, in some cases state data are also evidenced.

PRIMARY PRODUCTION

For the analysis of the Brazilian cachaça sector, it is important to consider the entire production chain. Therefore, throughout this section, the data of this chain is presented. With this, the data are analyzed at national and world level of the production, harvested area and productivity of the sugarcane crop.

3 Available at: http://www.mdic.gov.br/index.php/comercio-exterior/estatisticas-de-comercio-exterior/series-historicas

1.1 THE SUGAR CANE SECTOR IN ITS INITIAL POINT

The production of sugarcane is one of the main agricultural activities, practiced by several countries and responsible for generating jobs and income mainly in rural communities. From the cultivation of sugarcane, it is possible to obtain the extraction of two essential products for the world economy: sugar and alcohol. In this sense, it becomes relevant to notice the advance of the world production of sugarcane over the years. Graph 2 shows the global evolution of the production and area of sugarcane harvested between 2005 and 2017. The data shows that in 2005 the volume produced was 1.3 billion tons, while in 2017 this number jumped to 1.8 billion tons. There was a growth of 41.0% of world production, about 2.9% per year. Analyzing the data of Graph 2, it is possible to relate and observe that the growth of world production was accompanied by the increase of the harvested area from sugarcane. In 2005, the worldwide harvested area was 19.7 million hectares. As early as 2017, the area harvested in the world was 26.0 million hectares. There was an increase of 32.1%, approximately 2.3% per year.

Graph 2
GLOBAL EVOLUTION OF PRODUCTION AND HARVESTED AREA OF SUGARCANE BETWEEN 2005 AND 2017 (BILLION TONS AND MILLIONS OF HECTARES)

Source: Food and Agriculture Organization of the United Nations– FAO Stat[4].

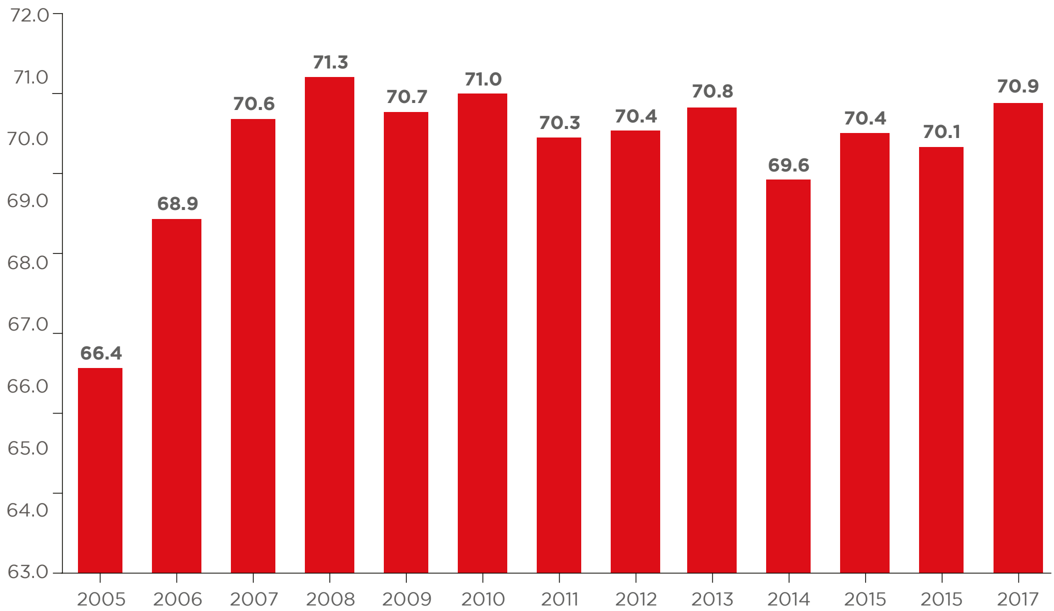
4 Available at: http://www.fao.org/faostat/en/#data

Another important factor to consider when analyzing the evolution of the world production of sugarcane, is to observe the productivity performance of the sector. Graph 3 shows the global evolution of sugarcane productivity between 2005 and 2017. It is possible to perceive that there were productivity gains over the period covered, however, productivity performance did not follow the growth rate of production and the harvested area, see Graph 2.

Considering Graph 3 data, it can be observed that in 2005, it was possible to produce 66.4 tons of sugarcane per hectare. This capacity increased to 70.9 tons per hectare in 2017. Productivity increased by about 6.7% between 2005 and 2017, growing approximately 0.5% per year. Therefore, although there have been productivity gains in the sector, the increase in production is still linked to the increase in the area.

Graph 3

GLOBAL EVOLUTION OF SUGARCANE PRODUCTIVITY BETWEEN 2005 AND 2017 (TONS PER HECTARE)



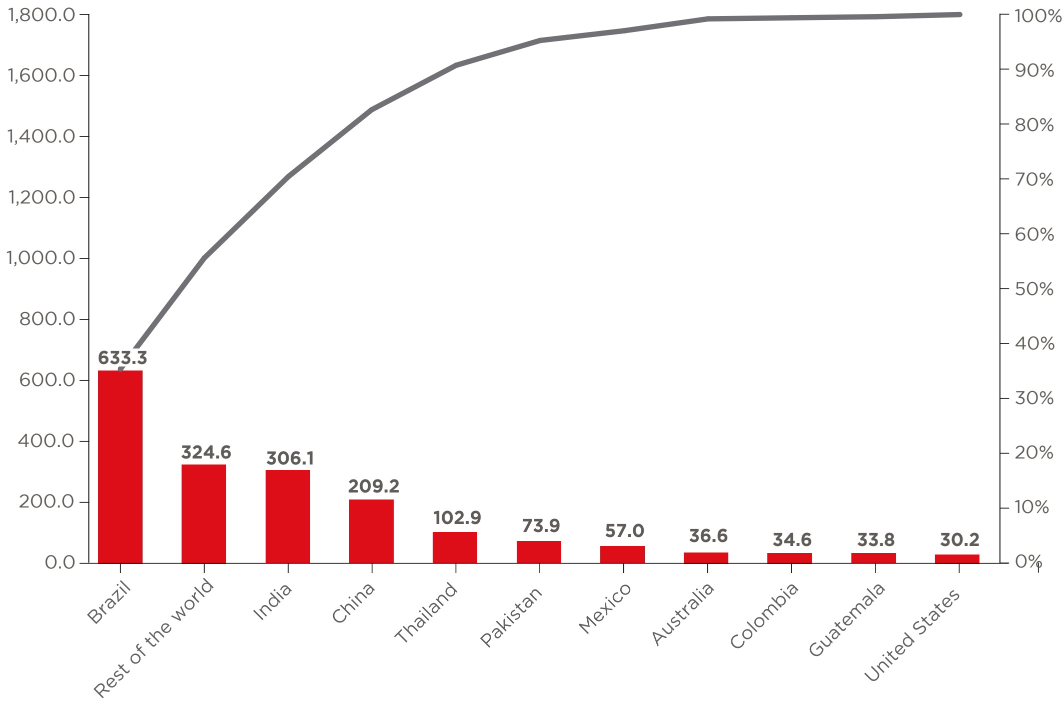
Source: Food and Agriculture Organization of the United Nations– FAO Stat[5].

5 Available at: http://www.fao.org/faostat/en/#data

One of the major players in this market is Brazil, the world's leading producer of sugarcane. According to Graph 4, Brazilian production is about 633.3 million tons, and accounts for 34.4% of the total volume produced in the world in 2017. Second is India, which produced 306.1 million tons approximately 16.6% of world production. China reached the third position, producing 209.2 million tons in 2017, 11.4% of the total produced in the world. Together, these three countries account for about 62.4% of the world's total sugarcane production.

Graph 4

GLOBAL SUGARCANE PRODUCTION IN 2017 (MILLION TONS)



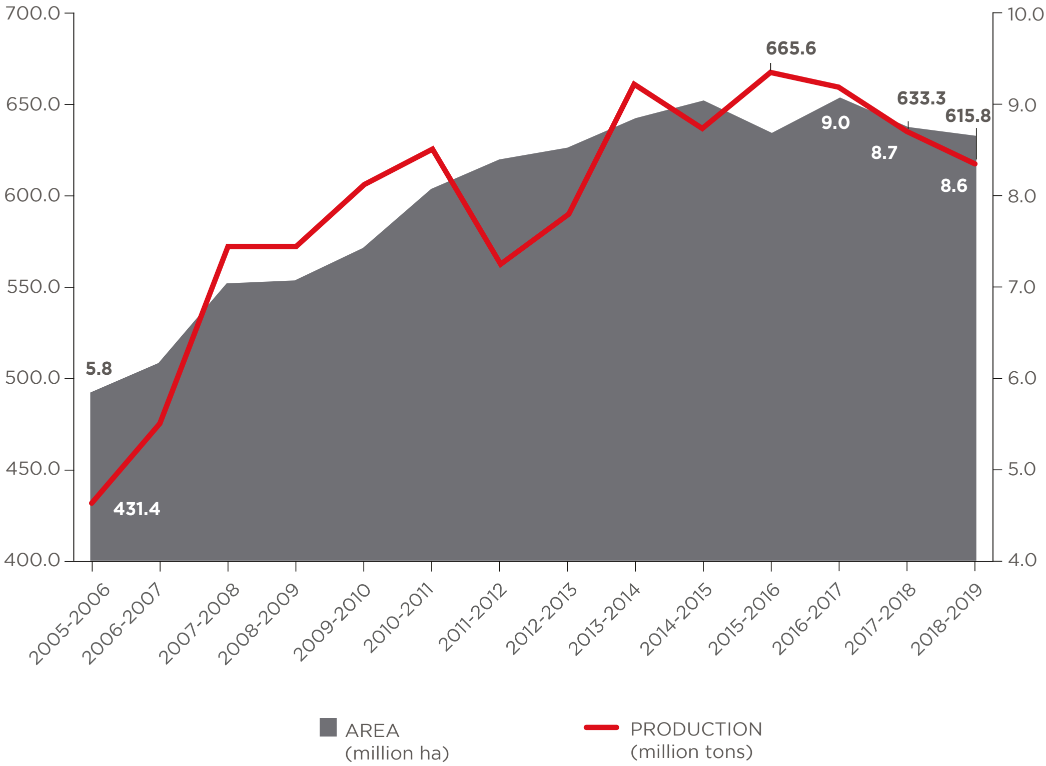
Source: Food and Agriculture Organization of the United Nations– FAO Stat[6].

Brazil's sugarcane sector expanded greatly in the 1970s, when the Brazilian government offered a number of incentives to domestic sugarcane production. The intention was to make the country produce more alcohol, replacing the use of gasoline, which was operating at very high prices due to the world oil crisis, burdening Brazilian imports. Since 2003, the sector has further accelerated its investments, driven by the increase in sugar demand in the international market and the development of flex fuel vehicles in Brazil. Graph 5 shows the Brazilian evolution of the production and the harvested area from sugarcane between the 2005/06 and 2018/19 harvests.

6 Available at: http://www.fao.org/faostat/en/#data

Graph 5

BRAZILIAN EVOLUTION OF PRODUCTION AND HARVESTED AREA OF SUGARCANE BETWEEN THE 2005/06 AND 2018/19 (MILLIONS OF HECTARES AND MILLIONS OF TONS)



Source: National Supply Company (CONAB)[7].

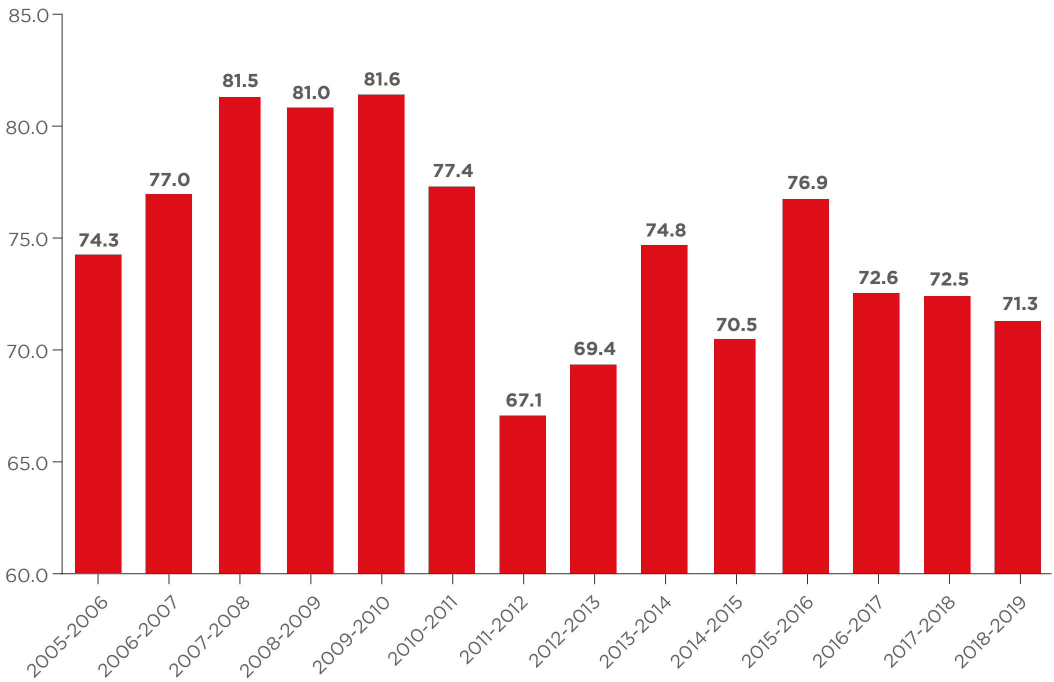
It is possible to observe that, despite oscillations over the years, in general, the national production of sugarcane increased by 42.7% between the 2005/06 and 2018/19 harvests. While in 2005 the production was 431.4 million tons, in 2018 the volume produced increased to 615.8 million tons, with an average growth of 2.8% per year. Regarding the harvested area, it is observed that in 2005, its extension was of 5.8 million hectares, by 2018, which rose to 8.6 million hectares. There was an increase of 47.8% between 2005 and 2018, approximately 3.1% per year.

7 Available at: https://www.conab.gov.br/info-agro/safras/serie-historica-das-safras

One of the main oscillations of Brazilian production occurred in the 2011/12 harvest, when there was a reduction of 10.1% decrease in production compared to the previous year. According to Federal Government data[8], several factors, mainly climatic factors, such as drought, rainfall and frost in the period, and excessive flowering contributed to this result, also contributed to this reduction the lack of renovation of sugarcane plantations and the use of small scale inputs. This drop in productivity can be seen in Graph 6.

Graph 6

BRAZILIAN EVOLUTION OF PRODUCTIVITY OF SUGARCANE BETWEEN 2005/06 AND 2018/19 (TONS PER HECTARE)



Source: National Supply Company (CONAB)[9].

In addition, when following the sugarcane productivity trajectory between the 2005/06 and 2018/19 harvests, it is possible to observe that there was a 4.0% reduction in productivity between the accumulated period, an average of 0.3 % per year. While in the 2005/06 harvest there were 74.3 tons per hectare, in the 2018/19 harvest the volume was 71.3 tons per hectare.

8 Available at: http://www.brasil.gov.br/governo/2011/12/safra-de-cana-de-acucar-reduz-8-4-e-chega-a-571-4-milhoes-de-toneladas

9 Available at: https://www.conab.gov.br/info-agro/safras/serie-historica-das-safras

A large part of the volume produced in Brazil is concentrated in the Central-West and Southeast regions. The centralization of production occurs mainly in the Southeast of the country, responsible for about 64.34% of the total volume of the 2018/19 harvest. The Central-West region appears in second place, producing approximately 21.92% of the total. The Northeast region produces 7.40%, the South region produces 5.79% and the North region produces 0.54%10.

The state of Sao Paulo is the main producer in Brazil, concentrating almost 53.60% of all production. Goiás appears in second place, producing 11.22% of the national volume. Minas Gerais comes in third with 10.01% and the state of Mato Grosso do Sul has a representation of 7.98%.

In terms of yield, considering the production of sugarcane in the state of Sao Paulo, the results have been positive in recent years. In 2015 the average income per hectare was R$ 1.8 thousand, in 2016 there was a positive fluctuation reaching R$ 2.8 thousand, remaining positive at R$ 1.9 thousand in 2017, see Table 1

Table 1
AVERAGE PROFIT YIELD PER HECTARE FOR THE SUGARCANE PRODUCED IN THE STATE OF SAO PAULO BETWEEN 2015 AND 2017 (R$/HA)

	AVERAGE INCOME	AVERAGE COSTS	PROFIT
2015	R$ 4,950.99	R$ 3,115.17	R$ 1,835.82
2016	R$ 5,915.45	R$ 3,099.19	R$ 2,816.26
2017	R$ 5,794.11	R$ 3,854.83	R$ 1,939.28

Source: CONAB11.

1.2 THE BRAZILIAN CACHAÇA AGROINDUSTRY

Within the cachaça market, according to the Sebrae[12], there are two types of the drink: the homemade cachaça and the caninha industrial that are differentiated by the way they are distilled. The distillation made in the still is also known as discontinuous, since the industrial is called continuous and also known as column. About 70% of all production is

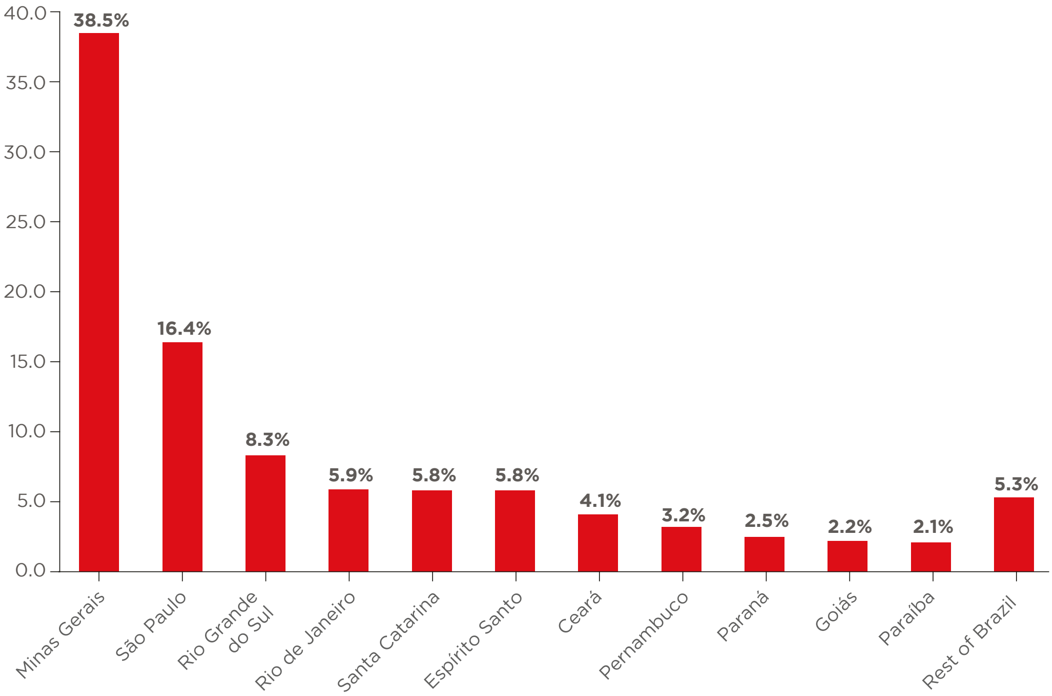
10 Available at: https://www.conab.gov.br/info-agro/safras/serie-historica-das-safras

11 Available at: https://www.conab.gov.br/

12 Available at: http://www.agencia.cnptia.embrapa.br/Repositorio/ESTUDO_SEBRAE_cachaca_000fjd7aiji02wyiv809gkz514kr8pf2.pdf

made up of industrial cachaça and the remainder is still. In addition, there is concentration of industrial production in the state of Sao Paulo, while still production is concentrated in Minas Gerais. They are cataloged by the Ministry of Agriculture, Livestock and Supply (MAPA) 4,124 brands of cachaça in Brazil, most of them (1,587) in Minas Gerais, see Graph 7.

Graph 7
BRAZILIAN DISTRIBUTION OF CACHAÇA BRANDS



Source: MAPA[13].

To understand more about the size of this industry, the Annual Industrial Survey Company (PIA - Company) made available by IBGE becomes a starting point. Table 2 shows that the value of industrial production of sugarcane for 2016 is R$ 56.35 billion.

13 Available at: http://www.agricultura.gov.br

Table 2

VALUE OF INDUSTRIAL PRODUCTION OF SUGARCANE IN 2016 (R$ BILLION)

TYPES OF INDUSTRIAL ACTIVITIES AND PRODUCTS	2016	
	VALUE	%
ETHANOL[20]	49.98	88.7%
REFINED CANE SUGAR	3.41	6.1%
SUGARCANE BRANDY (CACHAÇA OR CANINHA); RUM OR TAFIA	**1.94**	**3.4%**
SUGARCANE PULP, BEET PULP AND OTHER RESIDUES FROM THE MANUFACTURE OF SUGAR, INCLUDING FUSEL OIL	0.50	0.9%
CANE MOLASSES RESULTING FROM THE EXTRACTION OF SUGAR	0.46	0.8%
RAPADURA, MOLASSES AND SUGARCANE JUICE	0.04	0.1%
CANE MOLASSES FROM SUGAR REFINING	0.01	0.0%
TOTAL	**56.35**	**100%**

Source: IBGE - Annual Industrial Survey - Product[15].

Industrial production of sugarcane brandy, cachaça or canninha, rum or tafia is the third largest, after ethanol and refined sugar, and accounts for approximately 3.4% of the industrial value of this segment, around 1.94 billion reais.

According to the Brazilian Cachaça Institute[16] (IBRAC), cachaça is a typical Brazilian beverage and is produced both by large industries, which establish specific standards of quality and large-scale production, as well as artisanal, by small producers, in smaller quantities, using hand of family work. More and more the drink begins to gain space in bars and restaurants, being appreciated like other noble distilled drinks and the expectation is that the consumption gain more space in the national market as international.

In order to bring sophistication to the drink, both industry and small producers are striving and investing in technology, marketing and seeking to add greater value to the product by developing *premium* lines of cachaças. Although there is optimism, the sector of cachaça is a segment that depends on the social economic panorama. In times of crisis, market competition is defined by the price of the final product to the consumer. The fluctuations

14 They include: Ethyl alcohol (ethanol) denatured for fuel purposes; Ethyl alcohol (ethanol) denatured for non-fuel purposes; Undenatured ethyl alcohol (ethanol), of an alcoholic strength by volume of 80% or more, anhydrous or hydrated for fuel purposes; Ethyl alcohol (ethanol), undenatured, of an alcoholic strength by volume of 80% or more, for non-fuel purposes (e.g. product intended for the manufacture of beverages).

15 Available at: https://sidra.ibge.gov.br/tabela/6705

16 Available at: http://www.ibrac.net/

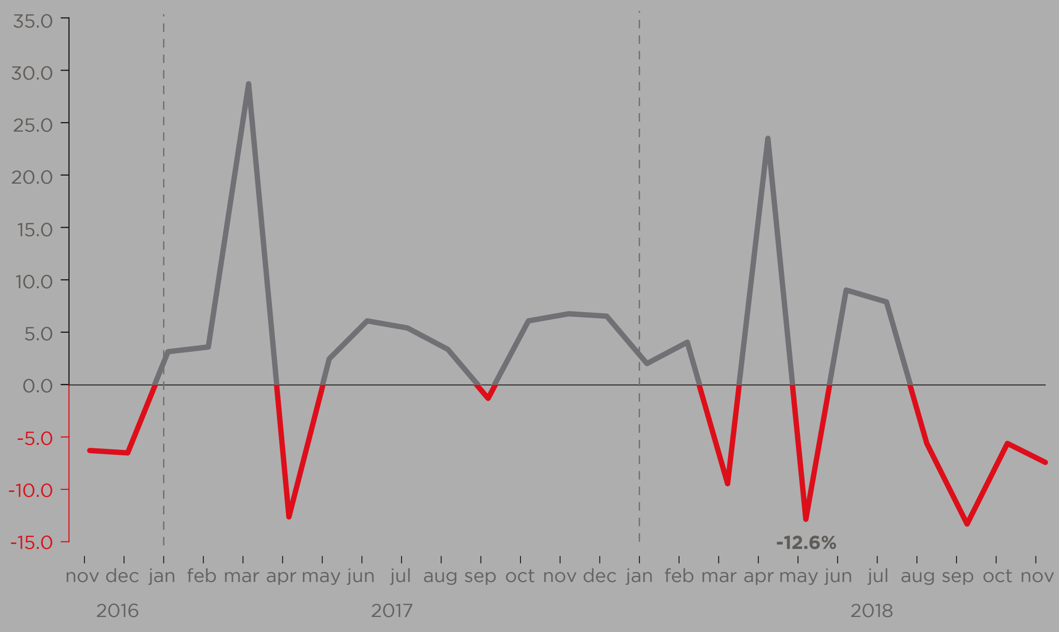
in consumer income directly influence the demand for the product, which shrinks in sales, when the income reduction of the population, and raises the commercialization when the purchasing power of consumers increases.

THE TRUCK DRIVER'S STRIKE AND THE BEVERAGE SECTOR

The month of May of 2018 in Brazil was marked by the strike movement of the truck drivers. Although in a decentralized way, the movement reached several points of the country with the blockade of roads and impediment of the transport of inputs and products. The total impact of the truckers strike is still uncertain in the most diverse sectors of the Brazilian economy. Graph 8 shows the industrial production of alcoholic beverages between November 2016 and November 2018. It is important to note that the index presented by Graph 8 always refers to the same month of the previous year.

Graph 8

BRAZILI AND INDUSTRIAL PHYSICAL PRODUCTION OF ALCOHOLIC BEVERAGES BETWEEN NOVEMBER 2016 AND NOVEMBER 2018 (MONTHLY BASE INDEX 100)



Source: IBGE - Monthly Industrial Survey - Physical Production [17].

In May 2018 the industrial production of alcoholic beverages showed a decrease of 12.6%, given the oscillation of the production of the sector, it is difficult to infer if this effect was generated by the strike or if there are additional factors that explain it. In June and July 2018, production varied positively in relation to the same months of the previous year, but in August it reduced again.

Even so, according to data from the Union of the Sugarcane Industry18 (UNICA), there was a loss of 4.5 days of sugarcane crushing due to the strike, with the result that it stopped processing about 13 million tons of the main cachaça raw material, the sugar and ethanol sector as a whole saw losses of R$ 1.2 billion.

17 Available at: https://sidra.ibge.gov.br/

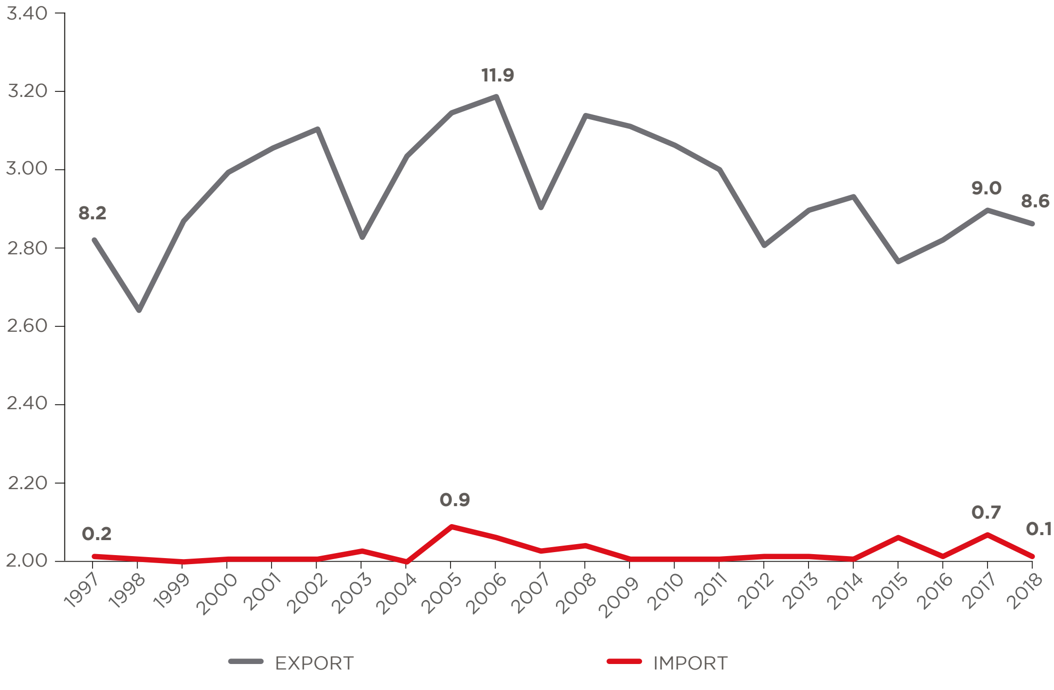
18 Available at: http://www.unica.com.br/noticia/42854212920312979436/greve-dos-caminhoneiros-afeta-a-producao/

2. BRAZILIAN COMMERCIAL TRADE OF THE CACHAÇA SECTOR

The national production of cachaça is basically focused on the domestic market. Graph 9 shows the evolution of international cachaça trade between 1997 and 2018. Analyzing the data, it is possible to perceive the difference between the volume of cachaça exported and imported by Brazil. This fact can be explained by the fact that the national market is almost totally supplied by the national production itself. In relation to exports, it is observed that fluctuations occurred throughout the period covered. In 1997, the volume of cachaça exported was 8.2 million tons, while in 2018 this number rose to 8.6%. There was a growth of about 5.37% of the total exported. In spite of having increased the exported volume, this variation was not so expressive.

Graph 9

EVOLUTION OF INTERNATIONAL TRADE OF CACHAÇA[1] BETWEEN 1997 AND 2018 (MILLION TONS)



Source: Comex Stat[2].

1 The products listed in Attachment 1 has been considered.

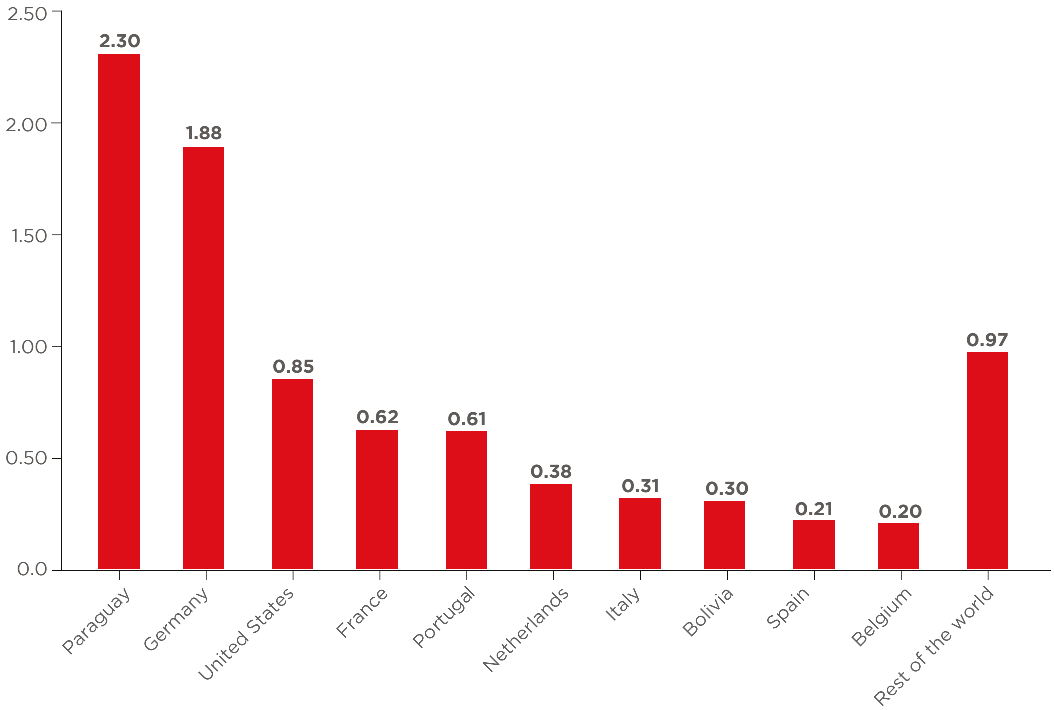
2 Available at: http://comexstat.mdic.gov.br/pt/geral

The national exports considered refer to two products, namely:

- Rum, cachaça and other spirits obtained by the distillation, after fermentation, of sugarcane products; and
- Denatured spirit with any alcoholic strength.

In that the first one responds, annually, for more than 99% of the volume and value exported. In the year 2018 this figure was around R$ 15.6 million, while the denatured spirit with any alcohol content was a little more than one thousand reais. Much of this volume exported goes to Paraguay, Germany and the United States, which together account for about 58% of the volume sold by Brazil, see Graph 10.

Graph 10
MAIN DESTINATION COUNTRIES OF BRAZILIAN CACHAÇA IN 2018 (MILLION TONS)



Source: Comex Stat (2018)[3].

3 Available at: http://comexstat.mdic.gov.br/pt/geral

The main importing country of Brazilian cachaça is Paraguay, which in 2018 demanded 2.3 million tons, 26.6% of the total volume sold. Germany is the second most importing country of Brazilian cachaça, absorbing 1.88 million tons, approximately 21.73% of Brazilian exports. The United States appears in third place, with 0.85 million tons, about 9.81%. Together, these three countries demand 58.17% of the total volume of exports of Brazilian cachaça.

In relation to imports, the same pattern occurs between the products and the import tariff is mostly composed of rum and other spirits from the distillation, after fermentation, of sugarcane products. The main countries of origin of the beverage imported by Brazil are Cuba and the United States. The main countries of origin of the beverage imported by Brazil[4] are Cuba (40.6 tons), the United States (40.4 tons), Mexico (4.9 tons), United Kindgom (2.0 tons) and Guatemala (0.9 tons).

4 Available at: http://comexstat.mdic.gov.br/pt/geral

3. BARRIERS TO THE COMMERCIALIZATION OF CACHAÇA FROM BRAZIL

Cachaça is a genuinely Brazilian product and its national industry has great relevance for the country's economy. It is the third most consumed distillate in the world, according to Sebrae[1], and the fact that domestic production is practically focused on the domestic market represents a loss of great opportunities for the sector. The existence of many producers, lack of standardization of the product and absence of representative organizations and entities generate difficulties so that the product can position itself more expressively in the international market. It is necessary that small and medium producers join forces and organize themselves in an efficient way to promote their products in the external market. The informality of the sector can cause damages to the quality of the product and even to the health of consumers and the environment.

Besides, informality, according to SindBebidas-MG[2], favors informal employment, unfair competition, promotes tax evasion and harms society as a whole. Therefore, one of the sector's challenges is to combat informality. On the other hand, it is justified given the tax burden on the sector, according to the Brazilian Institute of Planning and Taxation[3] (IBPT), taxes represent about 81.9% of the selling price of the beverage.

Another relevant issue is that, with production going almost entirely to the domestic market, the industry is vulnerable to the performance of the Brazilian economy, given that the level of consumer income has a direct influence on the demand for the product. In times of economic crisis, the consumption of the beverage undergoes a retraction.

In relation to exports, Figure 1 illustrates the level of protectionism practiced by the countries that import cachaça from Brazil. Considering the main importing countries of Brazilian cachaça in 2018, Paraguay, the largest consumer of Brazilian exports, and the United States, the third main destination of Brazilian cachaça exports, do not charge any import tariff on the Brazilian product. Germany, the second largest consumer of Brazilian beverage exports, applies a rate of 7.76% for imports of Brazilian cachaça.

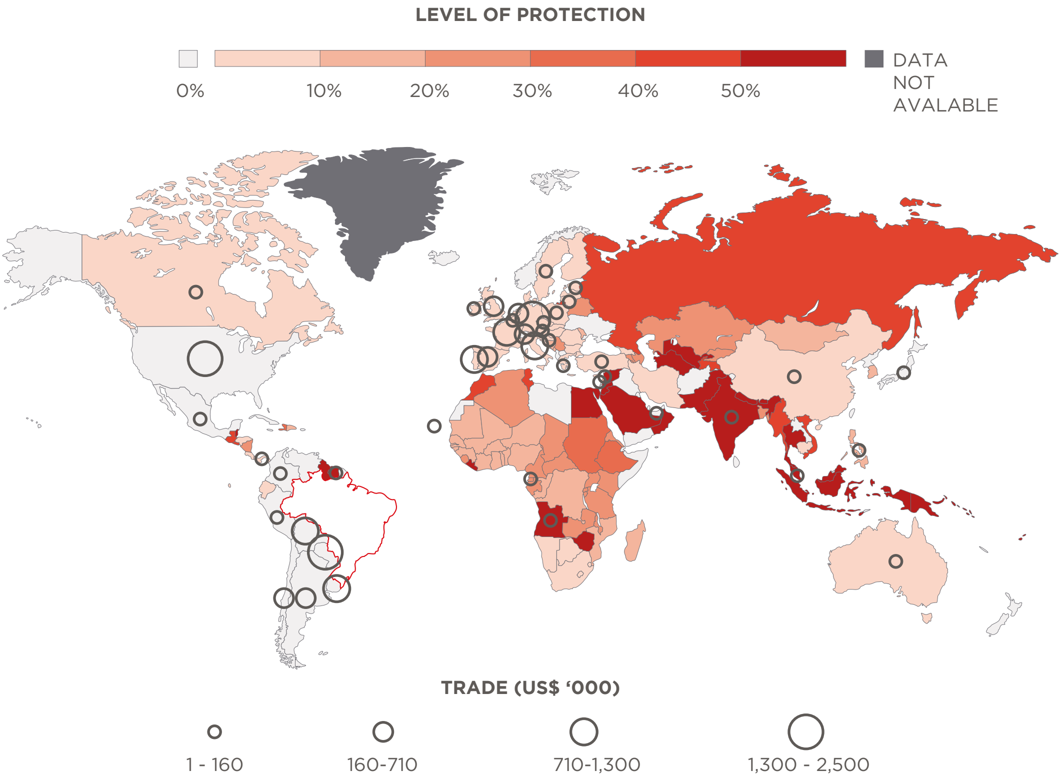
1 Available at: http://www.sebraemercados.com.br/cachaca-brasileira-os-numeros-de-um-mercado-em-expansao/

2 Available at: http://www.sindicatodaindustria.com.br/sindbebidasmg/

3 Available at: https://ibpt.com.br/

Figure 1

SIZE OF TRADE AND LEVELS OF PROTECTION APPLIED TO BRAZILIAN CACHAÇA IN THE INTERNATIONAL MARKET



Source: Adapted from Macmap (2018)[4].

4 Available at: http://www.macmap.org/QuickSearch/FindTariff/FindTariff.aspx

ATTACHMENT 1

PRESENTATION AND DESCRIPTION OF PRODUCTS ANALYZED ACCORDING TO ITS SOUTHERN COMMON NOMENCLATURE - NCM

CODE NCM	DESCRIPTION NCM
22084000	Rum and other spirits obtained by the distillation, after fermentation, of sugarcane products
22072020	Denatured spirits of any strength

ATTACHMENT 2

LIST OF ABBREVIATION

ACRONYM	DESCRIPTION
ABIA	BRAZILIAN ASSOCIATION OF FOOD AND BEVERAGE INDUSTRIES
CBRC	CACHAÇA BRAZILIAN REFERENCE CENTER
CEPEA	CENTER FOR ADVANCED STUDIES IN APPLIED ECONOMICS
CONAB	NATIONAL SUPPLY COMPANY
FAO	FOOD AND AGRICULTURE ORGANIZATION OF THE UNITED NATIONS
GDP	GROSS DOMESTIC PRODUCT
IBGE	BRAZILIAN INSTITUTE OF GEOGRAPHY AND STATISTICS
IBPT	BRAZILIAN INSTITUTE OF PLANNING AND TAXATION
IBRAC	BRAZILIAN INSTITUTE OF CACHAÇA
MAPA	MINISTRY OF AGRICULTURE, LIVESTOCK AND FOOD SUPPLY
MDIC	MINISTRY OF INDUSTRY, FOREIGN TRADE AND SERVICES
NCM	SOUTHERN COMMON NOMENCLATURE
PIA - Produto	ANNUAL INDUSTRIAL SURVEY - PRODUCT
PIM	MONTHLY INDUSTRIAL SURVEY
UNICA	SUGARCANE INDUSTRY UNION
VBP	GROSS VALUE OF PRODUCTION

FGV PROJETOS

FGV EUROPE PROJETOS

RIO DE JANEIRO
Praia de Botafogo 190/6º andar
Tel.: +55 21 3799.5498
Fax.: +55 21 2553.8810

SÃO PAULO
Av. Paulista 1294/15º andar
Tel.: +55 11 3799.4170
Fax.: +55 11 3262.3569

www.fgv.br/fgvprojetos