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BRAZILIAN COFFEE INDUSTRY AND THEIR INTERACTIONS WITH THE INTERNATIONAL TRADE

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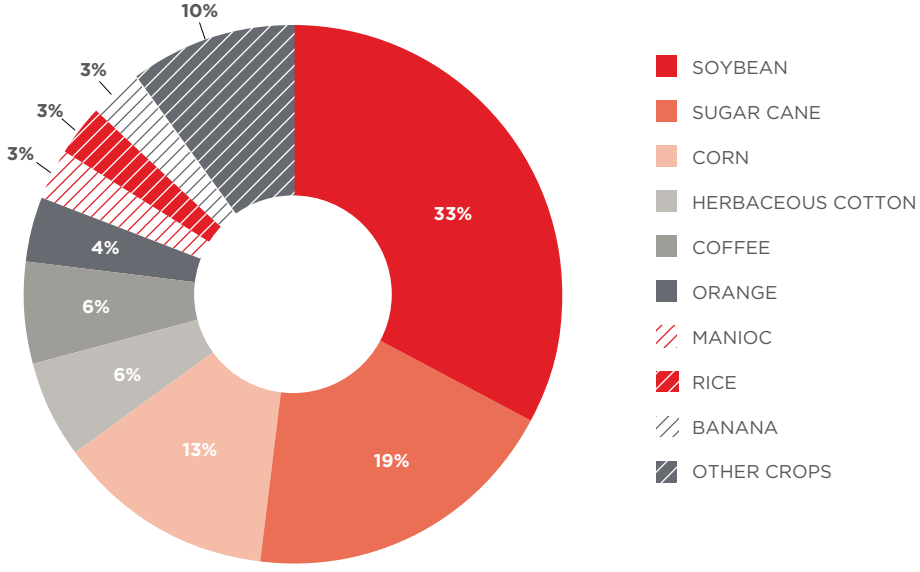
EXECUTIVE SUMMARY

Brazilian agribusiness represents 22% of the country's Gross Domestic Product (GDP). The Brazilian GDP ended the year 2017 with R$ 6.56 trillion, while agribusiness had a share of R$ 1.42 trillion in that amount. In addition, the Gross Value of Production (VBP) in Brazil reached approximately R$ 540 billion in 2017. Brazilian plantations were responsable for 67% of this amount, with approximately R$ 365 billion. The coffee crop has a relevant participation in the composition of this value, with approximately R$ 21 billion, that is 6% of the total.

Graph I

THE GROSS VALUE OF PRODUCTION OF BRAZILIAN CROPS, IN BILLIONS OF REAIS, FOR 2017

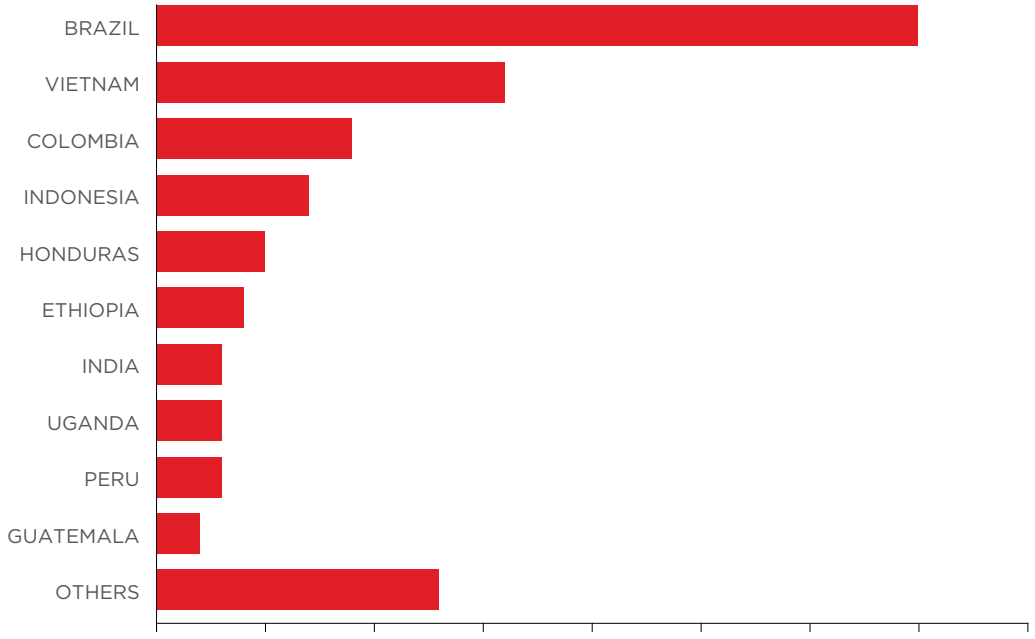


Source: MAPA[1] - Prepared by FGV.

Brazil, the world's largest producer and exporter of coffee for more than 100 years, stands out for the production capacity, responsible for about 35% of all coffee produced in the world, and for the quality of the beans.

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

Gráfico II
WORLD COFFEE PRODUCTION SHARE IN 2017



Source: USDA[2].

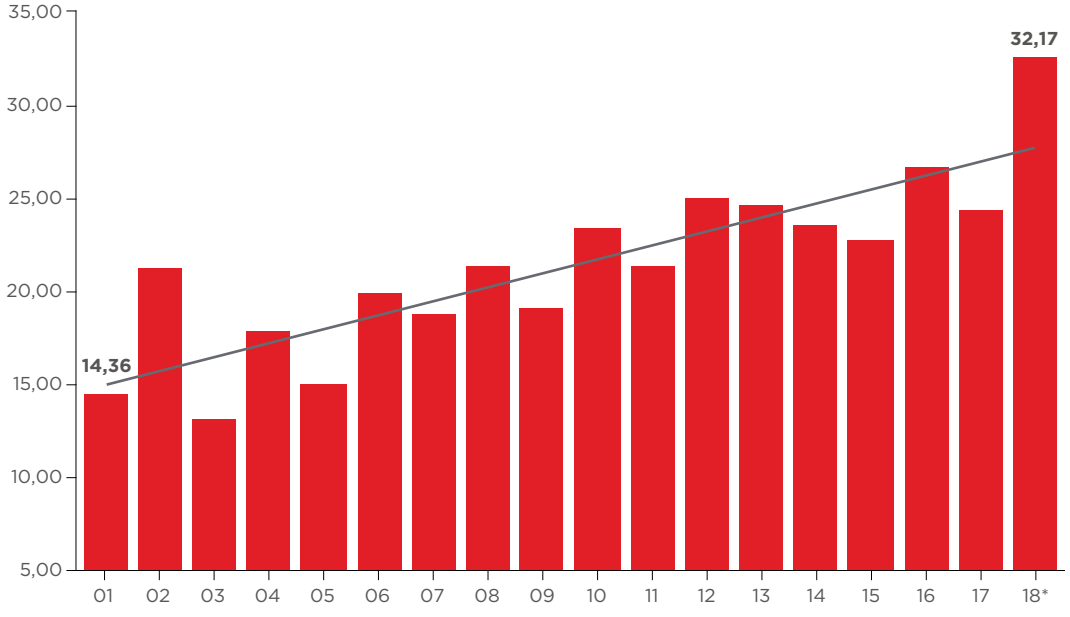
There are some aspects that allowed a diversified cultivation of grains bringing complex characteristics of the drink and contributing to the country occupy a leading position, they are:

- Large areas of land;
- Variety of climates, reliefs and altitudes;
- Advance and development of primary production, which allowed increased production and reduction of the planted area over the years, implying productivity gains.

2 Available at: https://apps.fas.usda.gov

Graph III

BRAZILIAN COFFEE YIELDS, IN BAGS OF 60 KG PER HECTARE, BETWEEN 2001 AND 2018*



* Estimate in September/2018.

Source: Conab[3].

3 Available at: www.conab.gov.br

PRIMARY PRODUCTION: NOTHING LIKE A GOOD COFFEE FROM MINAS GERAIS TO ACHIEVE LEADERSHIP

- According to data provided by Conab[4], approximately 45 million bags of Robusta and Arabica coffee were produced in 2017, with expected growth of 33% for 2018 harvest, reaching a record volume of around 60 million bags.

- Robusta coffee is responsible for 1/4 of the world's production. It has more bitter characteristics and is valued by the instant coffee industry because it has more soluble substances (sugars and caffeine), with great acceptance in the United States and European markets. The species is also more productive (blooms several times a year) compared to Arabica and disease resistant. Its production is concentrated in Africa, Asia and South America. In Brazil, the crops are mainly in Espírito Santo.

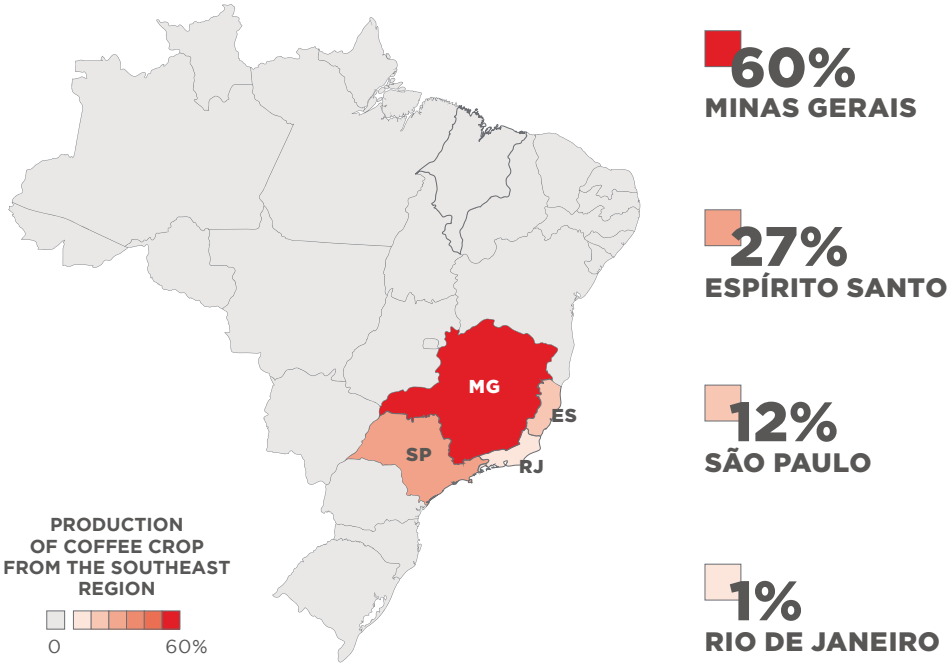
- Arabica coffee is responsible for 3/4 of the world coffee production. It is the species that gives rise to so-called fine coffees by means of its many varieties. The beverage originated from this grain is considered noble because of its complexity of aroma and flavor. It has concentrated production between South and Central America. In Brazil, its largest harvest is located in Minas Gerais, the main production state of the country.

- With this distribution of Arabica and Robusta coffee production in the states of Espírito Santo and Minas Gerais, the Southeast presents itself as the largest production region in Brazil, responsible for about 85% of the volume produced. The highlight is the state of Minas Gerais, responsible for more than half of the Brazilian production (51%) and for about 60% in the Southeast region.

4 Available at: www.conab.gov.br

Graph IV

BRAZILIAN STATE PARTICIPATION IN THE PRODUCTION OF COFFEE CROP (ARABICA AND ROBUSTA) FROM THE SOUTHEAST REGION FROM 2001 TO 2017



Source: Conab[5] - Prepared by GV Agro

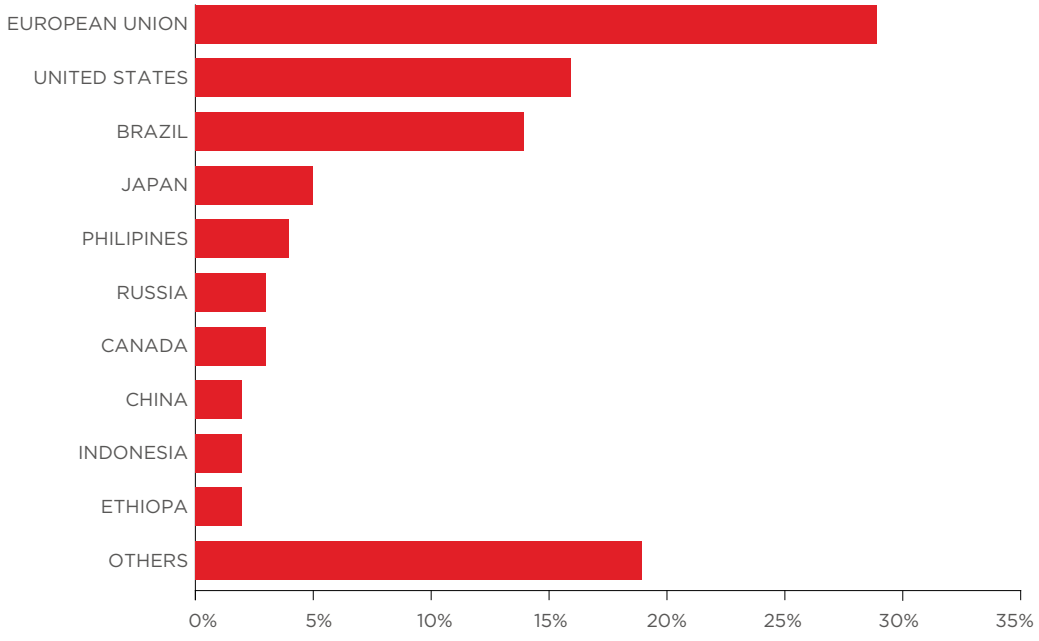
- The state of Minas Gerais is so abundant that is equal to the quantity of the world's second largest coffee producer, Vietnam. In this direction, there is still the expectation of growing production, with the possibility of a harvest record for both the country and the state in 2018. If this scenario is confirmed, Minas Gerais will exceed Vietnamese production.

- The expected advances to reach a record harvest in 2018, estimated in 60 million bags benefited, should come mainly from increased productivity. In other words, allied to this growing production, there is also a reduction of the planted area: in 2001, 2.18 million hectares were used, as already in 2017, that area was 1.86 million, a drop of about 15%.

5 Available at: www.conab.gov.br

- Another point where Brazil stands out is the consumption of coffee: the country is the 3rd largest global consumer, behind only the European Union and the United States. If we consider consumption at the country level, Brazil is occupying the 2nd position, with about 21 million bags in 2017, and expected to increase consumption, reaching 22 million in 2018.

Graph V
SHARE OF COFFEE CONSUMPTION BY COUNTRIES IN 2017



Source: USDA[6].

6 Available at: https://apps.fas.usda.gov

GLOBAL OFFER AND DEMAND: BRAZILIAN COFFEE SUPPLY FOR THE REST OF THE WORLD

Both global coffee production and consumption have grown over the years, and in addition to the Brazilian role, Latin America as a whole has been also showing increasing levels of consumption and production. In addition, the diversification of the drink has a positive factor, managing to attract more and more admirers.

- By 2017, world coffee consumption reached 157 million bags, while the production reached 162 million. On the supply side, the 5 largest producers in the world account for 71% of the volume produced. On the demand side, the top 5 consumers consume 68% of all coffee produced in the world. In addition, both world supply and consumption have grown over the years.

Graph VI

WORLD PRODUCTION AND DOMESTIC CONSUMPTION OF COFFEE, IN MILLIONS OF BAGS, BETWEEN 2002 AND 2017

Source: USDA[7].

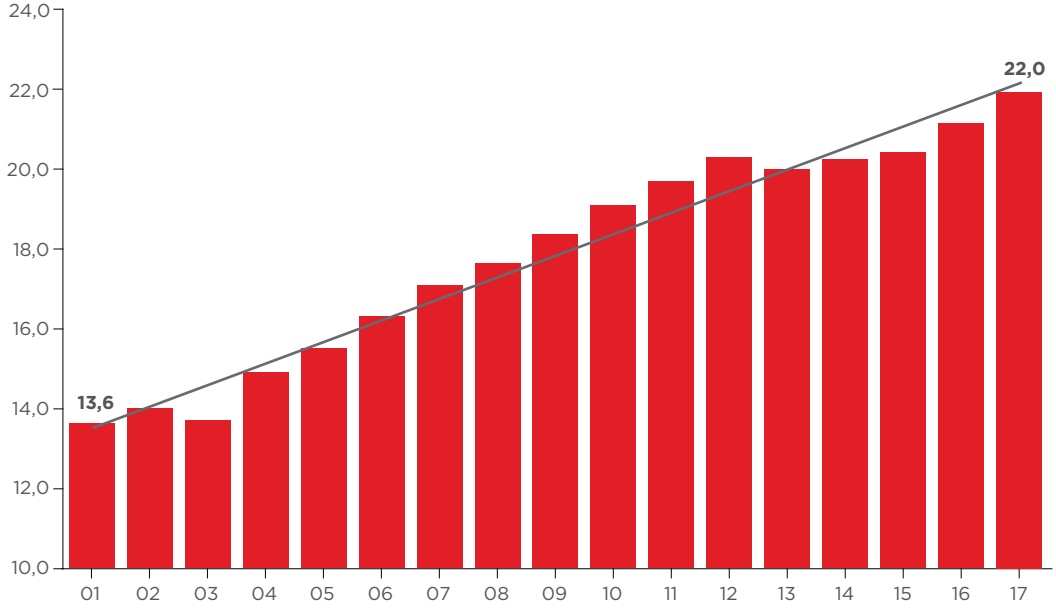
7 Available at: https://apps.fas.usda.gov

THE AGRO-INDUSTRY OF COFFEE IN BRAZIL: SOLUBLE AND CAPSULE COFFEE ADDING MORE VALUE

The per capita consumption of coffee in Brazil reached 5.1 kg/inhabitant/year, equivalent to about 83 liters of this drink that mover part of the daily life of the Brazilian population. The presence of coffee is so striking that, even in the crises that the country has been facing in recent years, consumption has not diminished. In addition, the ability to aggregate value with new and differentiated beverages can positively influence the value of industrial production in this sector.

Graph VII

BRAZILIAN EVOLUTION OF DOMESTIC COFFEE CONSUMPTION, IN MILLIONS OF BAGS, BETWEEN 2001 AND 2017



Source: ABIC[8].

- Among the main types of coffee, the class of roasted and ground coffee, including flavored and in capsules, represented around 66% of the total value of R$ 10.24 billion of industrial production in 2016. The soluble coffee also contributed to this amount and added R$ 2.78 billion, about 27% of the total.

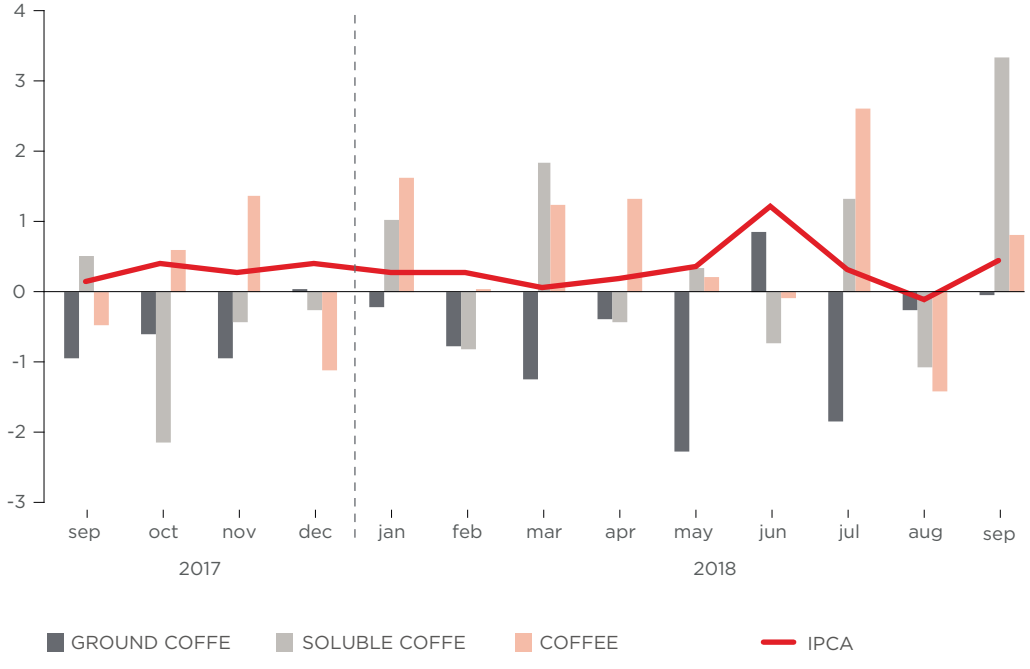
8 Available at: http://abic.com.br/estatisticas/indicadores-da-industria/

- Therefore, these data show the importance of value-added even to products that are already part of popular taste and present an inelastic demand for the price. Despite this feature, it is important to note that, as there is a range of different brands available in the market, there is great substitutability between them.

- Still in relation to the price, during 2018, the Broad National Consumer Price Index (IPCA) showed that inflation remained stable. Ground coffee showed deflation for most of the last year. This movement is in line with the largest grain supply in the market in 2018. The soluble coffee, the product of higher value-added and the coffee, a product offered by the service sector, showed inflation that changed above the national level.

Graph VIII

PRICE PAID BY CONSUMERS FOR COFFEE INDUSTRY PRODUCTS COMPARED TO THE IPCA BETWEEN SEPTEMBER 2017 AND SEPTEMBER 2018



Source: IBGE - Broad National Consumer Price Index[9].

9 Available at: https://sidra.ibge.gov.br/home/ipca/brasil

- In addition, the real salary mass has grown over the last few months, influencing the purchasing power of families and the pre-disposition to consume coffee outside the home, for example in coffee shops or turn to differentiated products such as capsules coffee.

COMMERCIAL TRADE OF COFFEE: STRICTLY POSITIVE BALANCE

It is important to be clear that, although the commodity ***boom*** has promoted several agricultural products, Brazil is traditionally the leader in the world market of coffee.

- The main buyer of Brazilian coffee is the United States, followed by Germany, Italy, Belgium and Japan, which together account for about 60% of the total volume of coffee shipped.

- In addition, about 95% of all Brazilian shipments are of raw coffee and grains, showing that Brazil was able to enter this market by exporting basically grains.

- However, even with all the volume produced and exported, Brazil has, on a smaller scale, a demand for imported products. This import tariff basically consists of roasted coffee and caffeine, which are more industrialized products. That comes mainly from Switzerland, China, Italy, Spain and France.

BARRIERS TO THE COFFEE: VULNERABILITY OF THE PRODUCER TO THE PRICE PAID BY BRAZILIAN COFFEE

Like many other crops, coffee is vulnerable to the climate. In production, climate conditions can directly interfere with the price of the product. If the climate is not favorable to the crop, the supply may suffer reductions against stable domestic demand, and this imbalance causes a price rise in of the product to the final consumer. In addition, the biennium of the crop can also impact the price of coffee.

- In relation to the international market, most importing countries require a very high quality of the product as a barrier. Moreover, it applies high tariffs to external products in order to stimulate demand for domestic products.

- The number of countries applying tariff barriers to Brazilian coffee in 2018 reaches 116. Import tariffs range from 1% in Syria and 2% in Korea to very heavy tariffs such as 100% in India and 90% practiced in Thailand.

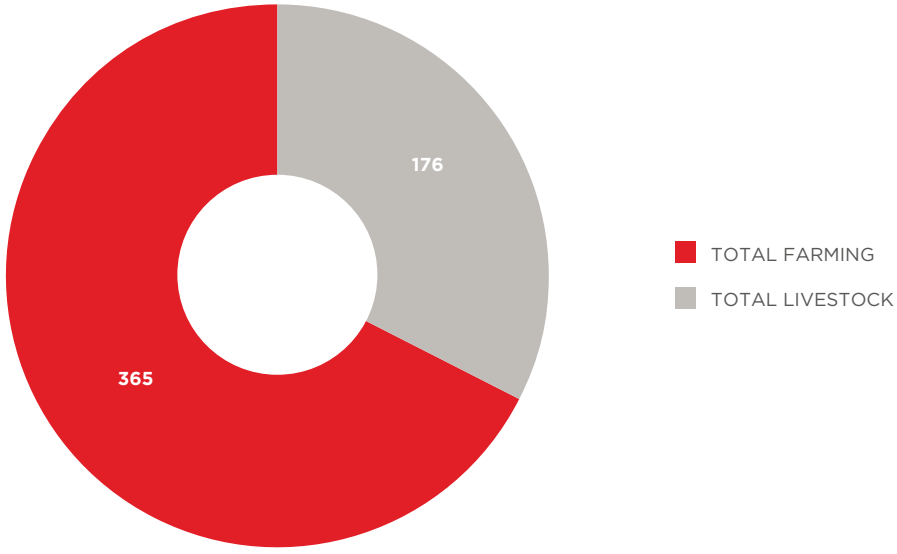
- Large grain importers such as Germany, Italy, and Belgium, charge tariffs of around 9%. This tariff (9%) is defined for the whole European Union. Japan, which has a large volume of coffee beans trade with Brazil, has 8% tariff.

- In relation to the soluble coffee, the rates imposed by Brazilian importers range from 2% (Chinese Taipei) to 49% (Thailand). In order to try to negotiate these tariffs on the imports of the product, the soluble coffee industries are seeking help from the federal government to establish strategies that prioritize tariff negotiations and agreements with imports countries.

1. THE COFFEE INDUSTRY IN BRAZIL AND WORLD

Brazilian agribusiness is responsible for 22% of the country's Gross Domestic Product (GDP). The Brazilian GDP ended the year 2017 with R$ 6.56 trillion, while agribusiness had a share of R$ 1.42 trillion in that amount. In addition, the Gross Value of Production (VBP) in Brazil reached approximately R$ 540 billion in 2017, distributed between farming and livestock, see Graph 1.

Graph 1
GROSS VALUE OF BRAZILIAN PRODUCTION, IN BILLIONS OF REAIS, FOR 2017

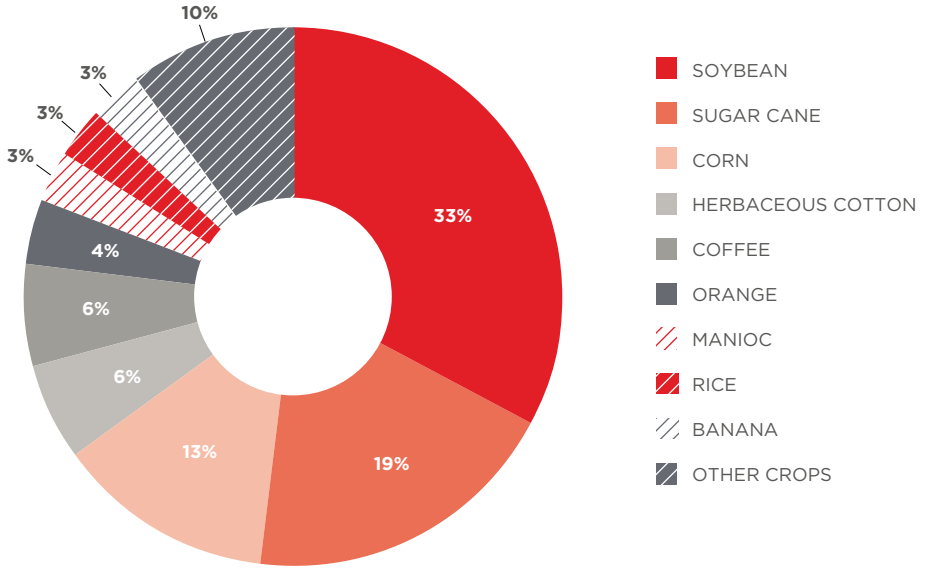


Source: MAPA[10] - Prepared by FGV.

Livestock is responsible for 33% of VBP, about R$ 176 billion, while crops account for about 67% of the total, approximately R$ 365 billion. Some crops, such as soybean, sugarcane, cotton maize and coffee, have great relevance for the composition of this value, see Graph 2.

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

Graph 2
GROSS VALUE OF PRODUCTION OF BRAZILIAN CROPS, IN BILLIONS OF REAIS, FOR 2017



Source: MAPA[11] - Prepared by FGV.

Soybeans holds 33% of the VBP of crops, about R$ 119 billion, followed by sugarcane with 19%, approximately R$ 68 billion, corn with 13%, cotton and coffee, both with 6%. It is remarkable the importance of Brazilian agribusiness for the economic development of the country and within this sector, some sectors deserve prominence, as is the case of Brazilian coffee, which has a gross production value of R$ 21 billion.

For more than a hundred years the country has a role as the largest producer and exporter of coffee, in addition it is the 2nd largest consumer in the world and accounts for about a third of world production. In order to understand the relevance of coffee to the country's economy, it is important to follow all of its production processes, starting with the primary production of this grain.

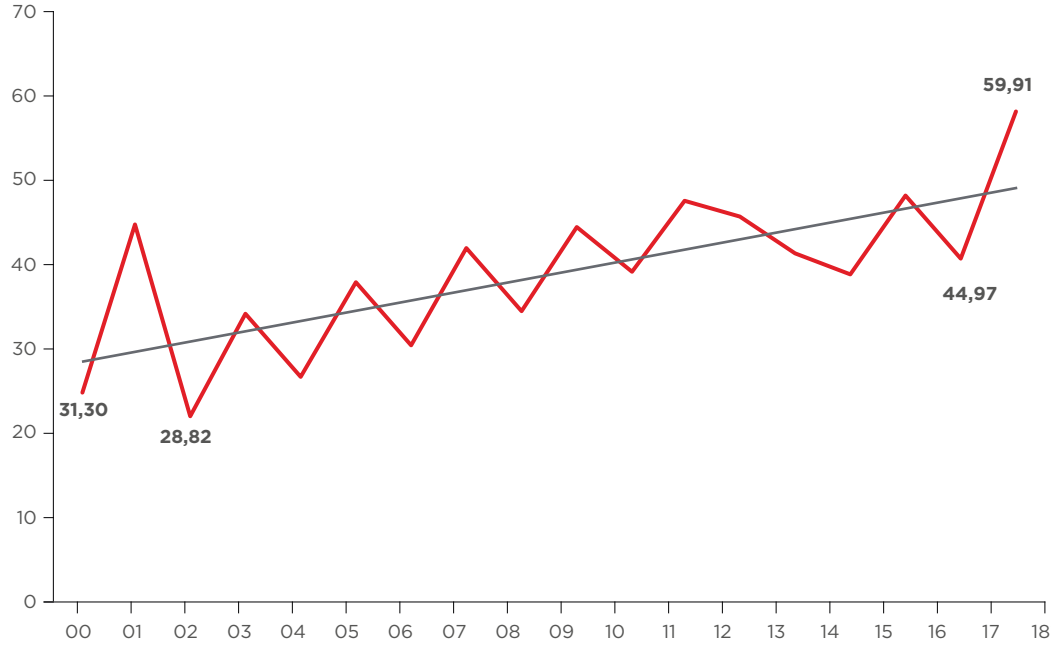
11 Available at: http://www.agricultura.gov.br/assuntos/politica-agricola/valor-bruto-da-producao-agropecuaria-vbp

1.1. COFFEE GROWING IN ITS INITIAL POINT: PRIMARY PRODUCTION

The National Supply Company (Conab) follows the Brazilian coffee harvest and publishes annual estimates, gathering information and data about the Brazilian production chain. The surveys take place in different periods of the year, the first of them between November and December, post-flowering period, the second in May, in the pre-harvest period, the third in August, in the full harvest period and the last in December, a period of the last harvest. It is estimated that in 2018 the Brazilian crop will be 59.9 million bags benefited, volume 33% higher than that produced in 2017, as shown in Graph 3

Graph 3

BRAZILIAN COFFEE PRODUCTION (ARABICA AND ROBUSTA), IN MILLIONS OF SACKS BENEFITED, BETWEEN 2001 AND 2018*



* Estimate in September/2018

Source: Conab[12].

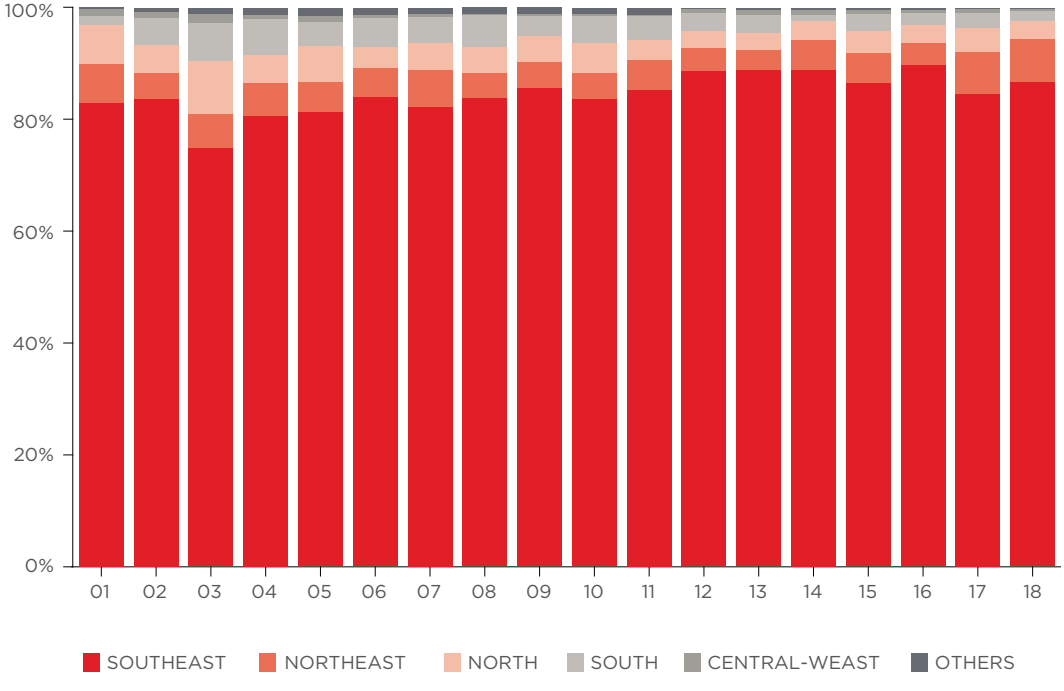
12 Available at: www.conab.gov.br

Coffee production have a growing tendency in Brazil. Since 2001, the volume produced is increased by 44%. Analyzing Graph 3 it is possible to notice that in 2002 the production reached record levels. In that year, the Brazilian coffee export reached results previously never obtained. There was a growth of 55% in the volume produced, and a 20.3% increase in the volume of shipments, compared to 2001. Brazil managed to substantially increase its worldwide participation in that year. The exchange rate was a relevant factor, which allowed the increase of competitiveness of Brazil in relation to other countries. Thus, despite the production of coffee in Brazil occupy the first position in the world ranking, we occupy the same position in the level of exports and variations in the foreign market directly affect the dynamics of Brazilian production.

Considering, therefore, the level of Brazilian production, it is important to emphasize that there is great spatial concentration, with the Southeast region dominating Brazilian production, see

Graph 4.

BRAZILIAN REGIONAL SHARE IN COFFEE CROP PRODUCTION (ARABICA AND ROBUSTA) BETWEEN 2001 AND 2018*



* Estimate in September/2018.

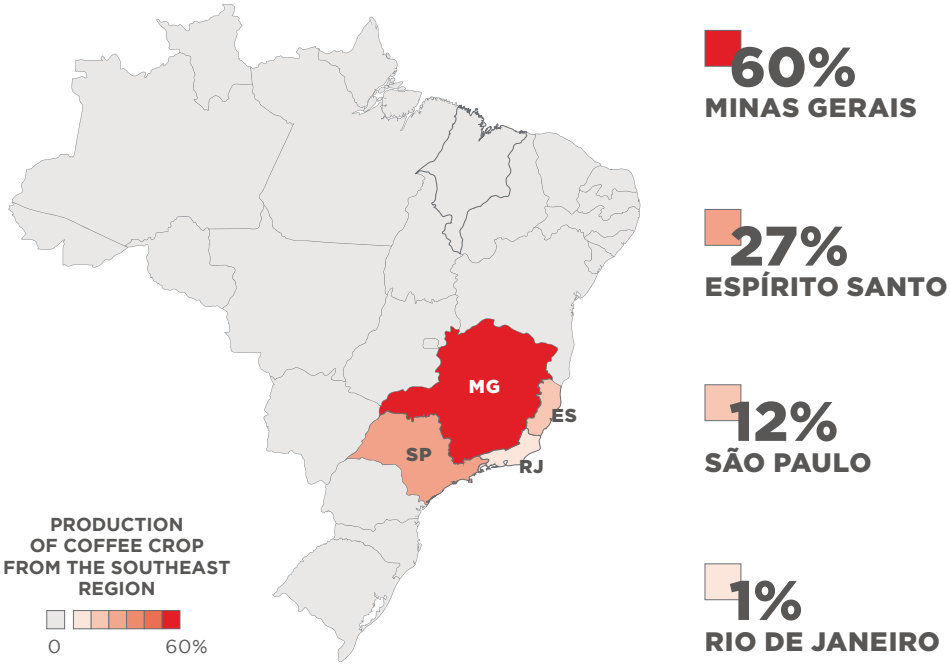
Source: Conab[13].

13 Available at: www.conab.gov.br

Even within the Southeast region, there is a concentration of production. Minas Gerais is responsible for about 60% of the total volume produced in the region between 2001 and 2018, as shown in Graph 5. In addition, in the analyzed period, only Minas Gerais and Bahia showed an increase in cultivated area. In addition to productivity gains, the state of Minas Gerais invests in research and development of programs to support the sector, together with public-private partnerships and educational institutions. The state's edaphoclimatic characteristics are also a preponderant factor that explains the centralization of production in Minas Gerais.

Graph 5

BRAZILIAN STATE SHARE IN THE PRODUCTION OF COFFEE CROP (ARABICA AND ROBUSTA) FROM THE SOUTHEAST REGION FROM 2001 TO 2017



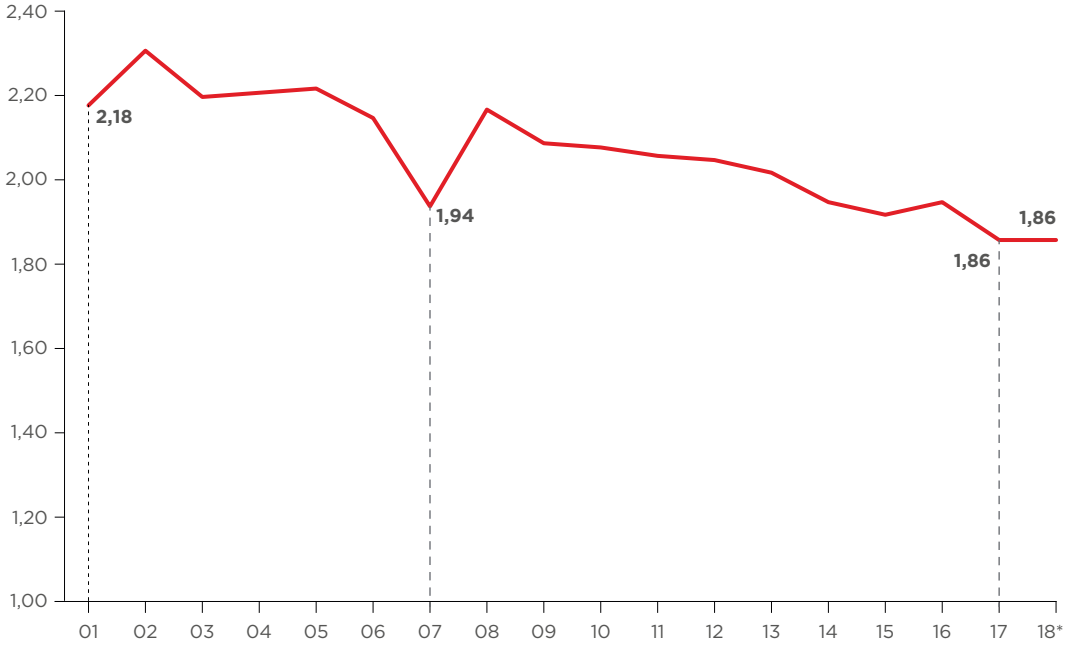
Source: Conab[14] - Prepared by GV Agro.

14 Available at: www.conab.gov.br

Therefore Minas Gerais presents itself as an important player within the Brazilian coffee industry. But the relevance not only of Minas Gerais, but also of the whole of Brazil, is attributed to other factors, such as the capacity for productivity gains over the years. It is possible to see this result by looking at factors such as the growth of production combined with the reduction of planted area, according to Graph 6.

Graph 6

BRAZILIAN PLANTED COFFEE AREA (MILLIONS OF HECTARES), BETWEEN 2001 AND 2018*



* Estimate in September/2018.

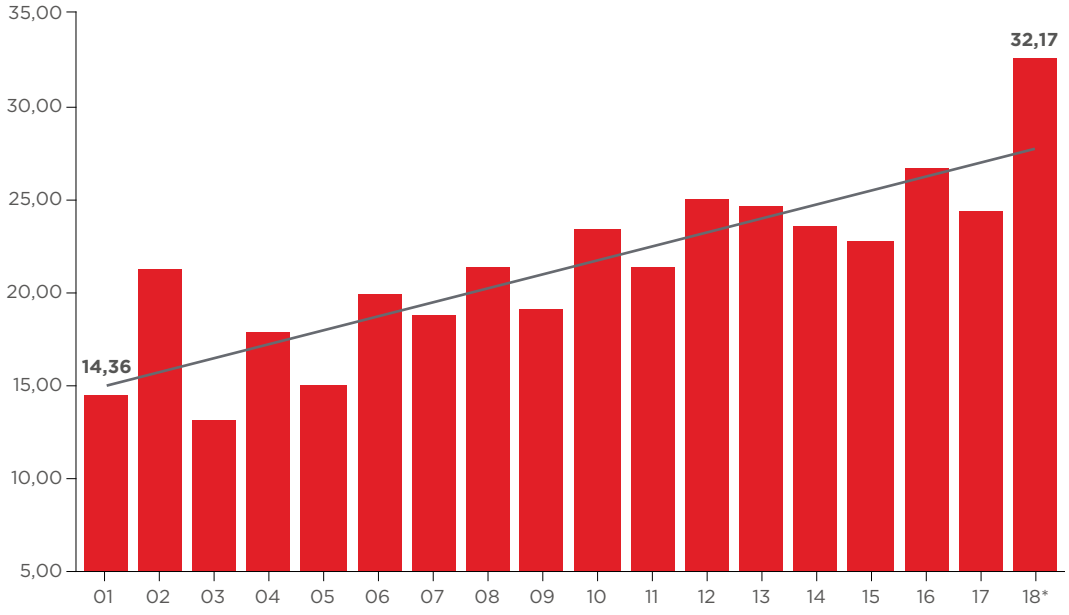
Source: Conab[15].

In 2001 the area reserved to coffee cultivation was about 2.18 million hectares and over the years the area has been decreasing, reaching 1.86 million hectares in 2017, and keeping the expectation of being use the same the reduction of the area planted together with the increase in production are interesting and show that over the years Brazil has been able to produce more coffee and save land destined to this crop, that is, there are a tendency to reduce cultivation area, as a result of productivity gains, achieved through the adoption of new technologies, fertilization and adequate irrigation, see Graph 7.

15 Available at: www.conab.gov.br

Graph 7

BRAZILIAN PRODUCTIVITY OF COFFEE, IN BAGS PER HECTARE, BETWEEN 2001 AND 2018*



* Estimate in September/2018.

Source: Conab[16].

The expectation for 2018 is that there is a record productivity of more than 32 bags per hectare and this factor is mainly due to the productivity gains of the sector, with the implementation of new technologies, the positive biennial of coffee and the climatic conditions favorable to the crop.

Besides, the analysis for the period between the years 2012 and 2017, the profit per hectare for the Arabica and Robusta coffee crops, it is noticed that for Robusta coffee the difference between Average Incomes and Average Costs has been more stable over the years. The average profit per hectare of Robusta coffee reached more than R$ 11,000 in 2017. The Arabica coffee presented costs that exceeded incomes in 2012 and 2013, but since then it has shown a positive profit, ending the year of 2017 with average profit per hectare slightly more than R$ 2,700, see Table 1.

16 Available at: www.conab.gov.br

Table 1
AVERAGE PROFIT OF ARABICA AND ROBUSTA COFFEE PRODUCTION BETWEEN 2012 AND 2017 (R$/HA) *

YEAR	ARABICA			ROBUSTA		
	AVERAGE INCOME	AVERAGE COSTS	PROFIT	AVERAGE INCOME	AVERAGE COSTS	PROFIT
2012	R$ 13,708.39	R$ 14,394.48	-R$ 686.09	R$ 20,748.43	R$ 13,720.22	R$ 7,028.20
2013	R$ 11,485.98	R$ 16,497.28	-R$ 5,011.30	R$ 19,198.42	R$ 16,180.37	R$ 3,018.05
2014	R$ 15,700.49	R$ 11,324.30	R$ 4,376.20	R$ 18,940.17	R$ 15,606.92	R$ 3,333.25
2015	R$ 15,916.89	R$ 10,090.14	R$ 5,82.75	R$ 24,620.23	R$ 19,237.18	R$ 5,383.05
2016	R$ 15,758.02	R$ 9,760.79	R$ 5,997.23	R$ 29,233.84	R$ 18,502.65	R$ 10,731.20
2017	R$ 13,969.79	R$ 11,248.75	R$ 2,721.04	R$ 26,909.08	R$ 15,264.55	R$ 11,644.53

* Values in reais from 2017 according with IPCA.

Source: CEPEA[17] and CONAB[18].

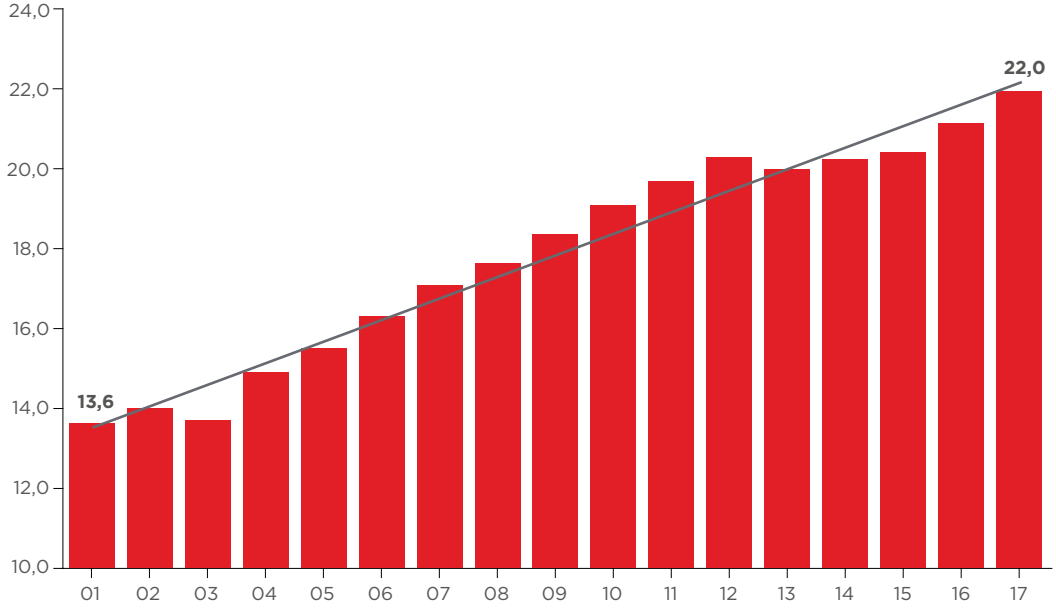
Despite the negative results of Arabica coffee in 2012 and 2013, it is possible to observe that the average profit has improved over the years, especially for Robusta coffee. It is important to mention two factors that during the last years helped to guarantee the positive result of the activity: the investment in mechanization and the production of gourmet coffee. These positive results, combined with increase of productivity, helped Brazil to maintain a leadership in the coffee production and export ranking, but also supply the domestic market. The country is the second largest consumer of the product in the world and has a tendency to increase consumption, see Graph 8.

17 Available at: https://www.cepea.esalq.usp.br/

18 Available at: www.conab.gov.br

Graph 8

BRAZILIAN DOMESTIC COFFEE CONSUMPTION, IN MILLIONS OF BAGS, BETWEEN 2001 AND 2017



Source: ABIC[19].

Brazilian coffee seems to have been through the worst moments of crisis in Brazil without feeling so much its effects in terms of consumption, as in 2008, in 2014, despite the economic crisis that has crossed the country, consumption has not diminished. Despite the financial difficulties that the country faced, coffee consumption managed to maintain its increasing stability, part of this behaviour can be explained by the presence of the drink in the daily consumption of the great majority of Brazilian families. This fact is interesting, since it portrays a certain inelastic degree to the consumption of coffee in Brazil and in addition, it reinforces the relevance of the country as a important player for the world coffee trade.

19 Available at: http://abic.com.br/estatisticas/indicadores-da-industria/

1.2. BRAZIL FRONT DEMAND AND WORLD COFFEE SUPPLY

World coffee production has grown over the years as well as its consumption, as shown in Graph 9. This growth can be attributed mainly to productivity gains worldwide. In addition, the industry has been investing in differentiations of the final product, and innovations, such as the option of different iced coffee drinks, creating a more seasonal option and thus leveraging the demand.

Graph 9
WORLD PRODUCTION AND DOMESTIC CONSUMPTION OF COFFEE, IN MILLIONS OF BAGS, BETWEEN 2002 AND 2017

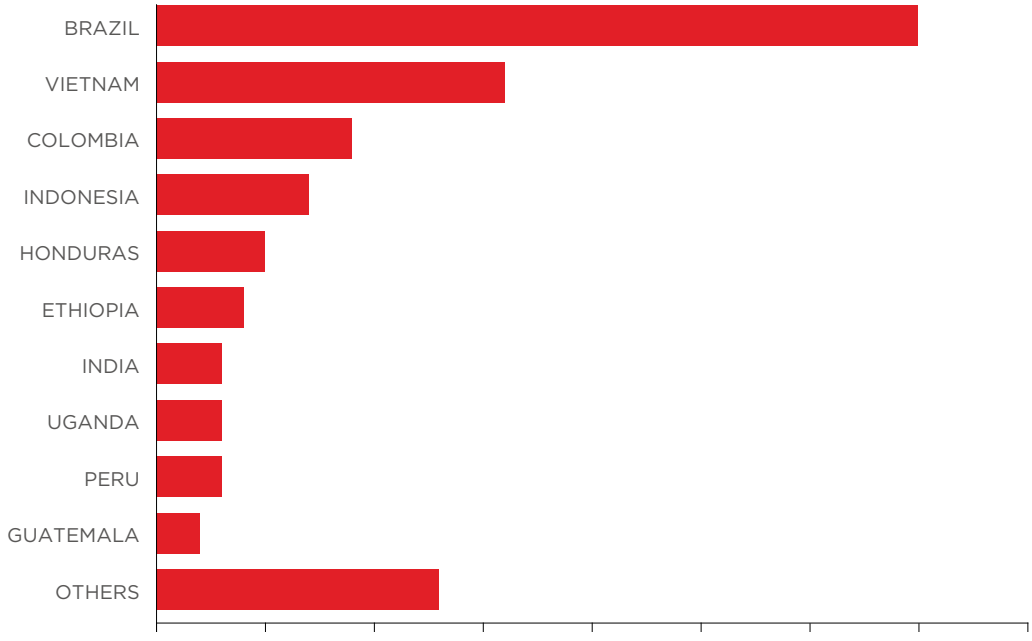
Source: USDA[20].

Although there are increasing trends, there is a contrast between production, which ranges from harvest to harvest, and consumption that grows more continuously, at an average rate of 2% per year. Both the increase in production and consumption are attributed to South America and especially to Brazil.

20 Available at: https://apps.fas.usda.gov

In this context, Brazil is extremely relevant, since it is the main producer and exporter in the world and responsible for 35% of world production in 2017, see Graph 10. Besides Brazil, Vietnam, Colombia, Indonesia and Honduras, of the World's top 5 coffee growers. Together these countries were responsible for 71% of world production in 2017.

Graph 10
WORLD COFFEE PRODUCTION SHARE IN 2017



Source: USDA[21].

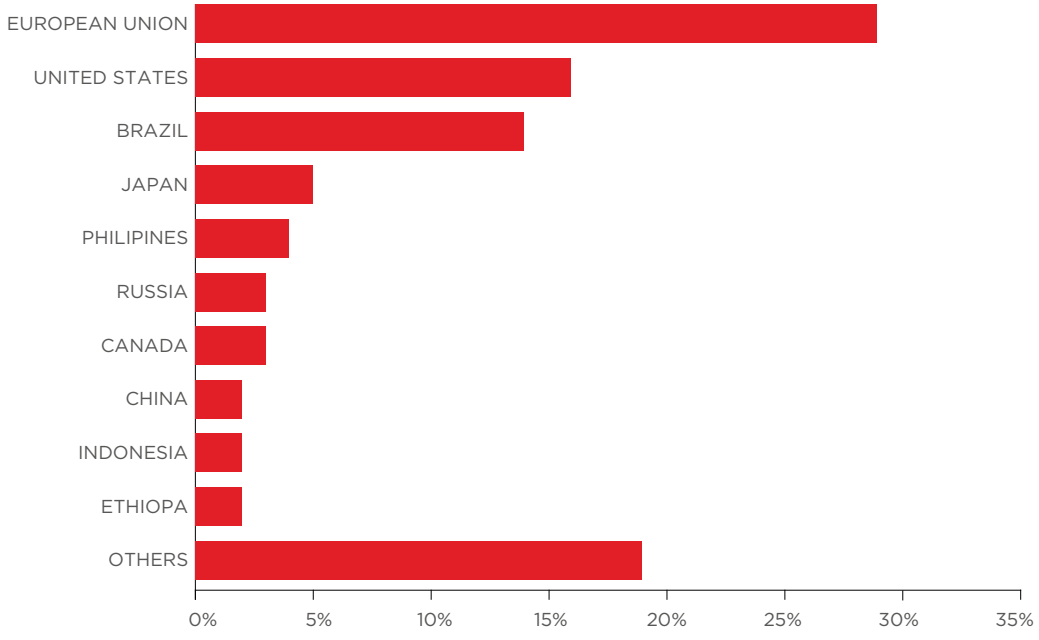
Besides to expressive production, Brazil also stands out in the consumption of coffee, is the 2nd largest consumer in the world at a country level, and when considering the European Union as a whole, Brazil occupies the 3rd position, as Graph 11 shows. The average growth of coffee consumption in the world is around 1.5% to 2.0%. This increasing average is pulled mainly by the countries that make up the European Union, the United States and Brazil.

21 Available at: https://apps.fas.usda.gov

The International Coffee Organization (OIC[22]) estimates that coffee consumption in coffee year 2017/2018 will be about 162 million bags of 60 kg, a record volume which would exceed the average growth rate of 2%. Part of this consumption will be pulled by South America, which is expected to grow by 3.3% compared to the consumption of 2016/2017, and a significant stop of this growth will be borne by Brazil.

Also according to the ICO, the other regions of the world will have less expressive growth and European Union is responsible for a volume 0.5% higher than the previous coffee year; Asia & Oceania 3%; North America 2.6%; Africa 1.6%; and 5 Mexico and Central America, with growth of 1.7%.

Graph 11
SHARE OF COFFEE CONSUMPTION BY COUNTRIES IN 2017



Source: USDA[23].

22 Available at: http://www.itamaraty.gov.br/pt-BR/component/tags/tag/oic-organizacao-internacional-do-cafe

23 Available at: https://apps.fas.usda.gov

Therefore, the importance of Brazil for this sector, both as a producer and as a consumer, is notorious. In addition, the relevance of coffee in Brazil and in the world goes beyond grain production, there is an entire industry that produces different types of beverage, whether in powder, capsules or as an input for sweets and other products. The Brazilian consumer did not increase its coffee consumption in 2017, and grew beyond the world average. The phenomenon known as coffee ***gourmetization*** may have also contributed to capture different market gaps. Therefore, it is important to understand how agribusiness operates in Brazil.

1.3. THE BRAZILIAN COFFEE AGROINDUSTRY

Coffee consumption has been increasing year by year in Brazil, and according to the Brazilian Coffee Industry Association (ABIC)[24], per capita consumption has also grown to around 5.1 kg/inhabitant/year, equivalent to around 83 liters per capita per year. In Brazil, coffee is a drink of high consumption and is part of popular taste. Faced with this demand and increasingly specific demands from consumers, there is a growing supply of higher quality, higher added value products that are responsible for a growing market share.

To understand a little more about the size of this industry Annual Industrial Survey Company (PIA - Company) made available by IBGE becomes a starting point. Table 2 shows that the value of industrial coffee production for the year 2016 was about R$ 10.24 billion. It is possible to verify that products with greater added value hold most of the industrial production. Coffee roasted and ground, including coffee in capsules, is the main responsible for the value of the industrial production of this sector, with approximately 66%, approximately R$ 6.7 billion

24 Available at: http://abic.com.br

Table 2
INDUSTRIAL COFFEE PRODUCTION IN BILLIONS OF REAIS IN 2016

CATEGORIES OF INDUSTRIAL ACTIVITIES AND PRODUCTS	PRODUCTION VALUE	%
COFFEE NOT ROASTED, DECAFFEINATED	0.33	3.18%
COFFEE ROASTED BEANS, INCLUDING FLAVOURED	0.12	1.22%
COFFEE ROASTED AND GROUND, INCLUDING FLAVOURED	6.72	65.57%
COFFEE ROASTING AND GRINDING SERVICES AND RELATED SERVICES	0.08	0.78%
COFFEE, WHETHER OR NOT DECAFFEINATED	2.78	27.16%
EXTRACTS, ESSENCES AND CONCENTRATES OF COFFEE; PREPARATIONS WITH A BASIS OF COFFEE (CAPPUCCINO)	0.21	2.09%
Total	**10.24**	**100.00%**

Source: IBGE - Annual Industrial Survey - Product [25].

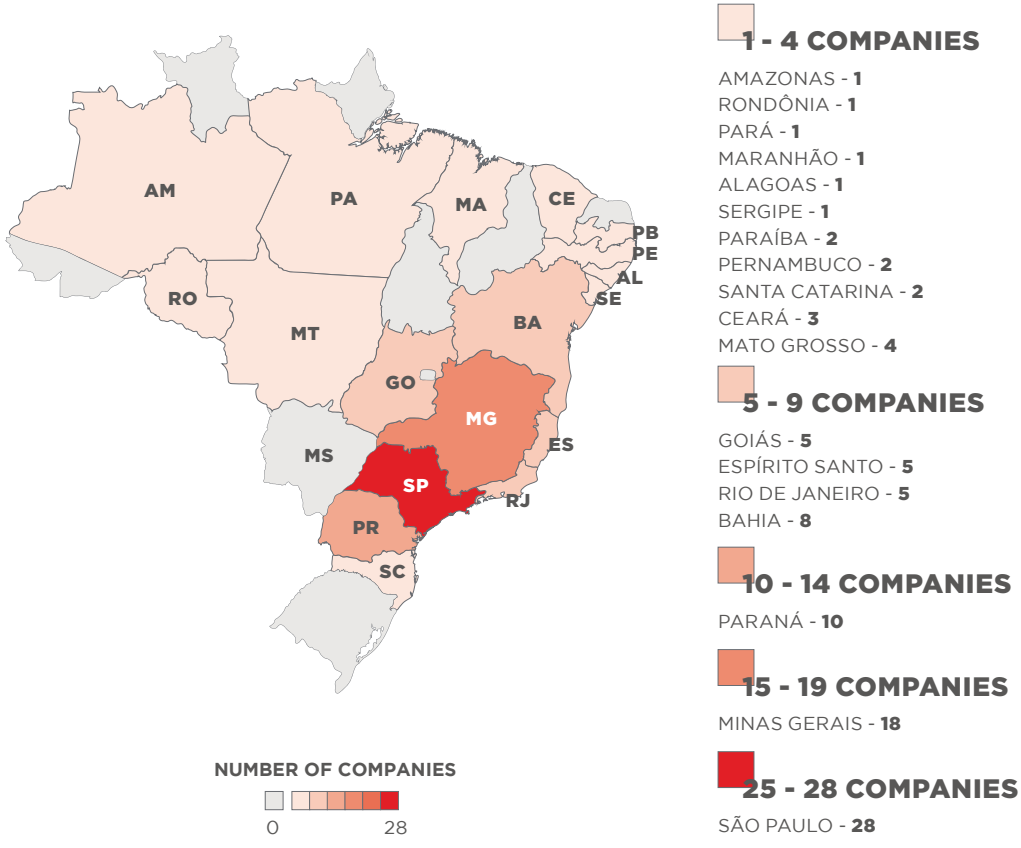
Another relevant product of this industry is soluble coffee, which is responsable for 27% of the industrial value, approximately R$ 2.78 billion. This result is interesting from the point of view of the value aggregation in the coffee production chain, since it shows that more industrialized products are the main responsible for the composition of the industrial value of coffee production in Brazil. In addition, as coffee consumption has grown over the years, as well as the availability of products such as soluble coffees or capsules, there is a strong incentive for the industry to diversify and present new options to consumers.

Considering that the Brazilian coffee industry is well established, the product is present in the great majority of Brazilian households and its consumption is inelastic to the price, an example seen in periods of crisis in which there is no drop in consumption. Graph 12 presents the regional concentration of the 100 largest coffee companies in Brazil in 2017.

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

Graph 12

BRAZILIAN STATE CONCENTRATION OF THE 100 LARGEST COFFEE COMPANIES IN 2017



Source: ABIC[26].

As with coffee production, there is a concentration of the coffee industries in the Southeast of the country, with 28 companies in São Paulo and 18 in Minas Gerais. There is also a certain concentration of these companies in Border States such as Paraná and Bahia. This type of concentration around the main producing region can be considered strategic, since Brazil is a country that depends on a large scale of the road, location can facilitate logistics and reduce costs. Among the top 100 companies, the main 10 are listed in Table 3.

26 Available at: http://abic.com.br

Table 3
BRAZILIAN STATE CONCENTRATION OF THE 10 LARGEST COFFEE COMPANIES IN 2017

STATE	COMPANY
CE	GRUPO TRES CORACOES
SP	JACOBS DOUWE EGBERTS BR COM. DE CAFES LTDA
SE	INDS. ALIMENTS. MARATA LTDA.
SP	MELITTA DO BRASIL IND. E COM. LTDA.
SP	MITSUI ALIMENTOS LTDA.
MG	COOP. REGIONAL DE CAFEICULTORES EM GUAXUPE LTDA. - COOXUPE
PB	SAO BRAZ S/A IND. E COM. DE ALIMENTOS S.A
MG	CAFE BOM DIA LTDA.
SP	CAFE PACAEMBU LTDA.
GO	CAFE RANCHEIRO AGRO INDL. LTDA.

Source: ABIC[27].

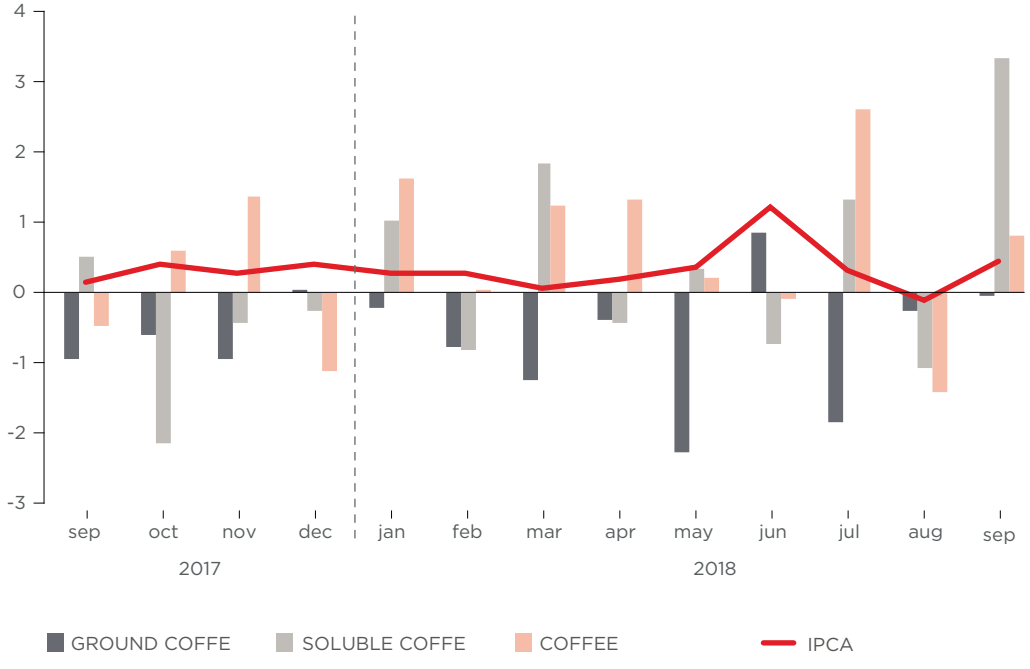
Among the main 10 companies in the industry, 6 are located in the Southeast and the rest are in the Northeast region and in Goiás. The strategic location of the companies, in order to contain logistics and production costs, is extremely relevant for this sector. Although the consumption of coffee is inelastic to the price in Brazil, there is substitutability between brands, so even if the final consumer does not stop consuming coffee every month, he can choose different brands according to different attractiveness, and the price is one of them.

In the last year, between September 2017 and September 2018, the final consumer did not notice strong fluctuations in the general price index of the economy, as Graph 13 shows. The price of coffee, mainly soluble coffee, suffered stronger oscillations than the index, walking in a few months in the opposite direction and negative. This fact can be explained by the higher production of grains during the year, this factor contributed to an increase in supply, thus generating a decrease in the price paid for the product, mainly for ground coffee and coffee, which present less added value when compared to coffee soluble.

27 Available at: http://abic.com.br

Graph 13

PRICE PAID BY CONSUMERS FOR COFFEE INDUSTRY PRODUCTS COMPARED TO THE IPCA BETWEEN SEPTEMBER 2017 AND SEPTEMBER 2018



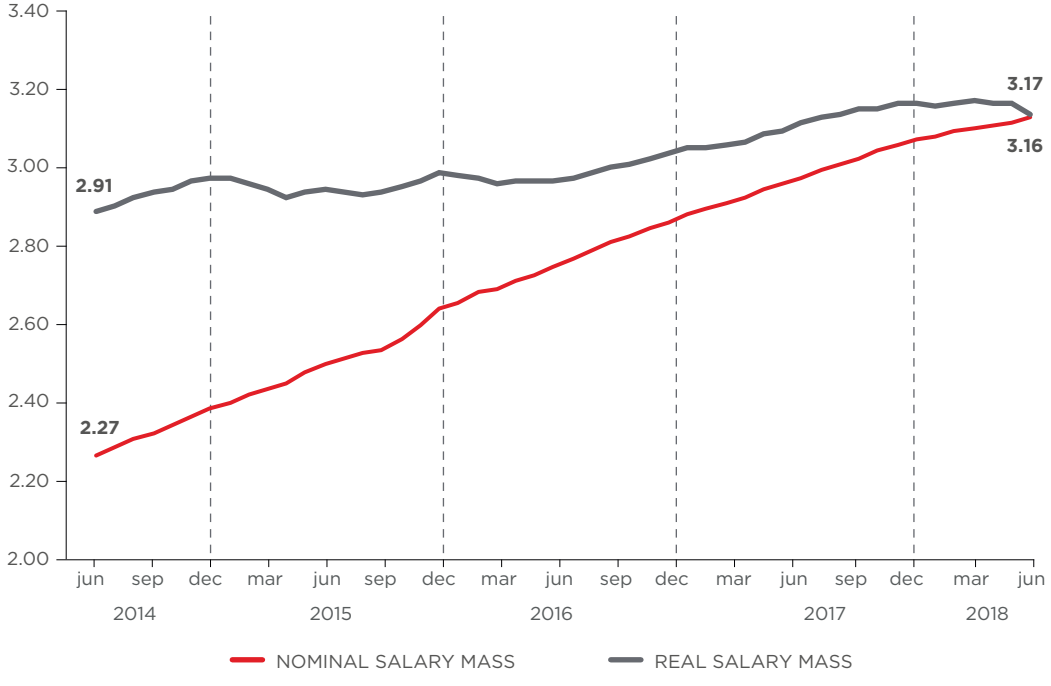
Source: IBGE - Broad National Consumer Price Index[28].

Besides the inelasticity of the coffee causes that its consumption is not heavily altered, which does not affect, therefore, the primary chain of the sector. However, it affects the industry, since there may be greater changes in higher value-added products, such as capsules. With this, it becomes relevant to consider the wage mass in Brazil, according to Graph 14.

28 Available at: https://sidra.ibge.gov.br/home/ipca15/brasil

Graph 14

EVOLUTION OF NOMINAL AND REAL SALARY MASSES IN TRILLION REAIS BETWEEN 2014 AND 2018



Source: IBGE - Broad National Consumer Price Index[29].

The growth of real salaries, as Graph 14 shows, may reflect directly and positively in Brazil's coffee industry, which has recently been reinventing itself to reach a more demanding consumer. In recent years coffee has gained a status that could resemble wine. The beverage has come to be valued for specific attributes such as flavour or aroma, unlinking from the initial image of stimulant beverage. As a result, coffee has gained more force in the market, and has led to the opening of specialty coffee shops in offering differentiation of the product together with superior quality with coffees produced in small quantities for an increasingly demanding and demanding consumer, thus allowing great value added.

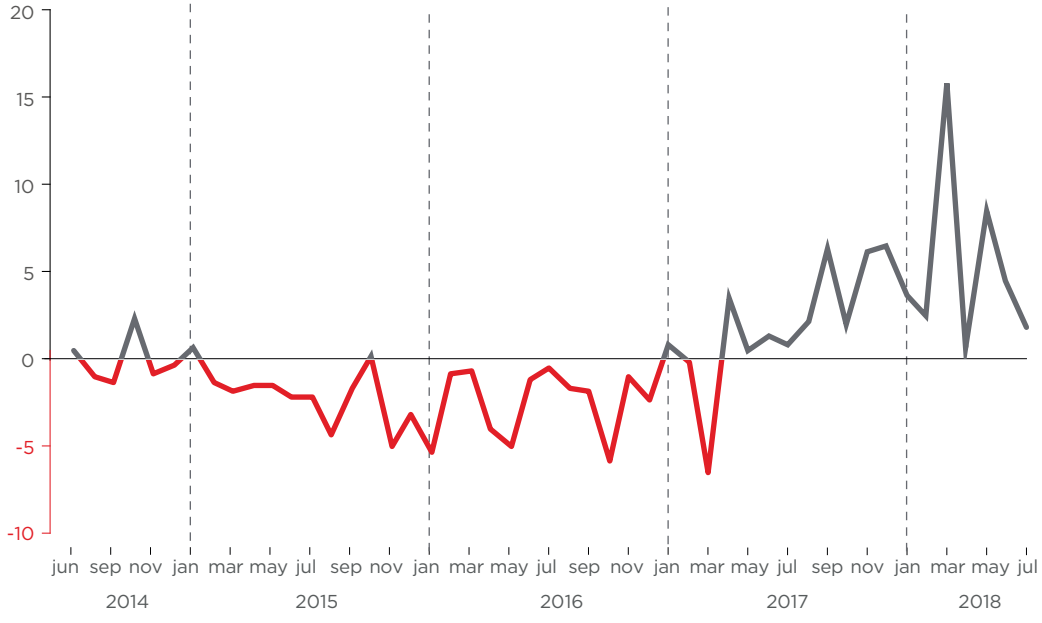
This growth can be seen in the increase in the volume of sales perceived by hypermarkets and Brazilian supermarkets since May 2017, as shown in Graph 15. The performance of the sector has been corroborated by the stability of the real income mass and prices.

29 Available at: https://sidra.ibge.gov.br/home/ipca15/brasil

Since the activity of supermarkets and hypermarkets is a basic activity, it has a greater ability to absorb income, and since coffee is an inelastic consumer commodity at price, the coffee sector can feel these variations more bland than supermarkets and hypermarkets as a whole. Producing companies, on the other hand, can notice changes in a more marked way, since in spite of the inelasticity price of the product, there is a high degree of substitutability between different brands.

Graph 15

BRAZILIAN VOLUME SALES IN HYPERMARKETS AND SUPERMARKETS, IN RELATION TO THE SAME MONTH OF THE PREVIOUS YEAR, BETWEEN 2014 AND 2018



Source: IBGE - Monthly Trade Survey [30].

When there is any increase in family income, there may be a conversion to higher quality coffees, with higher added prices, either in the form of drinks in coffee shops, or in capsules, soluble or even in more sophisticated coffees. Affecting the industry directly. In the event of falling income, there may be a replacement of households for more popular types, which are offered at lower prices.

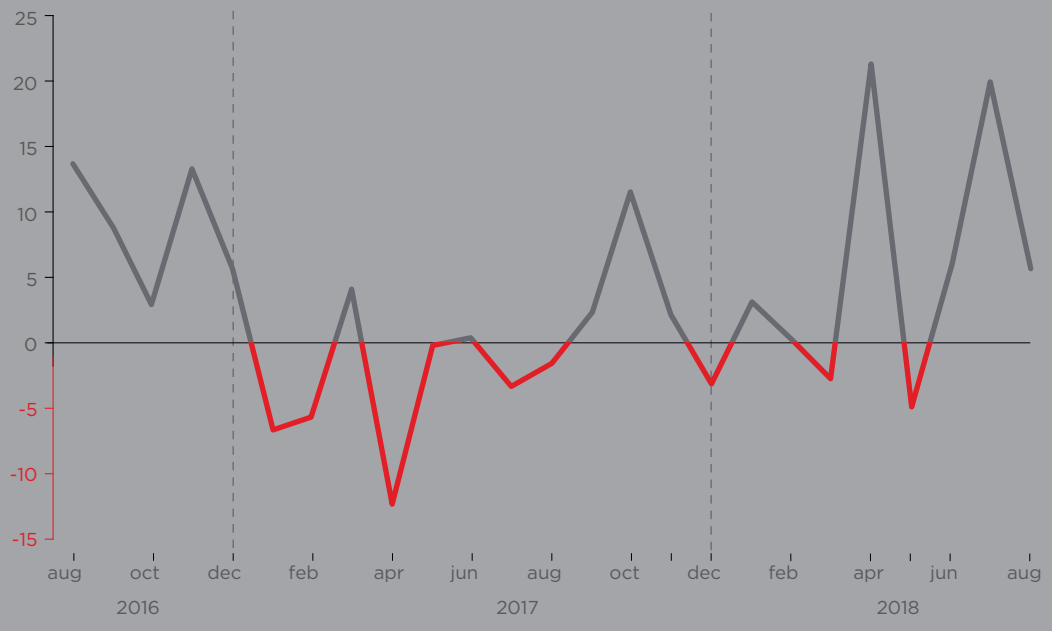
30 Available at: https://sidra.ibge.gov.br/pesquisa/pmc/tabelas

THE TRUCK DRIVER'S STRIKE AND THE COFFEE SECTOR

The month of May 2018, Brazil was marked by the truck drivers' strike movement. 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 agricultural sector is extremely dependent on the road transportation and felt clearly the effects of this strike.

The impact of the truckers' strike is still uncertain in the most diverse sectors of Brazilian agriculture. According to Cepea, many producers had started harvesting early coffees and new crops in May. But the unfavourable weather and the strike of the truck drivers slowed down the activities. The strike left farms without fuel for the machinery, as well as limiting or halting the movement of workers to crops, disrupting the grain harvest. Graph 16 shows the monthly variation of the industrial physical coffee production index from August 2016 to August 2018, where it is possible to perceive the effects of the truck drivers' strike in May 2018.

Graph 16
INDUSTRIAL PHYSICAL PRODUCTION OF THE COFFEE CHAIN BETWEEN AUGUST 2016 AND AUGUST 2018



Source: PIM IBGE (2018)[31].

31 Available at: https://sidra.ibge.gov.br/pesquisa/pim-pf-brasil

It is important to note that the index presented in Graph 16 always refers to the same month of the previous year. Thus, it can be seen that in most of the months of 2017 the monthly variation of the index was negative, which means that in comparison to 2016 the coffee production showed a decrease. The situation begins to improve by the end of 2017 and the beginning of 2018. The impact of the truck drivers' strike is evidenced by the result of May 2018, where it is possible to observe a decrease of 5.2% in the index compared to the same period of the year (which was also negative, see May 2017). The definitive results are still being verified, but have been felt throughout the agricultural sector, so it is possible to infer that logistic vulnerability and dependence on a single modal represent one of the fragile points of this chain.

2. COMMERCIAL BALANCE OF THE BRAZILIAN COFFEE SECTOR

Since the Brazil colonial period, the export of primary products has a importance for the Brazilian economy. There was the time of gold, sugar cane and commodities that are representative until today, such as coffee. The Brazilian trade balance obtained its first positive balance in 1861, thanks to coffee, which corresponded to 48% of exports, at the time. Brazilian participation in foreign trade continued to grow in the following years, and the coffee sector became the most dynamic economy, accounting for about 60% of shipments.

In 1929, with the stock market of the New York Stock Exchange, the coffee sector is greatly impacted by the fall in international demand for the product. Allied to this, the growing expansion of coffee plantations contributed to the supply of the product superior to the demand. With this scenario exposed, the federal government decides to destroy surplus stocks in an attempt to contain a fall in prices. The effects of this crisis felt until the middle of the Second World War, where international coffee prices are beginning to recover, becoming attractive again, and returning production and export of the product in prominent positions. In the early 1990s, with trade liberalization in Brazil, trade was intensified and Mercosur was created and the World Trade Organization, responsible for trade regulation, was established.

In the early 2000s, there was a large growth in demand for commodities, driven mainly by the accelerated growth of China, a large importer of raw materials. This new configuration of international trade influenced prices, which were higher and favored producer markets.

In 2004, the so-called ***boom*** commodity began, and Brazil perceived both the increase in demand and prices. Brazilian exports to China grew by over 500% between 2005 and 2011. This effect boosted the Brazilian GDP and benefited the country even in times of extreme crisis, as in 2008. But on the other hand, a new process of market dependence has begun in which the Brazilian economy is dependent on external and Chinese demand. With China's slowdown as of 2011, the national economy began to show signs of deterioration.

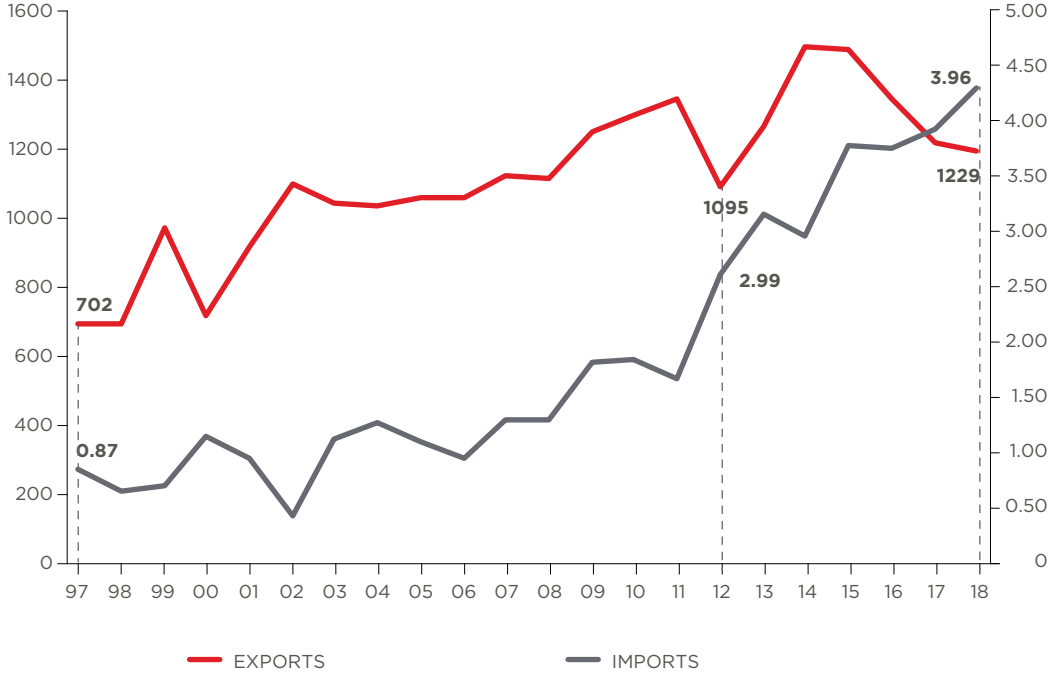
In spite of having a dependence on the Brazilian economy in relation to Chinese market, Brazil presents a relevant diversification in its export pattern, which affects a large number of countries. The translation process of the Asian country for the new economic model does not remain in the whole world, but also in the domestic market, it has been valued in its industrial production for export. Demand for commodities declined, affecting global prices.

In relation to imports, Brazil acquires a small quantity from the foreign market, when compared to exports. This scenario is mainly because the country produces a volume capable of supplying the domestic and foreign demand. The imports made meet specific demands, coming in the form of roasted coffee, essences, concentrates based on coffee and soluble coffee, among others. They are products that have greater added value in relation to green (raw) coffee, which makes up the largest portion of Brazilian exports.

The evolution of international trade in the coffee industry from 1997 to 2018 can be seen in Graph 17. The main issue observed is the considerable difference between import and export levels. Even though the trend has increased over the years, the degree of import is considerably lower than that of exports.

Graph 17

EVOLUTION OF INTERNATIONAL TRADE IN THE COFFEE INDUSTRY, IN MILLIONS OF TONS[32]



Source: Comex Stat (2018)[33].

In the context of exports, Brazilian coffee and its derivatives have a global reach. By September 2018, exports have reached 129 countries, a rise over 2017, where the reach was 120 countries. In recent years, the United States, Germany, Italy and Belgium were the main grain importers in Brazil. Together these 4 countries demanded in 2017 about 55% of the volume exported by Brazil.

32 It has been considered the products listed in Attachment 1.

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

Table 4
BRAZILIAN MAJOR COFFEE IMPORTING COUNTRIES IN 2016, 2017 AND 2018 (IN MILLIONS OF TONS)

COUNTRY	2016		2017		2018	
	VOLUME	%	VOLUME	%	VOLUME	%
UNITED STATES	269	20%	244	20%	209	17%
GERMANY	258	19%	228	19%	199	16%
ITALY	123	9%	122	10%	121	10%
BELGIUM	87	6%	75	6%	83	7%
JAPAN	99	7%	84	7%	81	7%
UNITED KINGDOM	23	2%	24	2%	54	4%
TURKEY	30	2%	41	3%	39	3%
CANADA	34	3%	33	3%	31	3%
FRANCE	32	2%	32	3%	29	2%
SWEDEN	30	2%	27	2%	27	2%
OTHERS	368	27%	321	26%	333	28%
WORLD	**1,354**	**100%**	**1,229**	**100%**	**1,206**	**100%**

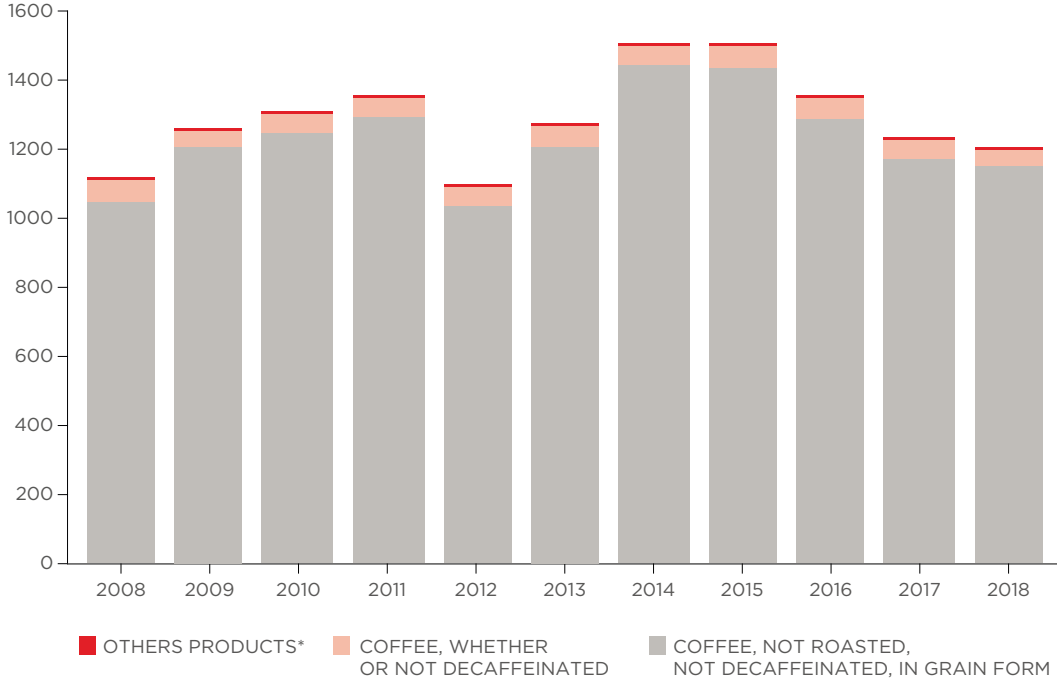
Source: Comex Stat (2018)[34].

Besides of all this global reach, Brazil has exported, mainly, over the years only one product, the coffee beans, see Graph 18. The historical series that presents the composition of coffee exports in Brazil is based almost in its totality in products of lower added value. Coffee beans are the flagship of this sector, accounting year-on-year for at least 95% of the sector's supply.

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

Graph 18

BRAZILIAN COMMERCIAL VOLUME OF THE MAIN PRODUCTS EXPORTED BY THE COFFEE INDUSTRY (IN MILLIONS OF TONS)



* Refers to Caffeine; Coffee roasted, decaffeinated and Coffee not roasted, decaffeinated.

Source: Comex Stat (2018)[35].

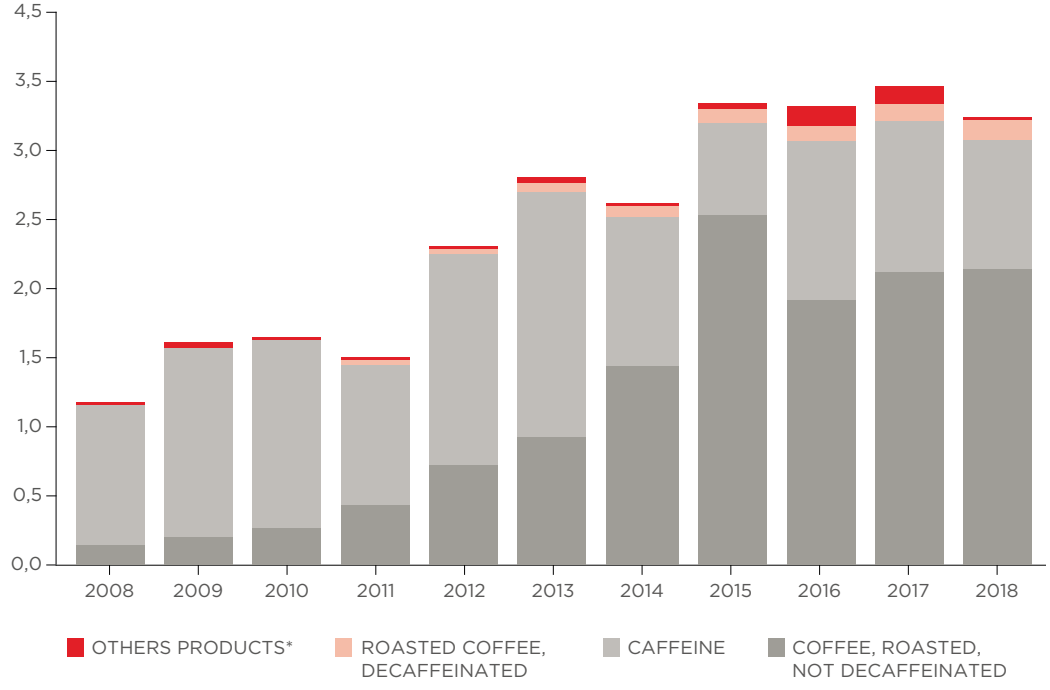
Besides coffee beans, another product worth to mention, even more moderate, is soluble coffee, which holds about 4% of the volume exported by Brazil year by year. Together, these two products account for at least 99% of Brazilian exports. This is an interesting result for the value-adding view. It shows that Brazil has a great potential and can be exploited in this sector, adding more value to the product, offering differentiation to reach more markets and generating increases to the industrial value of this sector.

Although the coffee industry in Brazil is predominantly exporting, there are some products that are part of the Brazilian import tariff, see Graph 19.

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

Graph 19

BRAZILIAN COMMERCIAL VOLUME OF THE MAIN PRODUCTS IMPORTED BY THE COFFEE INDUSTRY (IN MILLIONS OF TONS)



* Refers to coffee, not roasted, not decaffeinated, in grain form; Coffee, not roasted, not decaffeinated, other than in grain; Coffee, not roasted, decaffeinated and Coffee soluble, whether or not decaffeinated.

Source: Comex Stat (2018).

Like the export agenda, the import tariff is basically composed of two products: non--decaffeinated roasted coffee and caffeine. Over the years, it is possible to observe the increase in the share of non-decaffeinated roasted coffee in the Brazilian import tariff, jumping from 13% in 2008 to 55% in 2014, reaching and maintaining the first position of imports in the sector. Caffeine decreased during the observed period, falling considerably from 2008 to 2014, when it moved to the second place in the import tariff, falling gradually over time. On the other hand, the decaffeinated roasted coffee, although it still obtains a timid expressiveness within the imports, has increased its performance in Brazilian imports.

Over the past 10 years, only 33 countries have accessed the domestic market with coffee supply. Some of them in only specific years, but some others with a higher frequency. Table 5 presents the 10 largest coffee exporters to Brazil in recent years.

Table 5
MAJOR COFFEE EXPORTING COUNTRIES TO BRAZIL IN 2016, 2017 AND 2018 (IN MILLIONS OF TONS)

COUNTRY	2016		2017		2018	
	VOLUME	%	VOLUME	%	VOLUME	%
SWITZERLAND	1.05	28%	1.21	30%	1.39	32%
CHINA	1.07	28%	0.91	23%	0.71	16%
ITALY	0.61	16%	0.60	15%	0.27	6%
SPAIN	0.28	7%	0.24	6%	0.30	7%
FRANCE	0.08	2%	0.20	5%	0.27	6%
UNITED KINGDOM	0.09	2%	0.11	3%	0.15	4%
GERMANY	0.11	3%	0.10	3%	0.52	12%
UNITED STATES	0.14	4%	0.13	3%	0.24	5%
INDIA	0.05	1%	0.22	5%	0.17	4%
PORTUGAL	0.09	2%	0.13	3%	0.12	3%
OTHERS	0.21	6%	0.10	2%	0.19	4%
WORLD	**3.79**	**100%**	**3.96**	**100%**	**4.33**	**100%**

Source: Comex Stat (2018).

In recent years Switzerland has been our main supplier of coffee and by-products, reaching about 30% of our volume of imports. Besides Switzerland, we mainly trade with China, Italy, and Spain. Together these countries accounted for about 68% of the volume of coffee and by-products imported by Brazil in 2017.

3. BARRIERS TO THE COMMERCIALIZATION OF COFFEE IN BRAZIL

The coffee industry has shown significant participation in the Brazilian economy throughout history. Brazil has maintained its position as the world's largest producer and exporter and the effort to reduce barriers to the commercialization of the product is essential so that the share of coffee continues to make a significant contribution to the internal market and to provide greater foreign exchange gains to Brazil, with its participation in the foreign market.

The national grain producing regions, with a strong emphasis on Minas Gerais, have characteristics essential to the cultivation of grain, but the sector is faced with a series of issues that constitute barriers to the production, distribution and commercialization of the product.

Agricultural activity can suffer significant impacts due to climatic variations, perishability of the product, existence of tariff and non-tariff barriers in the foreign market, exchange rate policy, interest rates, worldwide consumption trend, economic growth, among other factors.

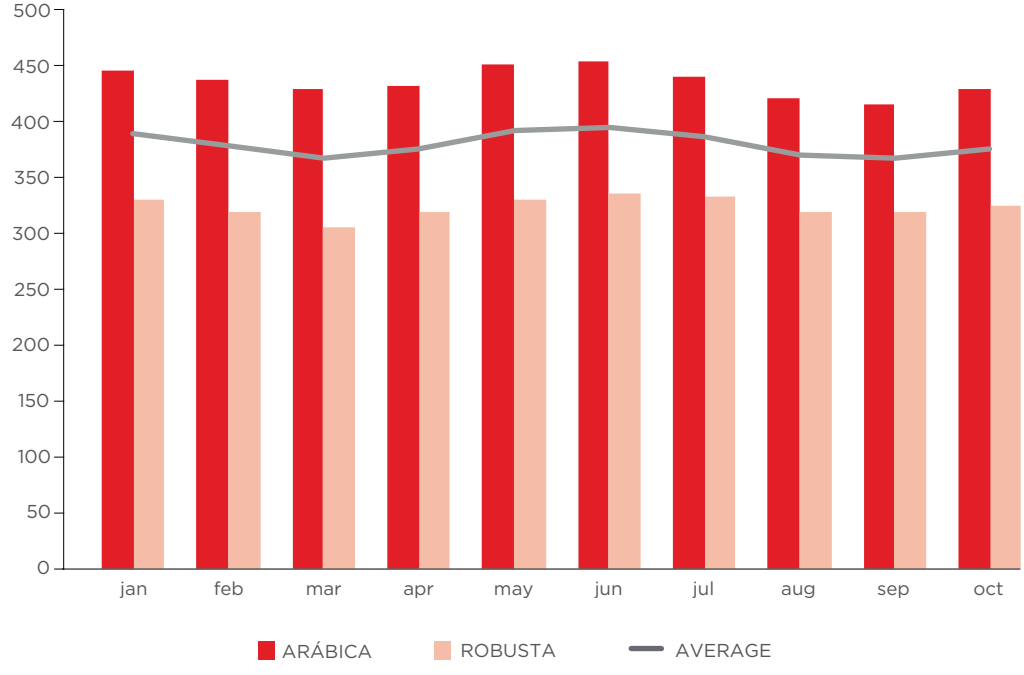
Already in production, the climatic conditions can interfere directly in the price of the product. If the climate is not favorable to the crop, the supply may suffer reductions against a stable domestic demand, and this imbalance causes a rise in the product price to the final consumer. In addition, the biennium of the crop can also impact the price of coffee. The variation of the harvest, when rising, brings the increase of the product supply, but causes the fall of the prices paid to the producers. On the other hand, when there is negative biennially, the final consumer is affected.

Arabica coffee represents 75% of the world coffee production, 87% of Brazilian production and has a higher market value due to its quality. It is a type of grain used for producing beverages of excellence for being considered more noble. At the beginning of 2018, domestic and external product prices were expected to undergo pressure throughout the year, due to the high harvest forecasts for the period. From February to April, prices continued to fall, boosted by the good harvest and external devaluations and the dollar. In May, the appreciation of the dollar, the increase in external quotations and increase in demand influenced the increase in domestic prices, increasing it by 3.7% in relation to the average of the previous month. In July, the external scenario receded and pressured internal prices, with a 2.9% reduction in price compared to the June average. In August, the decline in the domestic market, 4.1% in relation to July, occurred due to the strong devaluation of the real and the volume of the record harvest produced in Brazil. In September, the average monthly price continued to fall. There was a decrease of 1.3% due to the external decline and the devaluation of the dollar during a period of the month. Sellers shrank and liquidity was low.

Robusta coffee, which has a faster growth, better yield and is more resistant to parasites, presented in the first quarter of 2018 a drop in domestic prices, pressured by prices and external devaluations and the expectation of a large harvest for the year. As of April, domestic prices began to move forward. Some roasters had leaner stock and a slight delay in crop harvesting, so grain sales per spot came back. The second quarter of 2018 was followed by rising domestic prices, mainly due to the increase in foreign demand and the retraction of sellers. In the third quarter, domestic prices were again pushed back by external devaluations and the increase in the supply of the variety, as the harvest progressed.

Graph 20

AVERAGE MONTHLY PRICE PAID TO THE PRODUCER, PER BAG OF 60KG OF ARABICA AND ROBUSTA COFFEE, IN REAIS DURING 2018



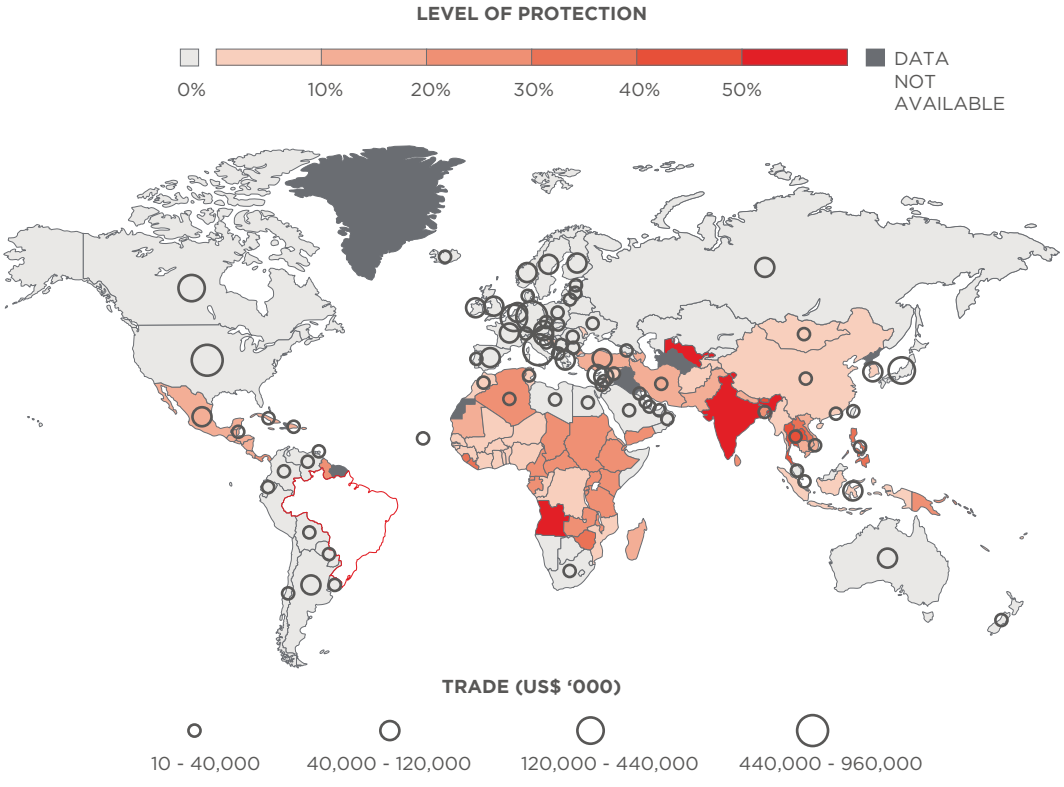
Source: Cepea[36].

In relation to the international market, the existence of tariff and phytosanitary barriers represent an important obstacle to the commercialization of the product. Most importing countries require a very high quality of the product as a barrier. In addition, it applies high tariffs to external products in order to stimulate demand for domestic products.

Figure 1 shows the size of Brazilian trade exports with the rest of the world and the levels of protection practiced for Brazilian coffee beans. The number of countries applying tariff barriers to Brazilian coffee beans is 116 in 2018. Import tariffs vary from 1% in Syria to 2% in Korea to very heavy tariffs such as 100% in India and 90% in tariffs in Thailand.

36 Available at: https://www.cepea.esalq.usp.br

Figure 1
PROTECTION LEVELS APPLIED TO BRAZILIAN COFFEE NOT ROASTED, NOT DECAFFEINATED IN THE INTERNATIONAL MARKET



Source: Adapt from Macmap (2018)[37].

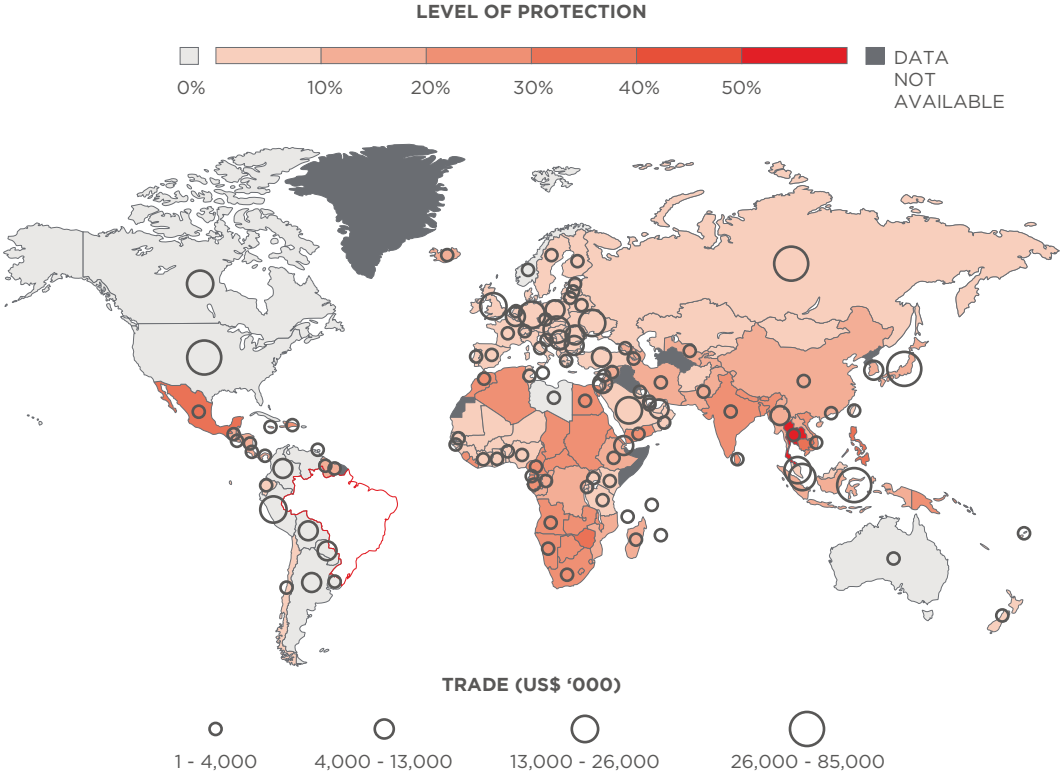
Large grain importers such as Germany, Italy, and Belgium, charge tariffs of around 9%. This tariff of 9% is defined for the whole European Union, even if the size of the coffee trade of the member countries with Brazil is different, the tariff is fixed. Japan, which has a large volume of coffee beans trade with Brazil, has an 8% tariff.

Coffee exports are among the main destinations, the European Union, the United States, and Japan. Trade in concentrated and extract soluble coffee is carried out in hundreds of countries, as shown in Figure 2, and import rates vary from 2% to 49 as shown in Figure 2.

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

In order to try to negotiate these high tariffs on the import of the product, the soluble coffee industries are seeking help from the federal government to establish strategies that prioritize negotiations and agreements tariffs with importing countries.

Figure 2
PROTECTION LEVELS APPLIED TO BRAZILIAN COFFEE SOLUBLE EVEN DECAFFEINATED IN THE INTERNATIONAL MARKET



Source: Adapt from Macmap (2018)[38].

The industry prioritized the negotiations in some destinations, among them, the European Union, that apply import taxes of 9%. Japan is the fourth largest consumer of soluble coffee, which charges tariffs of 8% and Indonesia, which occupies the sixth place in the Brazilian imports of this product, and increased its tariff from 5% to 20%. Such negotiations, aimed at immediate elimination, could bring considerable growth to the sector.

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

ATTACHMENT 1

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

CODE NCM	DESCRIPTION NCM
09012100	Coffee, roasted, not decaffeinated
29393010	Caffeine
09012200	Roasted coffee, decaffeinated
21011110	Coffee, whether or not decaffeinated
09011200	Coffee, not roasted, decaffeinated
09011110	Coffee, not roasted, not decaffeinated, in grain form
09011190	Coffee, not roasted, not decaffeinated, other than in grain

ATTACHMENT 2

LIST OF ABREVIATIONS

ACRONYM	DESCRIPTION
ABIC	BRAZILIAN COFFEE INDUSTRY ASSOCIATION
CEPEA	CENTER FOR ADVANCED STUDIES IN APPLIED ECONOMICS
CONAB	NATIONAL SUPPLY COMPANY
EU	EUROPEAN UNION
GDP	GROSS DOMESTIC PRODUCT
IBGE	BRAZILIAN INSTITUTE OF GEOGRAPHY AND STATISTICS
IPCA	NATIONAL CONSUMER PRICE INDEX
MAPA	MINISTRY OF AGRICULTURE, LIVESTOCK AND FOOD SUPPLY
NCM	SOUTHERN COMMON NOMENCLATURE
PAC	ANNUAL TRADE SURVEY
PIM	MONTHLY INDUSTRIAL SURVEY
PPM	MUNICIPAL LIVESTOCK RESEARCH
VBP	GROSS VALUE OF PRODUCTION

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