FGV EUROPE PROJETOS

THE BRAZILIAN CHOCOLATE, PEANUTS AND CANDIES INDUSTRY AND THEIR INTERACTIONS WITH INTERNATIONAL TRADE

anufood brazil

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EXECUTIVE SUMMARY

THE COCOA IN THE WORLD AND IN BRAZIL: A PRODUCTIVITY LOWER THAN EXPECTED

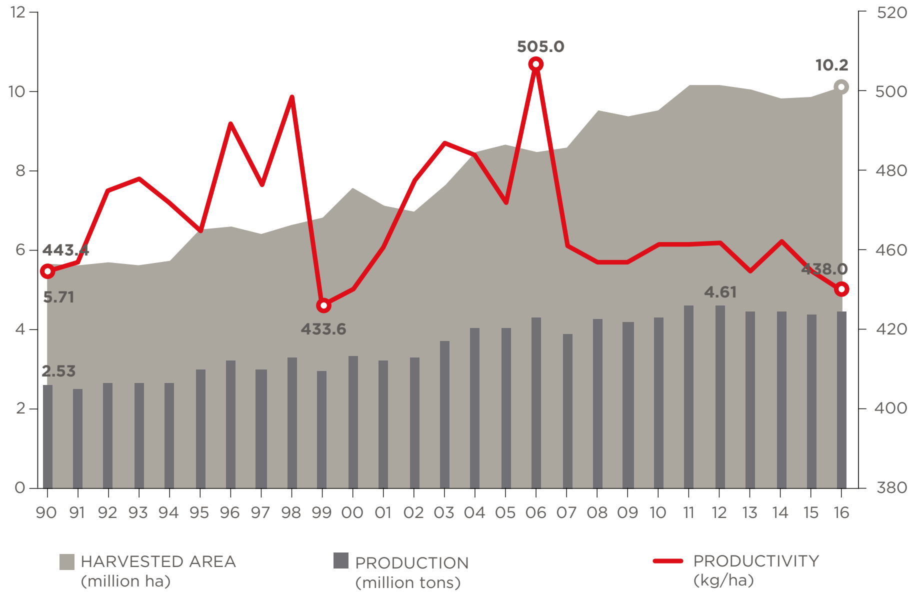
Cacao, a fruit known worldwide, mainly for being the main raw material in the production of chocolates, has great economic importance in the world scenario. In the past, according to the Executive Committee of the Plan of Cacao Cropland (CEPLAC),[1] their seeds were valuable and served as a currency of exchange between the Maya people. With the expansion of the consumption of chocolate, the interest for the cocoa cultivation was growing and other regions were trying to implement the planting, disseminating the production by the world. It was sent to Spain, Central and South America, Asia, the Caribbean and Africa, and today is responsible for large plantations that represent extreme importance to create jobs and income for millions of people. According to data from the Food and Agriculture Organization of the United Nations (FAO):

- World production increased from 2.53 million tons in 1990 to 4.47 million tons in 2016, representing total growth of 76.4% and an average of 2.21% per year;
- Harvested area increased from 5.71 million hectares in 1990 to 10.20 million hectares in 2016. An increase of about 78.5%, approximately 2.25% per year;
- The productivity of the sector increased from 443.4 kilograms per hectare in 1990 to 438 in 2016, a reduction of 1.22%, in the period with a decline of 0.05% per year; In this way, it is possible to perceive that the increase of world production was proportional to the expansion of the harvested area and not due to productivity gains in the sector.

1 Available at: http://www.ceplac.gov.br

Graph 01

GLOBAL EVOLUTION OF PRODUCTION, PRODUCTIVITY AND HARVESTED AREA OF COCOA BETWEEN 1990 AND 2016 (MILLION HA, KG/HA AND MILLIONS OF TONS)



Source: Food and Agriculture Organization of the United Nations– FAO Stat.[2]

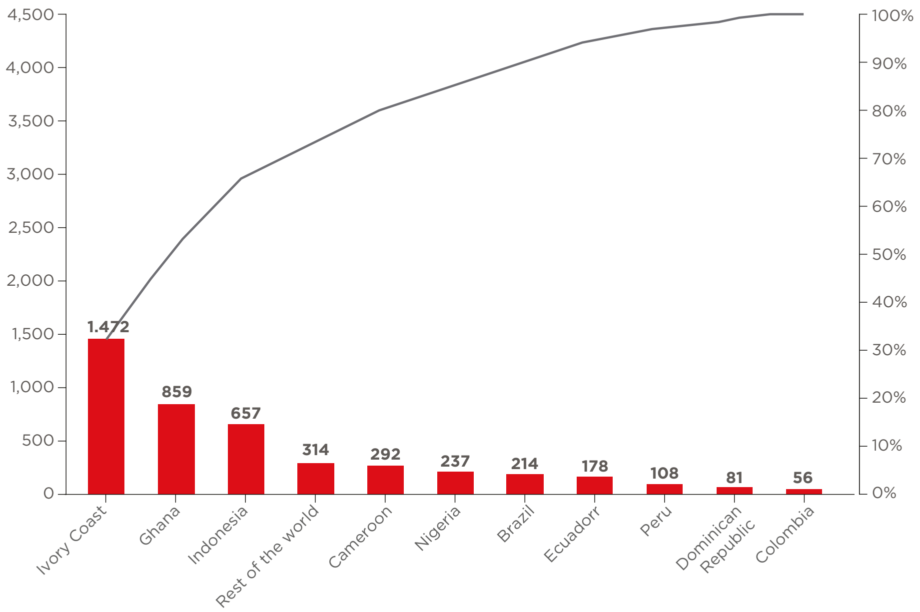
The fruit, which is a tropical plant that grows in hot and humid climates, has developed well in Africa, putting some countries of this continent as the main global producers. Are they:

- Ivoire Coast, which is the main producer of cocoa in 2016, responsible for 32.96% of total production, about 1.47 million tonnes;
- Ghana, which occupies the second position, holds about 19.23% of global production, about 859 thousand tons. Together these two countries account for about 52% of the cocoa produced worldwide;
- There are also Cameroon and Nigeria, which appear on the list of the 10 largest producers in the world. In 2016 these 4 African countries were responsable for 64% of world production.

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

Graph 02

WORLD PRODUCTION OF COCOA IN 2016 (THOUSAND TONS)



Source: Food and Agriculture Organization of the United Nations– FAO Stat.[3]

Among the largest producers, Brazil occupies the seventh place in the world ranking, producing about 4.79% of the global volume. Although world production is growing over the years, this growing movement is not seen in Brazilian production. Between 1990 and 2016, the Brazilian production of cocoa:

- Reduced 16.6%, from 256.2 thousand tons of the fruit to 213.8, an average reduction of 0.69% per year;

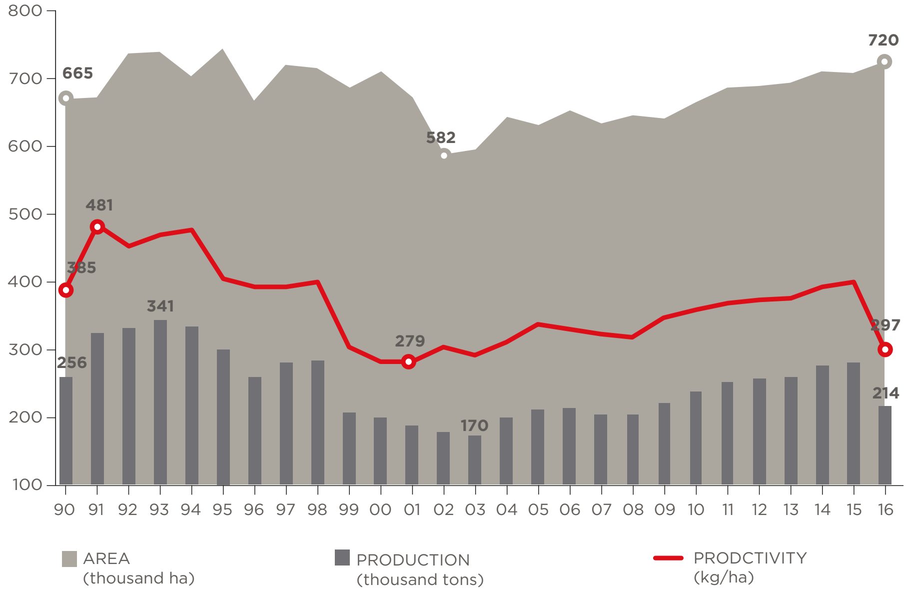
- Obtained an increase of 8.3% in the planted area, approximately 0.30% per year;

- With the reduction in production and the increase in planted area, it showed a decrease of 22.9% in productivity, about 1% per year.

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

Graph 03

BRAZILIAN EVOLUTION OF PRODUCTION, PRODUCTIVITY AND HARVESTED AREA OF CACAO BETWEEN 1990 AND 2016 (THOUSAND HA, KG/HA AND THOUSAND TONS)



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

Some factors may explain the reduction in national cocoa production since the 1990s, such as:

- In relation to the international scenario there was an increase in the production of the fruit, thus generating a reduction in the price;

- In the national scenario, in 1995 according to CEPLAC,[5] the national plantation was contaminated by fungi, developing a disease called witches' broom, which causes severe damages to the cocoa plantation; This problem reduced the incentive and increased production costs;

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

5 Available at: http://www.ceplac.gov.br

- In addition, adverse climatic conditions of the period were unfavorable to cultivation

In terms of income the cocoa crop was positive for the years 2015 and 2016.[6] In 2015, the average income per hectare was positive and it turned around around R$ 8.6 thousand, already for the year 2016 the value, although positive, was a little lower, reaching for around 6 thousand. For cocoa, which is a perene crop, the income is directly impacted by stage of production and the technology used: crop establishment, crop renovation and use of irrigation.[7]

Table 01

AVERAGE INCOME PER HECTARE FOR THE COCOA CROP IN 2015 AND 2016

YEAR	AVERAGE INCOME	COST	PROFIT
2015	R$ 21,097.52	R$ 12,465.60	R$ 8,631.92
2016	R$ 17,885.04	R$ 11,797.80	R$ 6,087.24

Source: FAO Stat[8]/Conab.[9]

THE PEANUT IN THE WORLD AND IN BRAZIL: A SWEET PERFORMANCE

Peanut is a food with high nutritional value and such characteristic impresses its importance in the food industry. Over the years, world peanut production has grown considerably. According to FAO[10] data, between 1990 and 2016, the international scenario of peanut crop indicates:

- Increase in production levels by 90.5% from 23 million tons in 1990, to around

6 Data concerning the state of Bahia of Brazil.

7 Available at: http://www.agricultura.gov.br/assuntos/camaras-setoriais-tematicas/documentos/camaras-setoriais/cacau/anos-anteriores/programa-de-desenvolvimento-sustentavel-para-as-regioes-produtores-de-cacau.pdf

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

9 Available at: https://www.conab.gov.br/info-agro/custos-de-producao/planilhas-de-custo-de-producao

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

44 in 2016, a growth of 2.51% per year;

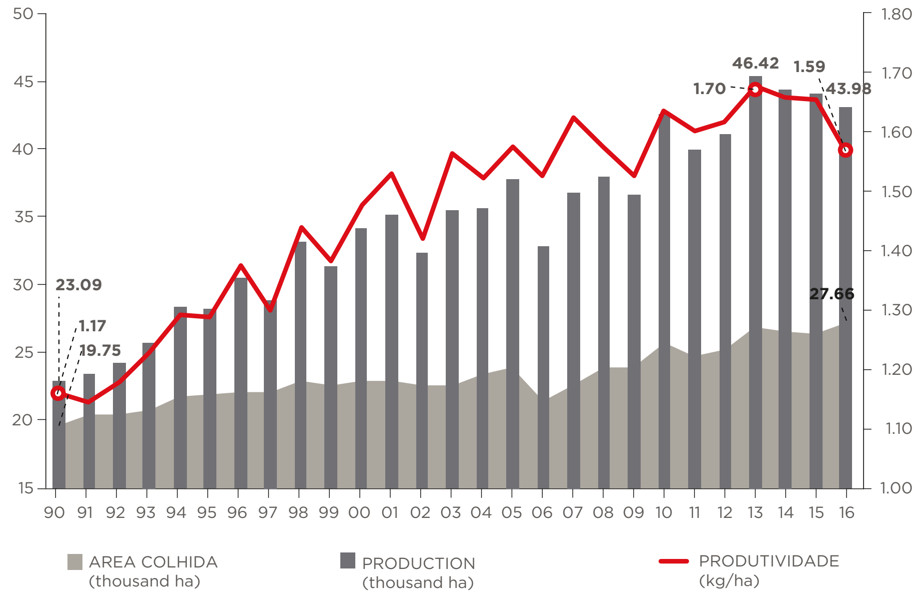
- Expansion of 40.4% of harvested area, rising from 19.75 million hectares in 1990 to 27.66 in 2016, an average growth of 1.3% per year;

- An increase of 36% in productivity in the sector, approximately 1.19% per year.

The fact that the growth of the area is less intense than the production gains reflects the successive productivity gains that the sector presented over the years.

Graph 04

WORLD PRODUCTION, PRODUCTIVITY AND HARVESTED AREA OF PEANUTS WITH SKIN BETWEEN 1990 AND 2016 (MILLION HA, TON/HA AND MILLIONS OF TONS)



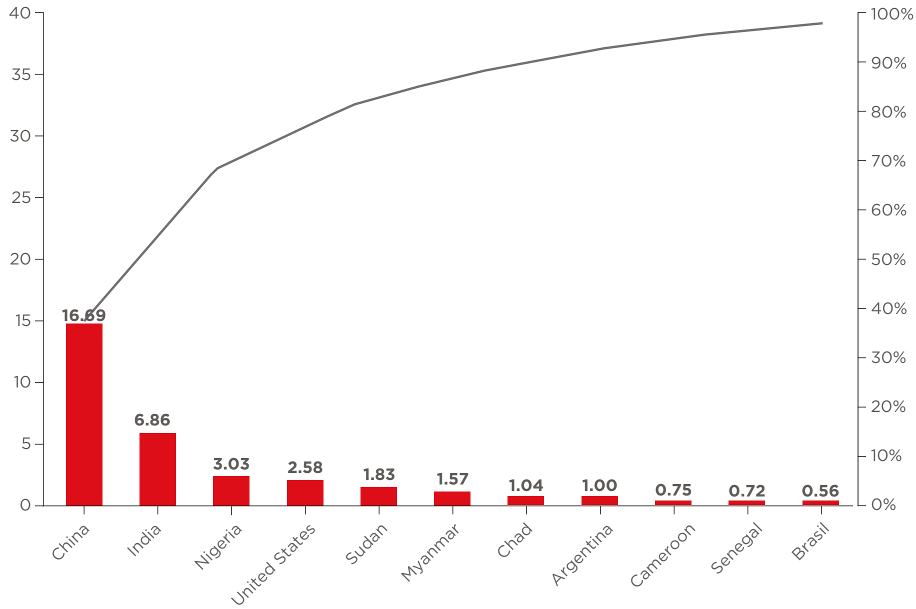
Source: Food and Agriculture Organization of the United Nations– FAO Stat.[11]

Most of this production is distributed between China and India, which together are responsable for more than half of all volume produced worldwide, about 53.5% of production.

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

Graph 05

WORLD PRODUCTION OF PEANUTS WITH SKIN IN 2016 (MILLION TONS)



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

In relation to Brazil, the country reaches the eleventh place in the world ranking, representing 1.3% of the total produced in the world. Despite the modest participation in the world scenario, the Brazilian production of peanuts has been growing over the years and has become increasingly expressive. According to FAO[13] data, between 1990 and 2016 the Brazilian culture of peanuts:

- The growth of 308%, about 5.56% per year;
- Expanded the harvested area at 84.91%, approximately 2.39% per year;
- Presented a 120.81% increase in productivity in the sector, an average of 3.09% per year.

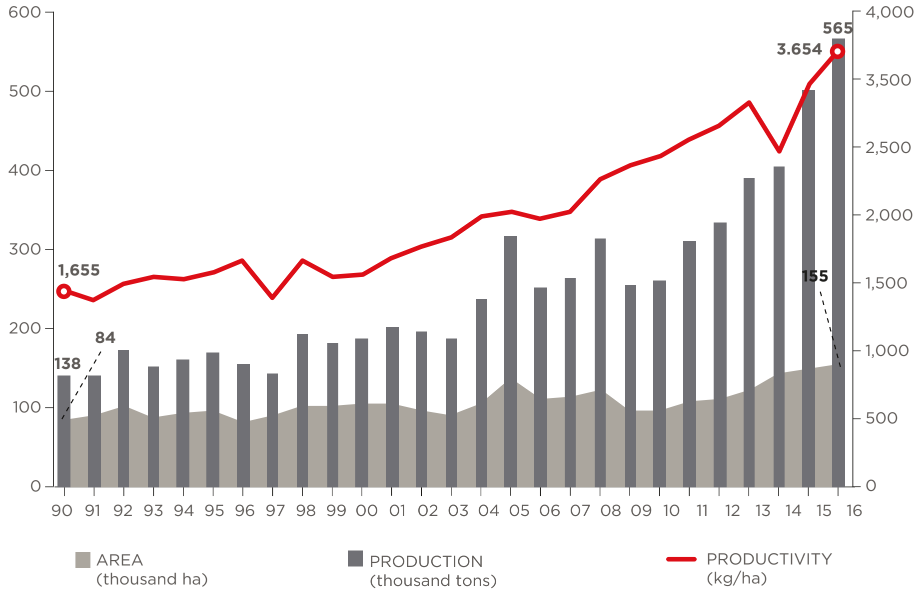
12 Available at: http://www.fao.org/faostat/en/#data

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

Therefore, it is important to emphasize that the growth of this production has been superior to the evolution of the use of the area, is explained, as well as the world production, by the productive advances that the culture has received over time.

Graph 06

BRAZILIAN EVOLUTION OF PRODUCTION, PRODUCTIVITY AND HARVESTED AREA OF PEANUTS WITH SKIN BETWEEN 1990 AND 2016 (THOUSAND HA, KG/HA AND THOUSAND TONS)



Source: Food and Agriculture Organization of the United Nations– FAO Stat.[14]

When considering the average income of peanut for the years 2015 and 2016 it is possible to notice that in the first year there was a negative average income of R$ 175.91, in 2016 the scenario was more favorable and the average income was positive, R$ 258.38.

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

Table 02

AVERAGE INCOME PER HECTARE FOR THE PEANUT CROP IN 2015 AND 2016

YEAR	AVERAGE INCOME	COST	PROFIT
2015	R$ 2,924.88	R$ 3,100.80	-R$ 175.91
2016	R$ 3,775.89	R$ 3,517.51	R$ 258.38

Source: FAO Stat[15]/Agrolink[16]/Conab[17].

THE AGRO-INDUSTRY OF CHOCOLATE, PEANUTS AND CANDIES IN BRAZIL: CANDIES AND CHOCOLATE BECAME BITTER THE REDUCTION OF CONSUMPTION AND NATIONAL PRODUCTION

To understand a little more about the size of this industry the Annual Industrial Survey Company (PIA - Empresa) made available by IBGE becomes a starting point. And shows that the value of the industrial production of chocolates, candies and confectionery for the year 2016 is of about R$ 12.63 billion reais. According to the classification of industrial activities and products related to the industrial production of chocolate, candies and confectionery in 2016:

- The type of candy and bar chocolates containing cocoa is the most expressive, responsable for 61.3% of the total value of industrial production;

- The production of candies, pastilles, white chocolate and other confectionery, without cocoa, even without sugar, is the second most significant, with 21.2% of the total value of industrial production in 2016.

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

16 Available at: https://www.agrolink.com.br/cotacoes/diversos/amendoim/

17 Available at: https://www.conab.gov.br/info-agro/custos-de-producao/planilhas-de-custo-de-producao

Table 03

INDUSTRIAL PRODUCTION OF CHOCOLATES, CANDIES AND CONFECTIONERY IN 2016 (R$ BILLION)

TYPES OF INDUSTRIAL ACTIVITIES AND PRODUCTS	VALUE OF PRODUCTION	%
BONBONS AND CHOCOLATE IN BARS, CONTAINING COCOA	7.74	61.3%
CANDIES, PASTILLES, WHITE CHOCOLATE AND OTHER CONFECTIONERY, NOT CONTAINING COCOA, INCLUDING SUGAR	2.68	21.2%
COCOA OR CHOCOLATE POWDER, NOT CONTAINING ADDED SUGAR OR OTHER SWEETENING MATTER	0.96	7.6%
GRANULATED CHOCOLATE	0.45	3.6%
CONFECTIONARY, CANDIES, PASTILLES OR OTHER SIMILAR CONFECTIONS CONTAINING COCOA	0.38	3.0%
CHOCOLATES AND OTHER FOOD PREPARATIONS CONTAINING COCOA, WEIGHING MORE THAN 2 KG, NOT FOR IMMEDIATE CONSUMPTION	0.38	3.0%
COCOA OR CHOCOLATE POWDER, CONTAINING ADDED SUGAR OR OTHER SWEETENING MATTER	0.05	0.4%
TOTAL	**12.63**	**100%**

Source: IBGE - Annual Industrial Survey - Product.[18]

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

Considering also the peanut, there is an increase of R$ 1.25 billion to the R$ 12.63 billion of the industrial production of candy and chocolates, causing this segment as a whole to reach R$ 13.88 billion in industrial production. According to the classification of industrial activities and products of industrial production of peanuts in 2016:

- The segment comprising peanuts, cashew nuts, Brazilian nuts and similar roasted, salted or otherwise preserved foods is the most significant category within industrial peanut production, with 62.0% of the total value produced in 2016;

- The type of peanut, other than roasted, salted or otherwise preserved, holds the remaining 38% of the production value of that industry.

Table 04

INDUSTRIAL PRODUCTION OF PEANUTS IN 2016 (R$ BILLION)

TYPES OF INDUSTRIAL ACTIVITIES AND PRODUCTS	VALUE OF PRODUCTION	%
PEANUT, OTHER THAN ROASTED, SALTED OR OTHERWISE PRESERVED	0.47	38.0%
PEANUTS, CASHEW NUTS, BRAZILIAN NUTS AND SIMILAR ROASTED, SALTED OR OTHERWISE PRESERVED	0.77	62.0%
TOTAL	**1.25**	**100%**

Source: IBGE - Annual Industrial Survey - Product.[19]

In this sense, when considering the production of the candy industry chocolates and peanuts, it is important to understand that it is divided into categories: candies and gums, various types of chocolates and peanuts.[20] Some of these categories, like candies and gums and chocolates, have performed similarly in terms of production and consumption in recent years.

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

20 No national production and consumption data for industrialized peanuts were found.

Between 2012 and 2017, the segment of candies and gums, according to information from the Brazilian Chocolate, Cocoa, Peanuts and Candies Industry Association (ABICAB),[21] it was observed a reduction in its production and consumption, as follows:

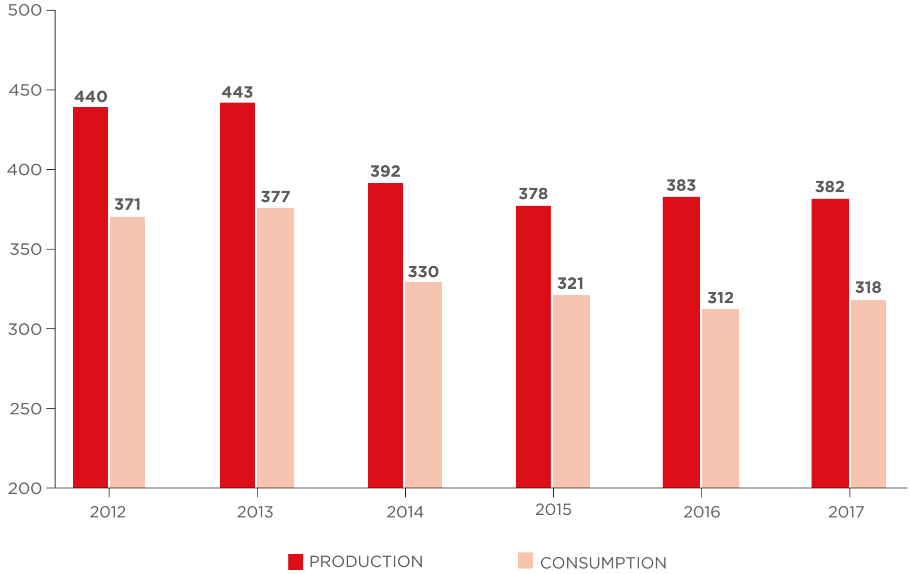
- Presented a reduction of 13.18% in production, an approximate decrease of 2.79% per year;

- Decreased 14.29% in domestic consumption, about 3.04% per year.

Graph 07

BRAZILIAN PRODUCTION AND CONSUMPTION OF CANDIES AND GUMS BETWEEN 2012 AND 2017 (THOUSAND TONS)

Source: Brazilian Chocolate, Cocoa, Peanuts and Candies Industry Association (ABICAB).[22]



Although production and consumption reduced between 2012 and 2017, ABICAB[23] has optimistic expectations for the sector and associates performance with the eco-

21 Available at: http://www.abicab.org.br/

22 Available at: http://www.abicab.org.br/

23 Available at: http://www.abicab.org.br/

nomic crisis and the change in the eating habits and consumption patterns of Brazilians.

Considering this possibility the candies and gums industry has adopted strategies to achieve better results in the coming years. It is investing in the manufacture of products that contain more functional, organic and zero-sugar ingredients, and implementing new smaller packaging options aimed at individual consumers.

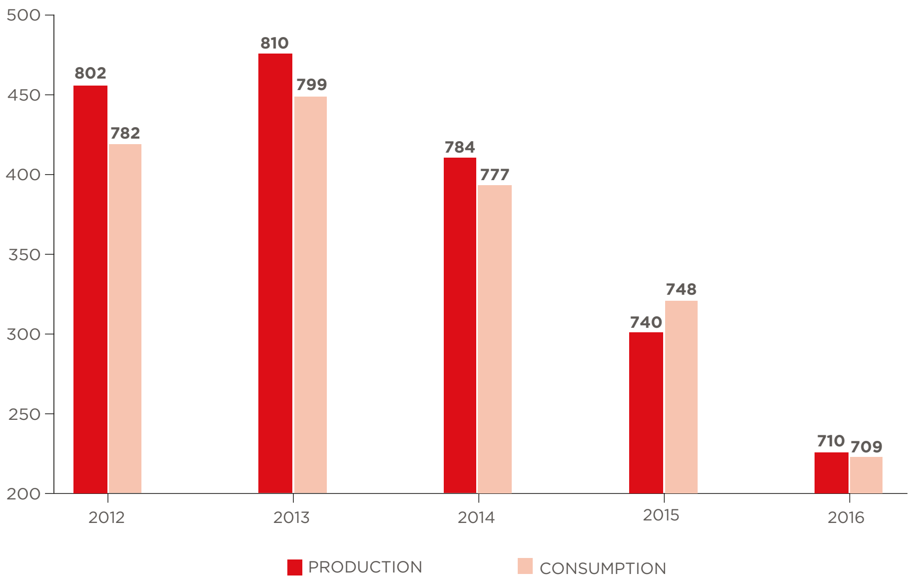
In line with the segment of candies and gums, the national production and consumption of chocolate also show a downward trend over the last few years. Although chocolate is a sweet spot in the preference of Brazilians, socioeconomic factors and changes in consumption patterns can directly influence the demand for the product. According to ABICAB[24] data, between the years 2012 and 2016:

- The national production of chocolate reduced 11.47%, about 3.00% per year;
- Domestic consumption reduced by 9.91%, approximately 2.58% per year, but was offset by the 81.14% growth in imports during the same period, about 16.01% per year.

24 Available at: http://www.abicab.org.br/

Graph 08

BRAZILIAN PRODUCTION AND CONSUMPTION OF CHOCOLATE[25] BETWEEN 2012 AND 2016 (THOUSAND TONS)



Source: Brazilian Chocolate, Cocoa, Peanuts and Candies Industry Association (ABICAB).[26]

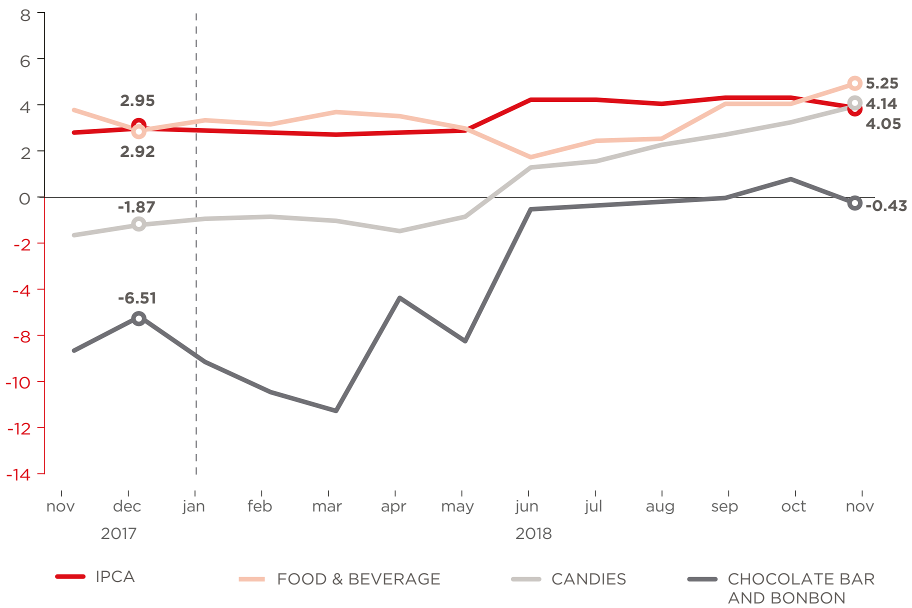
For the years between 2017 and 2018, no data were found on the national production and consumption of this industry, but it is a fact that the price level of the economy has a direct impact on the level of consumption. In this sense, observing the price variation of the products from November 2017 to November 2018, it is possible to verify that only the category of candies presents levels higher than the inflation in some specific months. The food and beverage sector started to have a positive variation from June 2018, while the chocolate bar and the candy bar presented a negative performance in almost the entire period covered.

25 Including chocolate powder.

26 Available at: http://www.abicab.org.br/

Graph 09

PRICE PAID BY CONSUMERS FOR PRODUCTS OF FOOD, CANDY AND CHOCOLATE INDUSTRY COMPARED TO THE IPCA BETWEEN NOVEMBER 2017 AND NOVEMBER 2018



Source: IBGE - Broad National Consumer Price Index.[27]

It is interesting to note that the entire food industry felt the effect of the truck drivers strike, which occurred in May 2018 in Brazil. As of June 2018, the indices that represent this industry show a movement of high that remain during the following months. The strike is not the only factor that affects the price movement of an economy, but considering that the food sector was most strongly affected it is reasonable to say that it is still feeling the effects of the impacts generated in May.

Regarding the world market for chocolates, Graph 10 shows the evolution of the international trade of chocolates between 1997 and 2018. According to Comex Stat information, in 1997 the volume exported was 18.7 million tons, while for 2017 the volume of exports increased to 22.6 million tons. There was a growth of 20.62% in twenty years, an average of 0.94% per year.

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

Comparing the years 2017 and 2018, export volume growth was 10.48%. It is interesting to note that in the last 10 years the volume of exports has reduced, with the exception of 2016, which increased by 9.96% compared to 2015 and 2018 compared to 2017.

COMMERCIAL BALANCE: CHOCOLATE DEFICIT AND PEANUT SURPLUSES

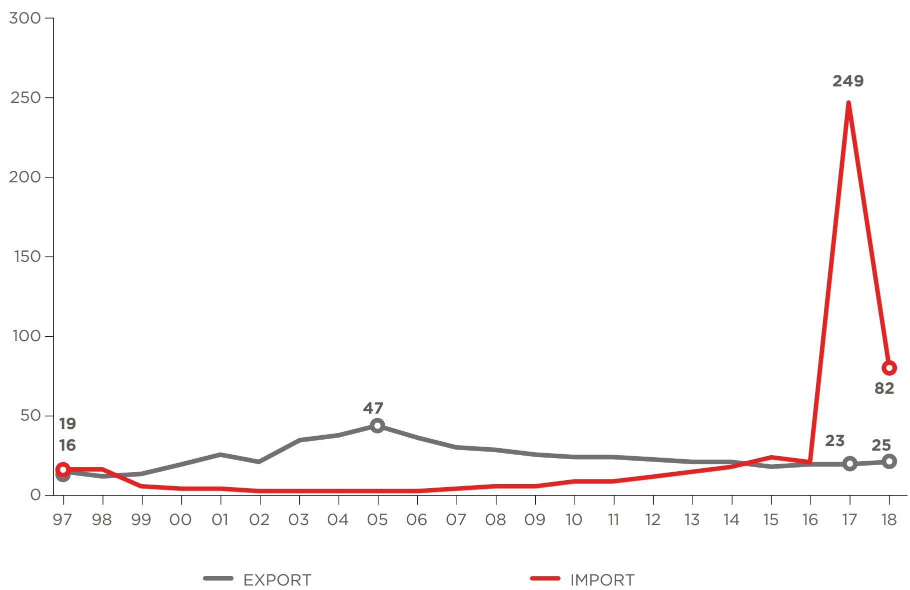
Regarding the international trade of chocolates, in 2015 Brazil went from exporter to importer category, noticing a sudden increase in imports in 2017, where it reached a record volume of 249 million tons, well above the 20.8 million tons of the year previous. Two phenomena are associated with this behavior:

- The reduction in cocoa production in the national territory, a movement that began to be observed between 2015 and 2016 and ended up affecting the entire production chain;

- Increase in world cocoa production, leading to lower prices paid to producers and making the domestic industry less competitive.

Graph 10

EVOLUTION OF INTERNATIONAL TRADE OF CHOCOLATES[28] BETWEEN 1997 AND 2018* (MILLION TONS)



* Values refers to until November 2018.
Source: Comex Stat.[29]

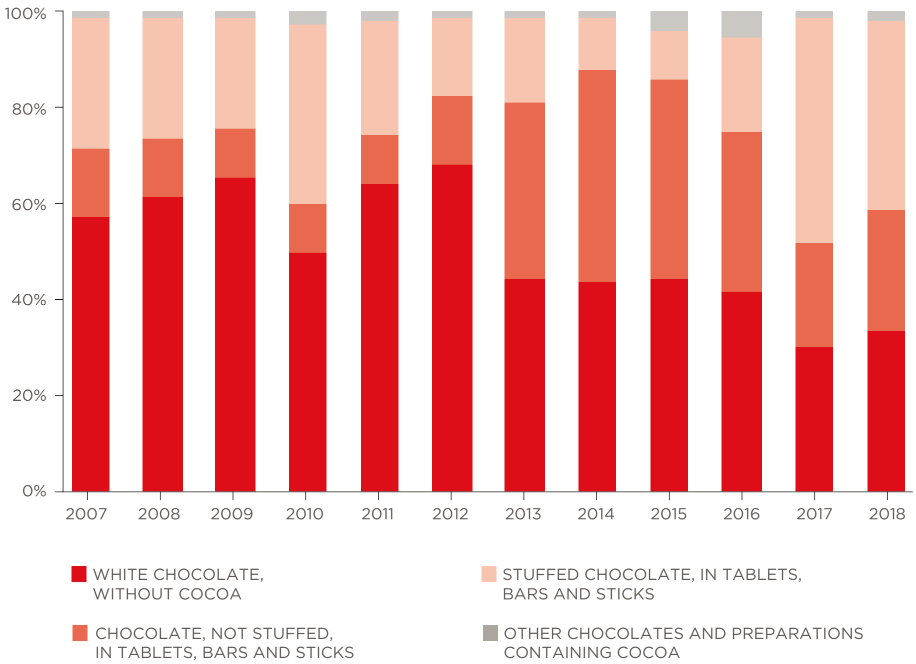
The increase of this production was distributed among the different types of chocolate that Brazil imports, however, the main responsible for the high volume variation imported in 2017 is *Chocolate not stuffed, in tablets, bars and sticks*. While in 2016, Brazil imported only 4.2 million tons of this type of chocolate, in 2017 that number jumped to 118.3 million tons.

28 The products listed in Annex 1 have been considered.

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

Graph 11

BRAZILIAN CHOCOLATE IMPORTS DIVIDED BY TYPE OF PRODUCT BETWEEN 2007 AND 2018*



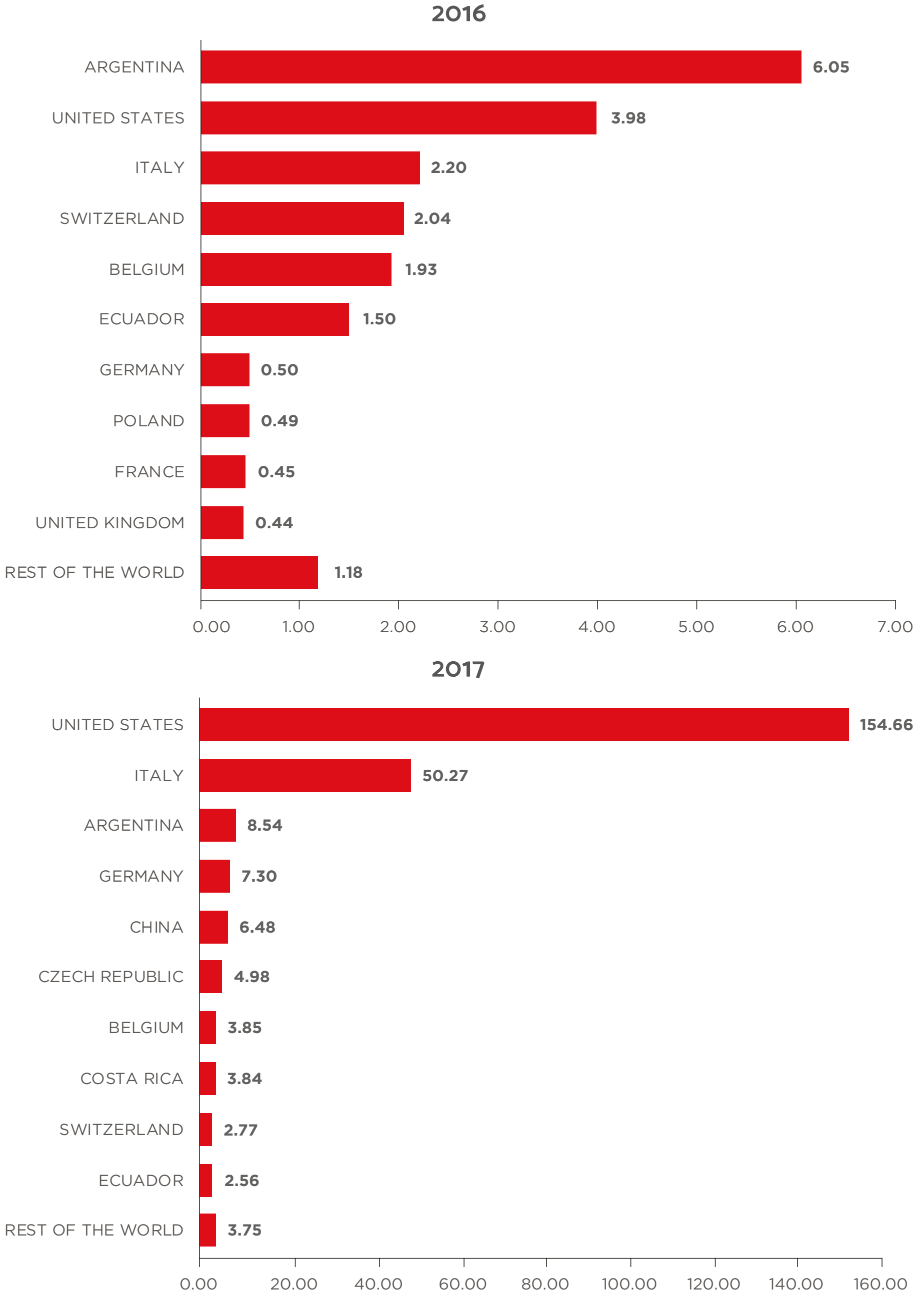
* Values refers to until November 2018.
Source: Comex Stat.[30]

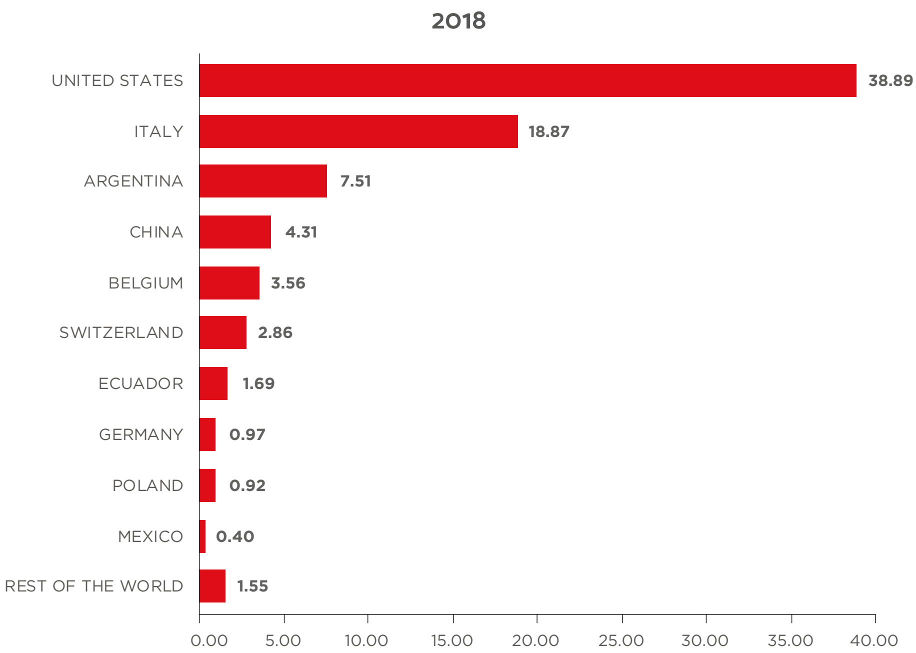
In relation to the origin of these imports, the United States occupied the position of the main supplier to Brazil, passing ahead of the leader: Argentina. In 2016, Argentina exported about 29.13% of the total volume imported by Brazil. In 2017 and 2018, the United States represents 62.11% and 47.71% of the total volume, respectively.

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

Graph 12

MAIN CHOCOLATE EXPORTING COUNTRIES FOR BRAZIL IN 2016, 2017 AND 2018* (MILLION TONS)





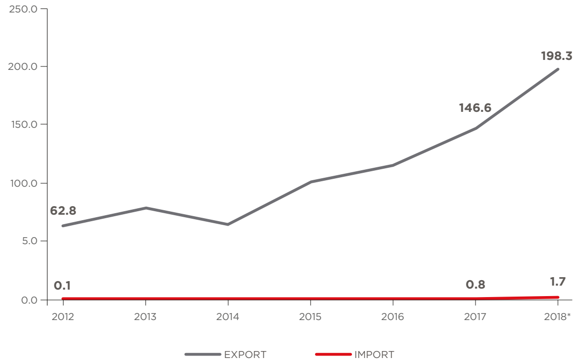
* Values refers to until November 2018.
Source: Comex Stat (2018).[31]

Like chocolate, the trade balance of Brazilian peanuts also has a sudden increase, although it is from 2012 onwards. In the period of just one year, between 2011 and 2012, the volume exported increased by 798.56%, from 7 million tons in 2011, to 62.8 million tons in 2012. The movement of exports, in most of the years, makes 2018 the year with the largest volume of exports, about 198.3 million tons.

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

Graph 13

INTERNATIONAL EVOLUTION OF PEANUT[32] TRADE BETWEEN 1997 AND 2018* (MILLIONS OF TONS)



* Values refers to until November 2018.
Source: Comex Stat (2018).[33]

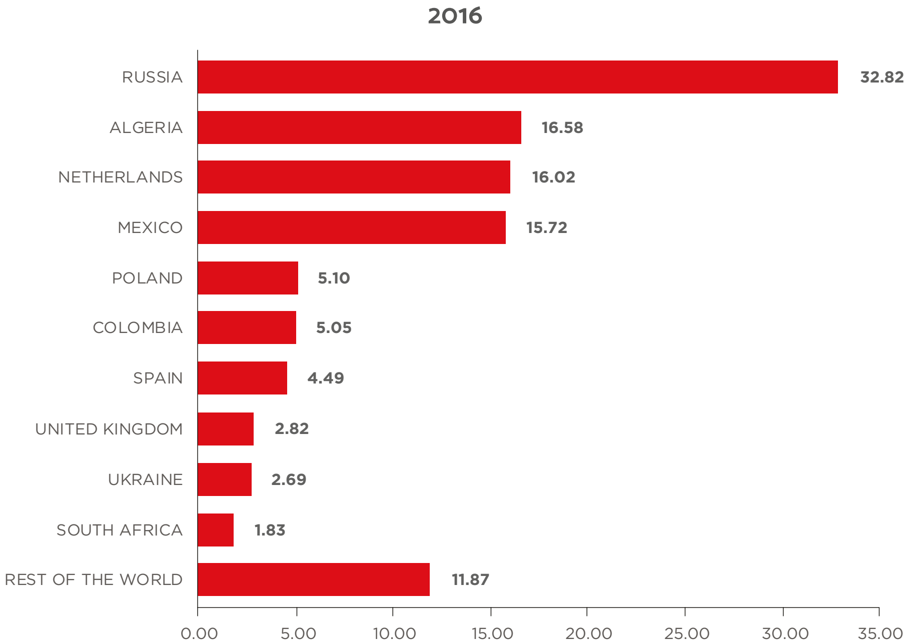
Among the causes of this increase, the expansion of peanut exports, associated with an increase in the number of importing countries. The main destination of these exports has been Russia. In 2016, the country was responsible for consuming 28.54% of Brazilian peanut exports, in 2017 this share rose to 33.32% and in 2018 reached 38.24%

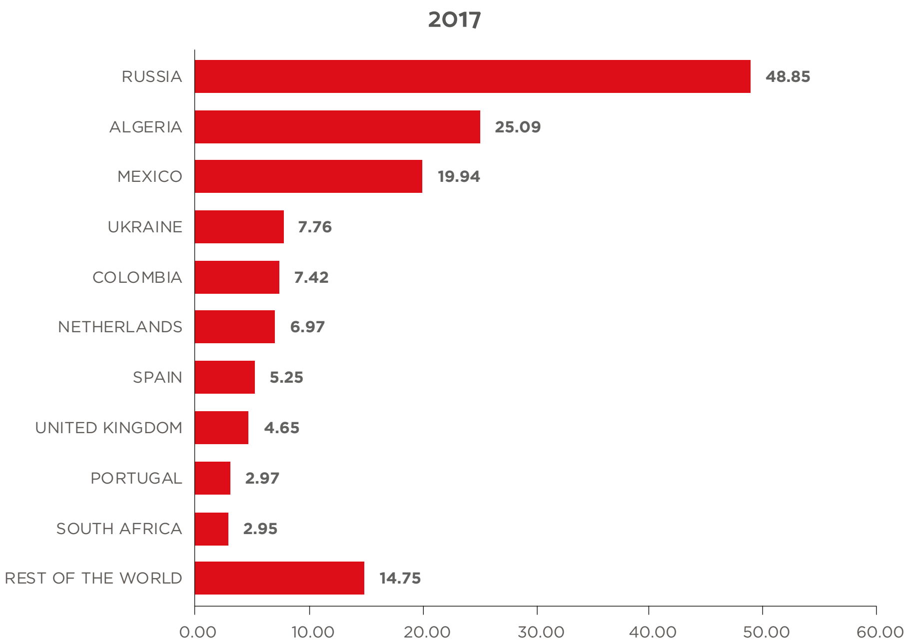
32 The products listed in Annex 1 have been considered.

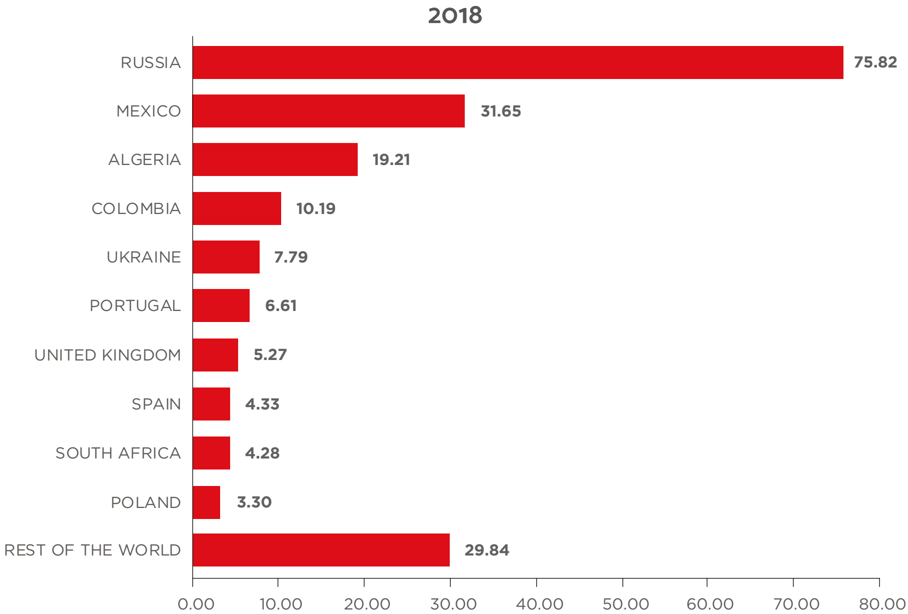
33 Available at: http://comexstat.mdic.gov.br/pt/geral

Graph 14

MAIN COUNTRIES IMPORTING PEANUTS FROM BRAZIL IN 2016, 2017 AND 2018* (MILLION TONS) * VALUES REFERS TO UNTIL NOVEMBER 2018.







* Values refers to until November 2018.
Source: Comex Stat (2018).[34]

The performance of exports is directly related to the behavior of the agricultural production as a whole, and not only of the crops and volumes produced that reflect in the increase of the harvests, there is also a higher quality of the standards reached, which provides more access to the markets and better remuneration.

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

1. THE INDUSTRY OF CHOCOLATE, PEANUT AND CANDIES IN BRAZIL AND IN THE WORLD

For the analysis of the sector of chocolate, peanuts and candies from Brazilian industry, it is important to consider the entire production chain. Therefore, throughout this section, the data of the first link of this chain is presented. It is presented the production data from Brazil and for the world, harvested area and productivity for cocoa and peanut crops.

1.1. THE CHOCOLATE SECTOR IN ITS INITIAL POINT

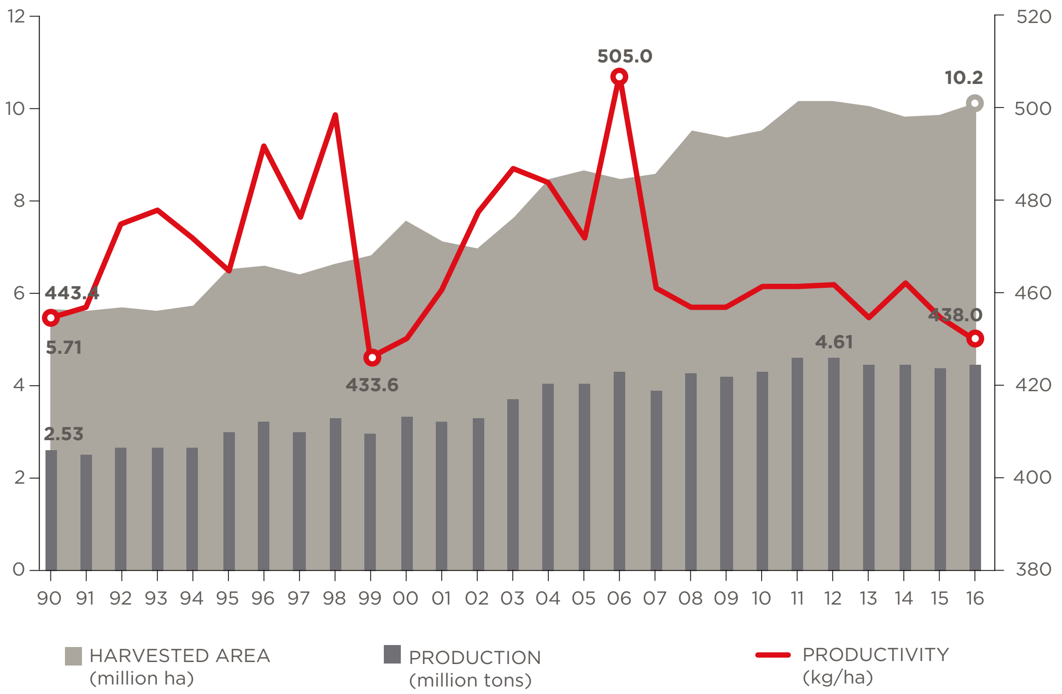
Cocoa is a fruit known worldwide. According to the Executive Committee of the Plan of Cacao Cropland[35] (CEPLAC), the plant originated in the Amazon basin and its seeds were spreading to other places across the Amazon River. The plant has stimulating properties and is the main raw material in the production of chocolates.

World cocoa production has grown over the years. According to Graph 1, it is possible to observe the evolution of world cocoa production between 1990 and 2016. In 1990 the world production was 2.53 million tons, while for 2016 this number increased to 4.47 million tons. There was a raise of around 76.4% of world production in this period, an average of 2.21% per year.

35 Available at: http://www.ceplac.gov.br/radar/radar_cacau.htm

Graph 1

GLOBAL EVOLUTION OF PRODUCTION, PRODUCTIVITY AND HARVESTED AREA OF COCOA BETWEEN 1990 AND 2016 (MILLION HA, KG/HA AND MILLIONS OF TONS)



Source: Food and Agriculture Organization of the United Nations– FAO Stat.[36]

Graph 1 also shows the relationship between world production, harvested area and productivity in this sector. The harvested area increased by 78.5% between 1990 and 2016, approximately 2.25% per year, while the productivity of the sector showed a retraction of 1.22%. Although the productivity reached its isolated peak in 2006, with a production of 505 kg/ha, it has been losing strength since then, considering the whole period analyzed (1990-2016), the fall reaches approximately -0.05% per year.

Despite a big reduction in productivity since 2006, the value obtained was an isolated episode. Considering only the period between 2007 and 2016, the reduction in

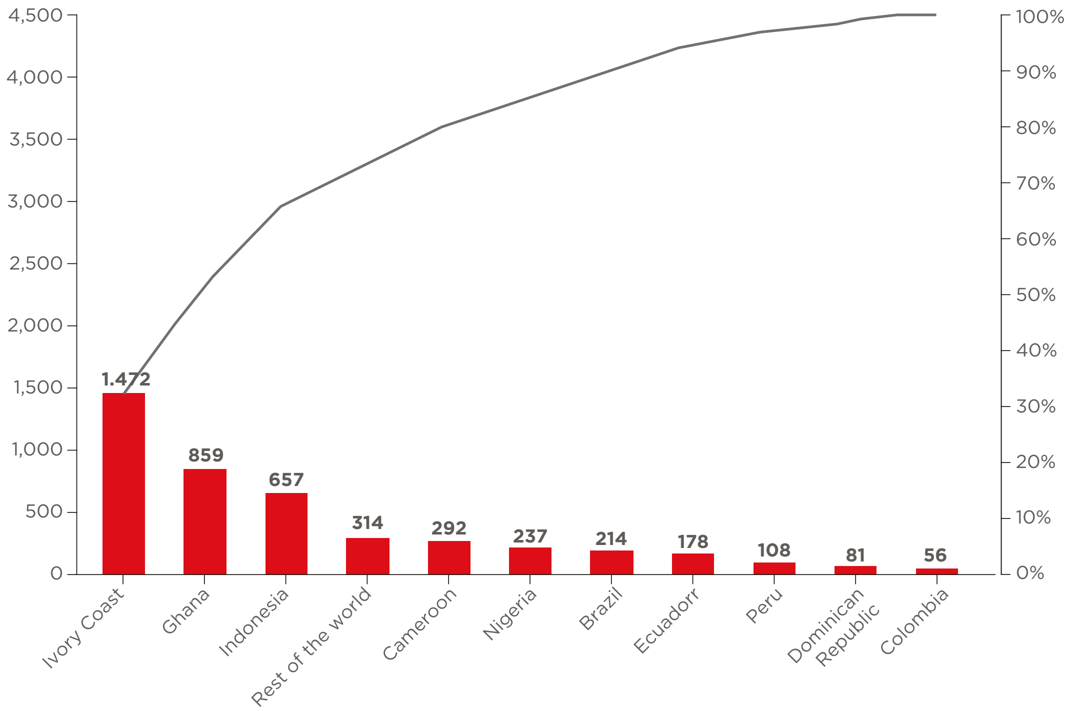
36 Available at: http://www.fao.org/faostat/en/#data

productivity is 2.86%, linked to the growth of 17.93% of the harvested area, 1.85% per year. This increase in the area also allowed production growth for this period, about 14.56%, approximately 1.52% per year.

In this world context, Ivory Coast was the main producer of cocoa in 2016, responsible for 32.96% of total production. Ghana is in second place, with around 19.23% of global production, followed by Indonesia with 14.71%, see Graph 2.

Graph 2

WORLD PRODUCTION OF COCOA IN 2016 (THOUSAND TONS)



Source: Food and Agriculture Organization of the United Nations– FAO Stat.[37]

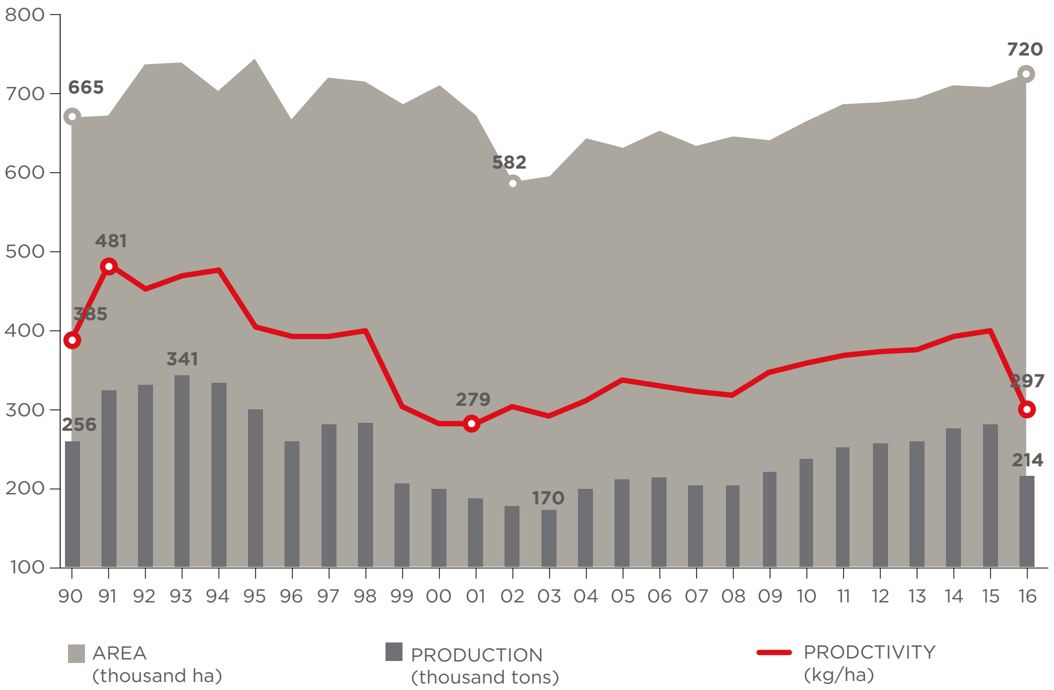
Even with all the representativeness of the African continent, Brazil had a 4.79% share of world production in 2016, ranking the seventh position in the ranking of the largest

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

producers. According to CEPLAC, cocoa production in Brazil officially began in 1679 through the signing of the royal charter that authorized the cultivation of the product. Graph 3 shows the evolution of cocoa production in Brazil between 1990 and 2016.

Graph 3

BRAZILIAN EVOLUTION OF PRODUCTION, PRODUCTIVITY AND HARVESTED AREA OF CACAO BETWEEN 1990 AND 2016 (THOUSAND HA, KG/HA AND THOUSAND TONS)



Source: Food and Agriculture Organization of the United Nations– FAO Stat.[38]

It is possible to observe that, unlike the world production, there is a downward movement in the Brazilian production of cocoa between 1990 and 2016, with a reduction of 16.6%, representing a reduction of about 0.69% per year. Brazil produced approximately 256 thousand tons in 1990, in the following years, until 1993, maintained a rhythm of production increasing and reaching its peak with 340.9 thousand tons, from that

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

date the behavior of production volume was reversed and fell over the years, reaching around 214 thousand tons in 2016.

As with production, the harvested area of cocoa increased by 8.3% over the whole period, about 0.31% per year. However, productivity had a negative performance, reducing by 22.9% between 1990 and 2016, representing a decrease of 1% per year. Some factors may explain the decline in national cocoa production since the 1990s, such as:

- Regarding the international scenario, there was a general reduction in the prices of the product, which in part can be explained by the greater productivity gain in the period;

- In the national scenario, in 1995, the national cocoa plantation was contaminated by fungi, developing a disease called Witch's Broom, which causes severe damage to the cocoa plantation;

- In addition, adverse climatic conditions in the period were unfavorable to cultivation.

In terms of income the cocoa crop was positive for the years 2015 and 2016[39]. In 2015, the average income per hectare was positive and it turned around around R$ 8.6 thousand, already for the year 2016 the value, although positive, was a little lower, reaching around 6 thousand. For cocoa, as is a perene crop, it is worth mention that there are three main types of cultivation that impact the income: renovation, irrigated and implanted.[40]

Table 1

AVERAGE INCOME PER HECTARE FOR THE COCOA CROP IN 2016 AND 2017

YEAR	AVERAGE INCOME	COST	PROFIT
2015	R$ 21,097.52	R$ 12,465.60	R$ 8,631.92
2016	R$ 17,885.04	R$ 11,797.80	R$ 6,087.24

Source: FAO Stat[41]/Conab.[42]

39 Data concerning the state of Bahia of Brazil.

40 Available at: http://www.agricultura.gov.br/assuntos/camaras-setoriais-tematicas/documentos/camaras-setoriais/cacau/anos-anteriores/programa-de-desenvolvimento-sustentavel-para-as-regioes-produtores-de-cacau.pdf

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

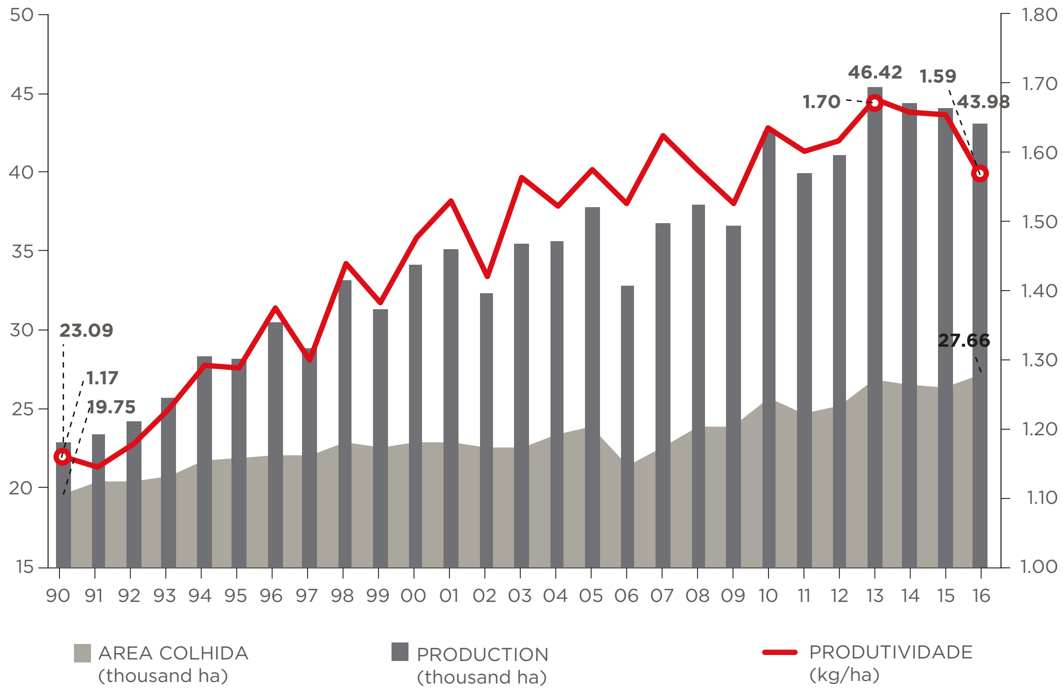
42 Available at: https://www.conab.gov.br/info-agro/custos-de-producao/planilhas-de-custo-de-producao

1.2 THE PEANUT SECTOR IN ITS INITIAL POINT

Peanut is a food with high nutritional value and such characteristic makes its importance in the food industry. Its use goes beyond food when in the form of oil, it can be used in the manufacture of paints, leather clothes, soap, cosmetics, among others. Their skin are also used to produce plastics, plasters, abrasives, cellulose and fuel. Worldwide, the production of peanuts over the years, and, according to Graph 4, it is possible to understand this evolution between 1990 and 2016.

Graph 4

WORLD PRODUCTION, PRODUCTIVITY AND HARVESTED AREA OF PEANUTS WITH SKIN BETWEEN 1990 AND 2016 (MILLION HA, TON/HA AND MILLIONS OF TONS)



Source: Food and Agriculture Organization of the United Nations– FAO Stat.[43]

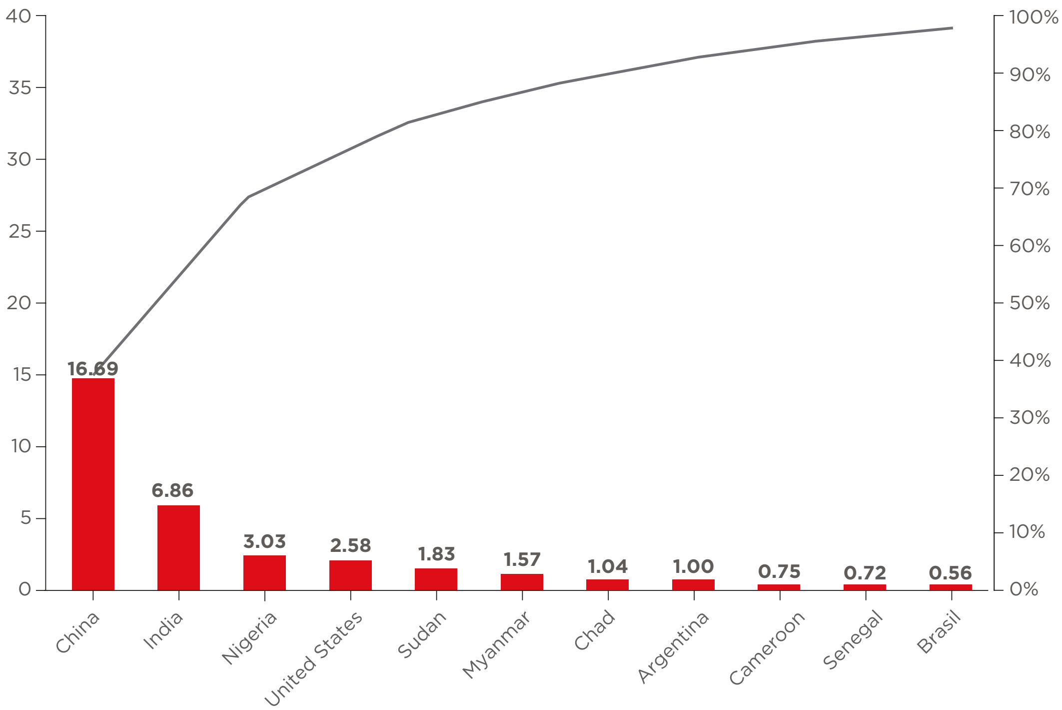
43 Available at: http://www.fao.org/faostat/en/#data

In 1990, global production was 23.9 million tons, and in 2016 the total produced was 43.98 million tons. There was a growth of 90.5% of production over the whole period, about 2.51% per year. The harvested area has also grown, but with less intensity. It went from 19.75 million hectares in 1990 to 27.66 million hectares in 2016, growing about 40.4% between 1990 and 2016, at about 1.3% per year. The fact that the growth of the area is less intense than the production gains can be explained by productivity growth, which has also improved positively over time. In 1990 world production capacity was 1.17 tons per hectare, while in 2016 its productivity increased to 1.59 tons per hectare. There was a growth of 36% during the period, about 1.19% per year.

China and India together were responsable for more than half of all the volume produced worldwide, together the two countries hold about 53.5% of production, which amounts to almost 24 million tons, see Graph 5. Only China, leading the country in this ranking, produced 16.69 million tons in 2016, about 37.9% of the world total. India, second in the ranking, produced 6.86 million tons, approximately 15.6% of total global production.

Graph 5

WORLD PRODUCTION OF PEANUTS WITH SKIN IN 2016 (MILLION TONS)



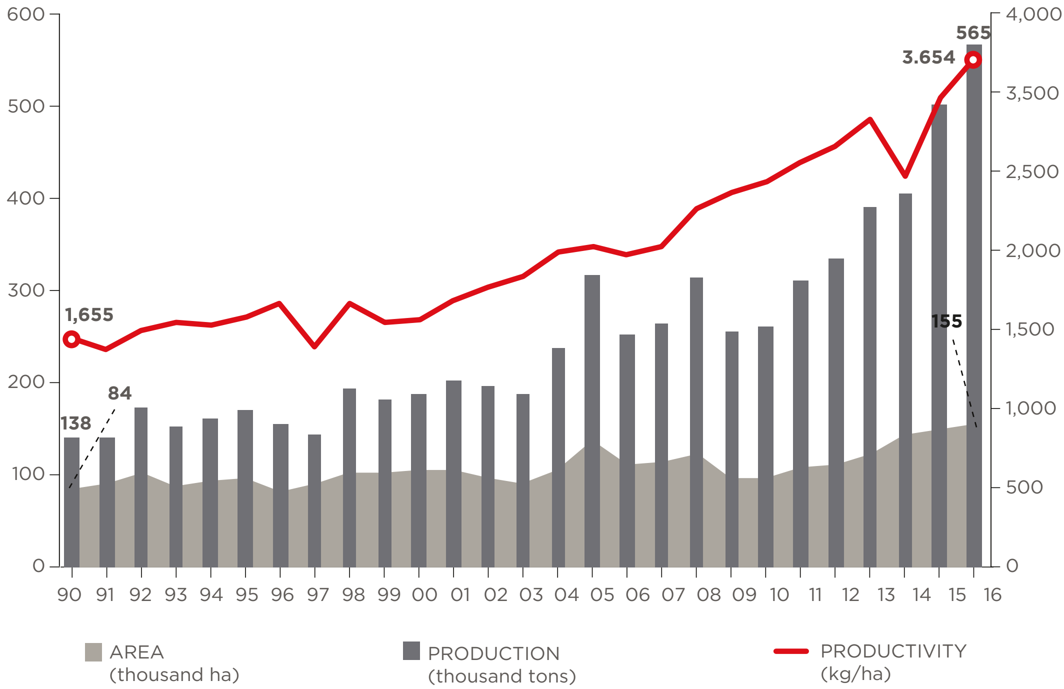
Source: Food and Agriculture Organization of the United Nations– FAO Stat.[44]

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

As for Brazil, the country takes the eleventh place in the world ranking, with a production of 0.56 million tons, representing only 1.3% of the total produced in the world. Despite the modest participation in the world scenario, Brazilian production has been growing since 1990 and has become more expressive. Graph 6 covers the evolution of Brazilian peanut production with skin, the productivity of the sector and the size of the harvested area between 1990 and 2016.

Graph 6

BRAZILIAN EVOLUTION OF PRODUCTION, PRODUCTIVITY AND HARVESTED AREA OF PEANUTS WITH SKIN BETWEEN 1990 AND 2016 (THOUSAND HA, KG/HA AND THOUSAND TONS)



Source: Food and Agriculture Organization of the United Nations– FAO Stat.[45]

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

In 1990, the production was 138.3 thousand tons while in 2016 this volume rise to 564.8 thousand tons, that is, there was a 308% increase in production, about 5.56% a year. The harvested area, which in 1990 was 83.6 thousand hectares, increased to 154.6 thousand hectares in 2016, an increase of 84.91% in the period, approximately 2.39% per year. Productivity also increased over the years, in 1990 production was 1,654.9 kilograms per hectare, this number jumped to 3,654.2 kilograms per hectare in 2016. The observed increase in peanut yield is about 120.81% between 1990 and 2016, approximately 3.09% per annum. Therefore, it is important to emphasize that the growth of this production has been superior to the evolution of the use of the area, being explained by the productive advances that the culture has perceived over time.

When considering the average income of peanut for the years 2015 and 2016 it is possible to notice that in the first year there was a negative average income of R$ 175.91, in 2016 the scenario was more favorable and the average income was positive, R$ 258.38.

Table 2

AVERAGE INCOME PER HECTARE FOR THE PEANUT CROP IN 2016 AND 2017

YEAR	AVERAGE INCOME	COST	PROFIT
2015	R$ 2,924.88	R$ 3,100.80	-R$ 175.91
2016	R$ 3,775.89	R$ 3,517.51	R$ 258.38

Source: FAO Stat[46]/Agrolink[47] /Conab[48]

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

47 Available at: https://www.agrolink.com.br/cotacoes/diversos/amendoim/

48 Available at: https://www.conab.gov.br/info-agro/custos-de-producao/planilhas-de-custo-de-producao

1.3 THE AGRO-INDUSTY OF CANDIES, PEANUTS AND CHOCOLATE IN BRAZIL

To understand a little more about the size of this industry the Annual Industrial Survey Company (PIA - Company) made available by IBGE becomes a starting point. Table 3 shows that the value of industrial production of chocolates, candies and confectionery for the year 2016 is about R$ 12.63 billion.

Table 3

INDUSTRIAL PRODUCTION OF CHOCOLATES, CANDIES AND CONFECTIONERY IN 2016 (R$ BILLION)

TYPES OF INDUSTRIAL ACTIVITIES AND PRODUCTS	VALUE OF PRODUCTION	%
BONBONS AND CHOCOLATE IN BARS, CONTAINING COCOA	7.74	61.3%
CANDIES, PASTILLES, WHITE CHOCOLATE AND OTHER CONFECTIONERY, NOT CONTAINING COCOA, INCLUDING SUGAR	2.68	21.2%
COCOA OR CHOCOLATE POWDER, NOT CONTAINING ADDED SUGAR OR OTHER SWEETENING MATTER	0.96	7.6%
GRANULATED CHOCOLATE	0.45	3.6%
CONFECTIONARY, CANDIES, PASTILLES OR OTHER SIMILAR CONFECTIONS CONTAINING COCOA	0.38	3.0%
CHOCOLATES AND OTHER FOOD PREPARATIONS CONTAINING COCOA, WEIGHING MORE THAN 2 KG, NOT FOR IMMEDIATE CONSUMPTION	0.38	3.0%
COCOA OR CHOCOLATE POWDER, CONTAINING ADDED SUGAR OR OTHER SWEETENING MATTER	0.05	0.4%
TOTAL	**12.63**	**100%**

Source: IBGE - Annual Industrial Survey - Product.[49]

Among the types of industrial activities and products, the Bonbons and chocolates in bars containing cacao is the most expressive, being responsible for 61.3% of the total value of the industrial production. In second place is the production of candy, pastilles, white chocolate and other confectionery, without cocoa, even without sugar, with 21.2% of the total value of industrial production in 2016.

Considering also the peanut, there is an increase of R$ 1.25 billion to the R$ 12.63 billion of the industrial production of candy and chocolates, causing this segment as a whole to reach R$ 13.88 billion in industrial production.

Table 4

INDUSTRIAL PRODUCTION OF PEANUTS IN 2016 (R$ BILLION)

TYPES OF INDUSTRIAL ACTIVITIES AND PRODUCTS	VALUE OF PRODUCTION	%
PEANUT, OTHER THAN ROASTED, SALTED OR OTHERWISE PRESERVED	0.47	38.0%
PEANUTS, CASHEW NUTS, BRAZILIAN NUTS AND SIMILAR ROASTED, SALTED OR OTHERWISE PRESERVED	0.77	62.0%
TOTAL	**1.25**	**100%**

Source: IBGE - Annual Industrial Survey - Product.[50]

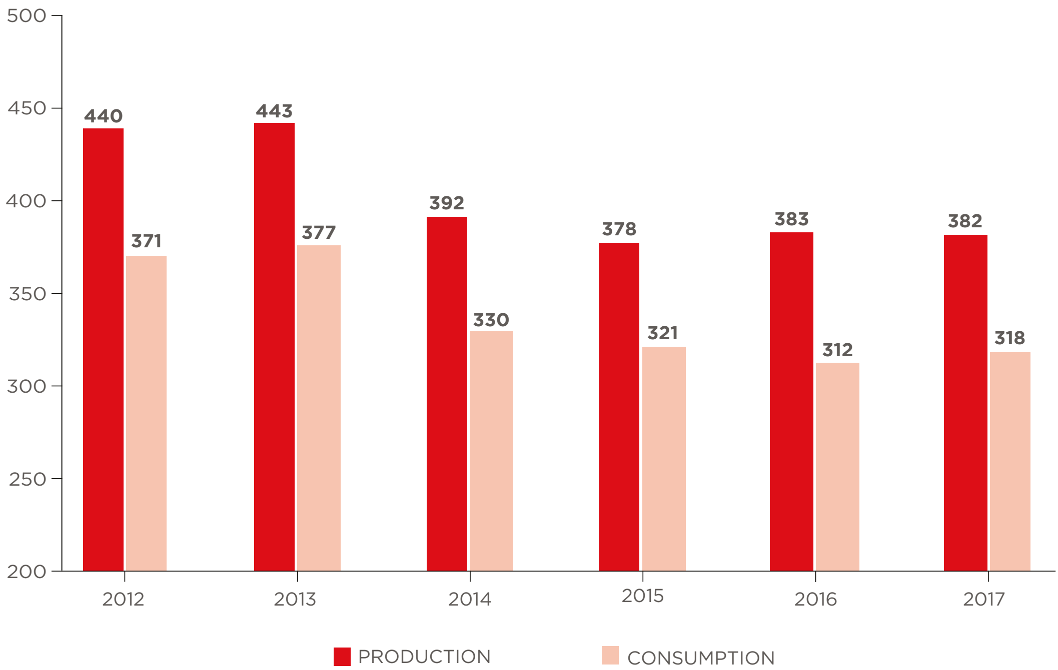
The segment that includes peanuts, cashew nuts, Brazil nuts and similar roasted, salted or otherwise preserved foods is the most significant category within industrial peanut production, with 62.0% of the total value produced in 2016, about R$ 770 thousand. The segment that includes peanuts, other than roasted, salted or otherwise preserved, holds the remaining 38% of the production value of this industry, which represents about R$ 470 thousand.

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

When considering the candy industry's production of chocolates and peanuts, it is important to understand that it is divided into several products. Graph 7 presents the production and consumption of a niche specific to that industry: candies and gums.

Graph 7

BRAZILIAN PRODUCTION AND CONSUMPTION OF CANDIES AND GUMS BETWEEN 2012 AND 2017 (THOUSAND TONS)



Source: Brazilian Chocolate, Cocoa, Peanuts and Candies Industry Association (ABICAB).[51]

In 2012, the national production of candies and gums was approximately 440 thousand tons, by 2017, the quantity produced reduced to about 382 thousand tons. There was a reduction of 13.18% in production between 2012 and 2017, an approximate reduction of 2.79% per year. Domestic consumption also declined over the same period, from 371 thousand tons in 2012 to 318 thousand tons in 2017. Demand retracted 14.29% between 2012 and 2017, about 3.04% a year.

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

Although production and consumption reduced between 2012 and 2017, ABICAB[52] has optimistic expectations for the sector over the next few years. The institution reinforces that although production remained practically stable between 2016 and 2017, consumption showed a slight growth of 1.92% in 2017 compared to the previous year. One possible explanation for the fact that consumption has been lower in previous years is in the question of the economic crisis that devastated the country and limited the purchasing power of consumers.

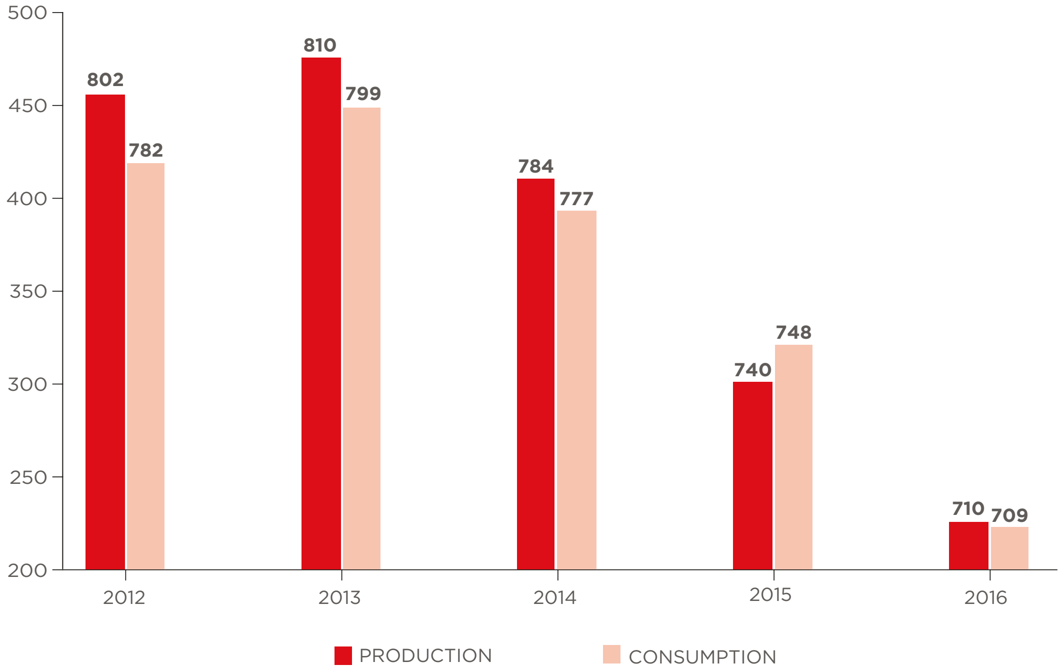
Besides the economic crisis, there are other factors that can be considered, such as the change in eating habits and consumption patterns of Brazilians. Considering this possibility the candies and gums industry has adopted strategies to achieve better results in the coming years. It is investing in the manufacture of products that contain more functional, organic and zero-sugar ingredients, and implementing new smaller packaging options aimed at individual consumption.

In line with the segment of candies and gums, the national production and consumption of chocolate have a tendency of reduction over the last years, see Graph 8. Although chocolate be a sweet in the preference of Brazilians, socioeconomic factors and changes consumer patterns can directly influence demand for the product.

52 Available at: http://www.abicab.org.br/

Graph 8

BRAZILIAN PRODUCTION AND CONSUMPTION CHOCOLATE[53] BETWEEN 2012 AND 2016 (THOUSAND TONS)



Source: Brazilian Chocolate, Cocoa, Peanuts and Candies Industry Association (ABICAB).[54]

Between the years of 2012 and 2016, the national production of chocolate has retracted. In 2012, production of 802 thousand tons reduced to 710 thousand tons in 2016. The decrease in volume produced was 11.47% during this period, around 3.00% per year. Consumption also showed a downward movement in the analyzed period. In 2012, domestic consumption was 787 thousand tons, already in 2016, the volume consumed dropped to 709 thousand tons. The total reduction in the period covered was 9.91%, approximately 2.58% per year.

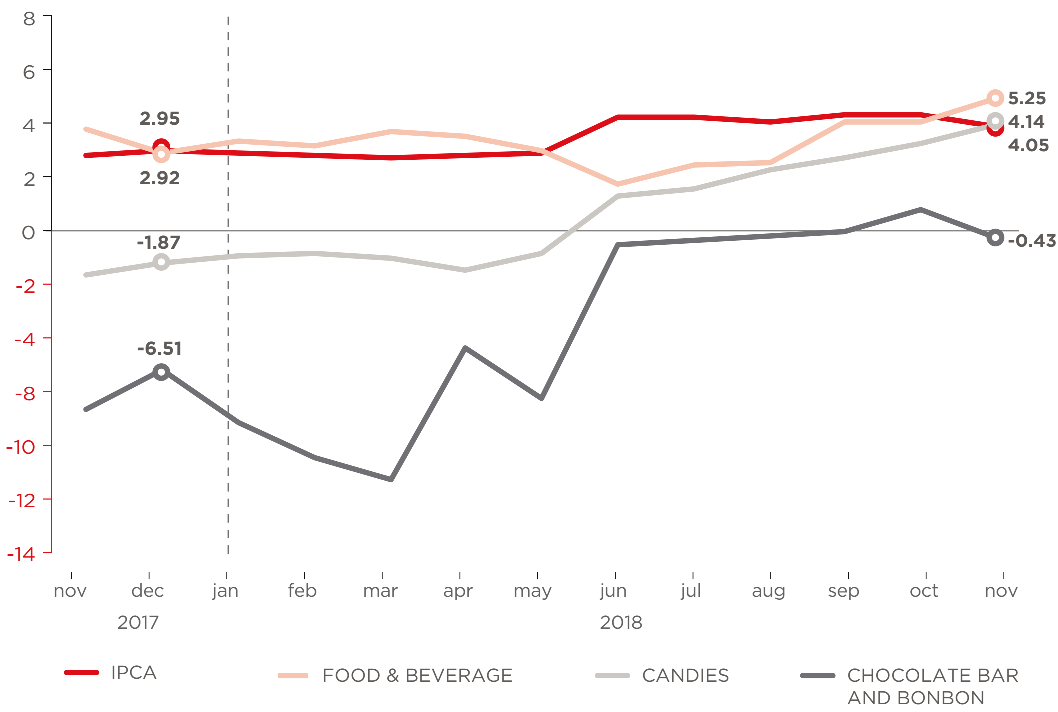
53 Including chocolate powder.

54 Available at: http://www.abicab.org.br/

For the years 2017 and 2018 no data on the national production and consumption of this industry were found, but considering that the price level of the economy has a direct impact on the level of consumption. Graph 9 shows how food prices in a general way and chocolates and candies specifically behaved in relation to the price index of the national economy. Regarding the evolution of the 12-month accumulated prices of food, candy and chocolate products with the IPCA, Graph 9 shows that in 2017 the IPCA ended the year at 2.95%, while the food and beverage sector closed down 1.87% for the same period and the sector of bullets in high of 2.92%, very close to that of inflation. The segment of chocolates in bars and bonbons remained negative at 6.51% at the end of 2017.

Graph 9

PRICE PAID BY CONSUMERS FOR PRODUCTS OF FOOD, CANDY AND CHOCOLATE INDUSTRY COMPARED TO THE IPCA BETWEEN NOVEMBER 2017 AND NOVEMBER 2018



Source: IBGE - Broad National Consumer Price Index.[55]

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

Analyzing the price variation of the products from November 2017 to November 2018, it is possible to verify that only the category of candies presents levels higher than the inflation in some specific months. The sector of food and beverages started to have a positive variation from June 2018, while the chocolate bar and candy presented a negative performance in almost all the period covered, varying positively by only 0.93% in the month of October 2018.

It is interesting to note that the entire food industry felt the effect of the truck drivers strike, which occurred in May 2018 in Brazil. As of June 2018, the indices that represent this industry show a movement of high that remains during the following months. The strike is not the only factor that affects the price movement of an economy, but considering that the food sector was most strongly affected it is reasonable to say that it is still feeling the effects of the impacts generated in May.

THE TRUCK DRIVER'S STRIKE AND THE CHOCOLATE SECTOR

The month of May 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. One of the most impaired sectors was dairy, due to the high perishability of its raw material - milk. With this, the chocolate industry was also affected by having milk as one of its main raw materials. The Brazilian Association of Dairy Products reported that on the seventh day of the strike the sector already bittered a loss of 1 billion reais in the entire milk production chain. Large volumes of the beverage had to be discarded due to the high perishability of the product. In addition, factories were inoperative due to lack of fuel, supplies and packaging.

In addition to the dairy sector, there are other sectors that use milk as matter and were also heavily affected, the chocolate industry is one of them. Nestlé, the largest dairy producer and chocolate producer in Brazil, suffered from shortages of supplies and supplies in the company's factories. In a note of the company, underscored a drop in sales in the country from January to June 2018 compared to the same period last year. According to the company, sales decreased by 15.7% compared to the first half of January 2017. This result brought impacts not only to the Brazilian industry, as is the case of Nestlé, which had its performance compromised throughout the Latin America, since the operations and distribution of the company in Brazil were compromised in the period of the strike.

2. BRAZILIAN COMMERCIAL TRADE OF THE CHOCOLATE AND PEANUTS SECTOR

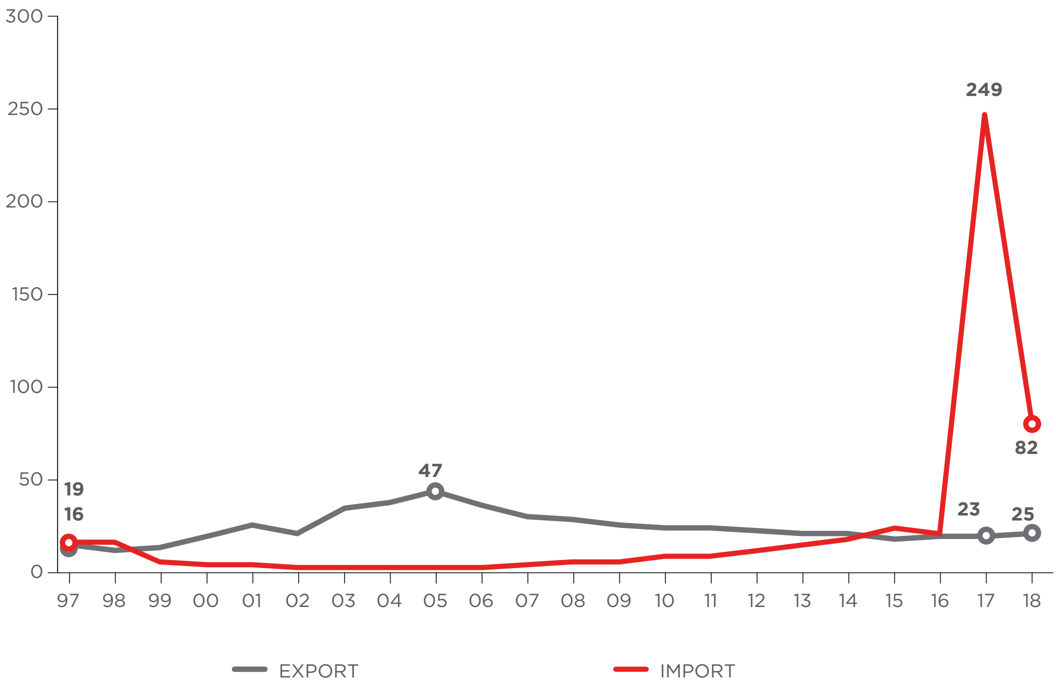
2.1 CHOCOLATE

Regarding the world market for chocolates, Graph 10 shows the evolution of the international trade of chocolates between 1997 and 2018. According to Comex Stat data, in 1997 the volume exported was 18.7 million tons, while for 2017 the volume of exports increased to 22.6 million tons. There was a growth of 20.62% in twenty years, an average of 0.94% per year.

Comparing the years 2017 and 2018, export volume growth was 10.48%. It is interesting to note that in the last 10 years the volume of exports has reduced, with the exception of 2016, which increased by 9.96% compared to 2015 and 2018 compared to 2017.

Graph 10

EVOLUTION OF INTERNATIONAL TRADE OF CHOCOLATES[56] BETWEEN 1997 AND 2018* (MILLION TONS)



56 The products listed in Annex 1 have been considered.

* Values refers to until November 2018.

Source: Comex Stat.[57]

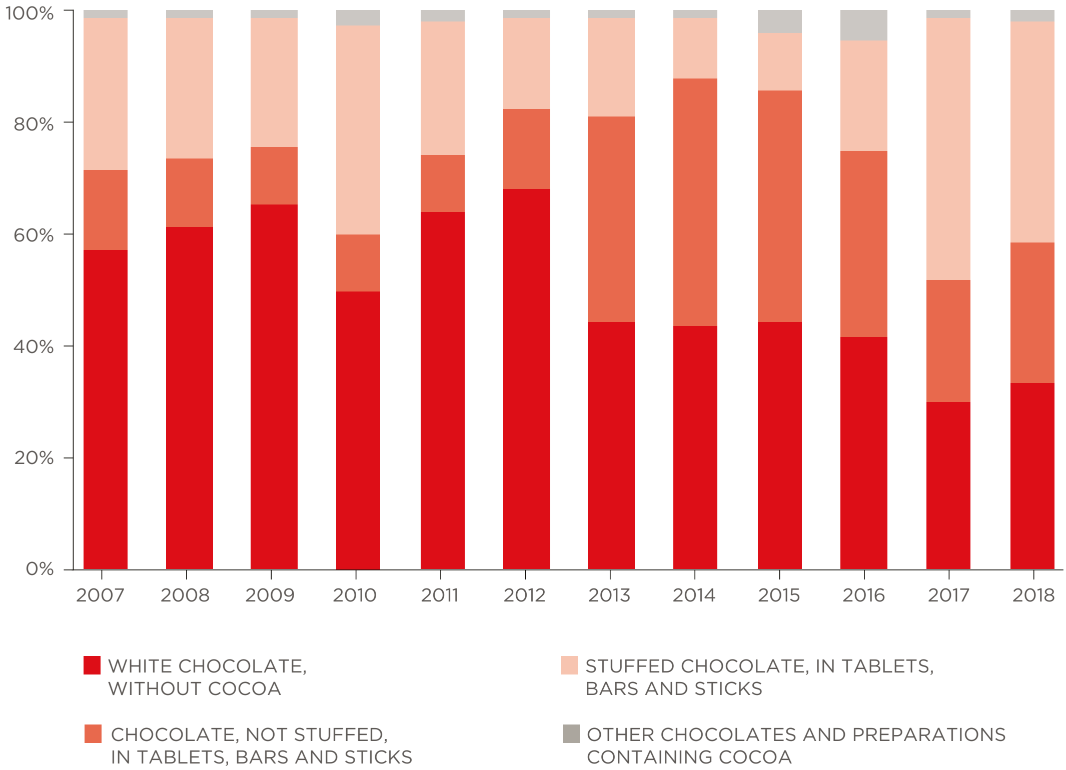
When analyzing imports for the period from 1997 to 2016, the volume of imports increased by 26.21%, about 1.23% per year. It is interesting to note that the volume imported in 2017 was well above the average in recent years. And while imports reduced by 67.26% to 2018 compared to 2017, it is possible to see that the volume of the last year was also considerably higher than the previous years of the series. Despite the large variation in the volume of imports in 2017, which was almost 11 times higher than the previous year (1,099%), the value of exports increased by about 32%. Part of this behavior can be explained by the fall in cocoa production in the national territory, a movement that began to be observed between 2015 and 2016 and ended up affecting the entire production chain.

When disaggregated by different categories of products, see Graph 11 indicates the evolution of the participation of the products in the Brazilian imports of chocolates between 2007 and 2018. It is possible to observe that the main product responsible for the high volume variation imported in 2017 is the unfilled Chocolate product, in bars and sticks, which jumped 2,730% in 2017 compared to 2016. In 2016, Brazil imported only 4.2 million tons of this type of chocolate, while in 2017 that number jumped to 118.3 millions of tons.

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

Graph 11

BRAZILIAN CHOCOLATE IMPORTS DIVIDED BY TYPE OF PRODUCT BETWEEN 2007 AND 2018*



* Values refers to until November 2018.

Source: Comex Stat (2018).[58]

All the products indicated in Graph 11 had an expressive increase. The category of other chocolates and food preparations containing cocoa was the second largest variation. In 2016 the imported volume was 8.7 million tons, while in 2017 the import was 74.3 million tons. There was a growth of 758% between 2016 and 2017. Stuffed chocolate, in tablets, bars and sticks also made great progress. The amount imported in 2016 was

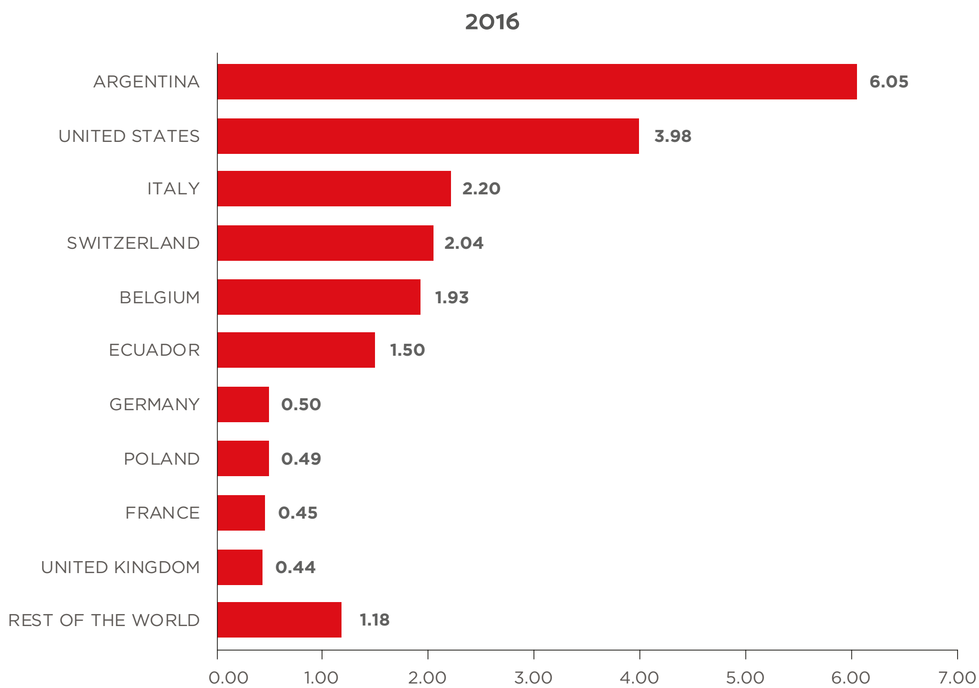
58 Available at: http://comexstat.mdic.gov.br/pt/geral

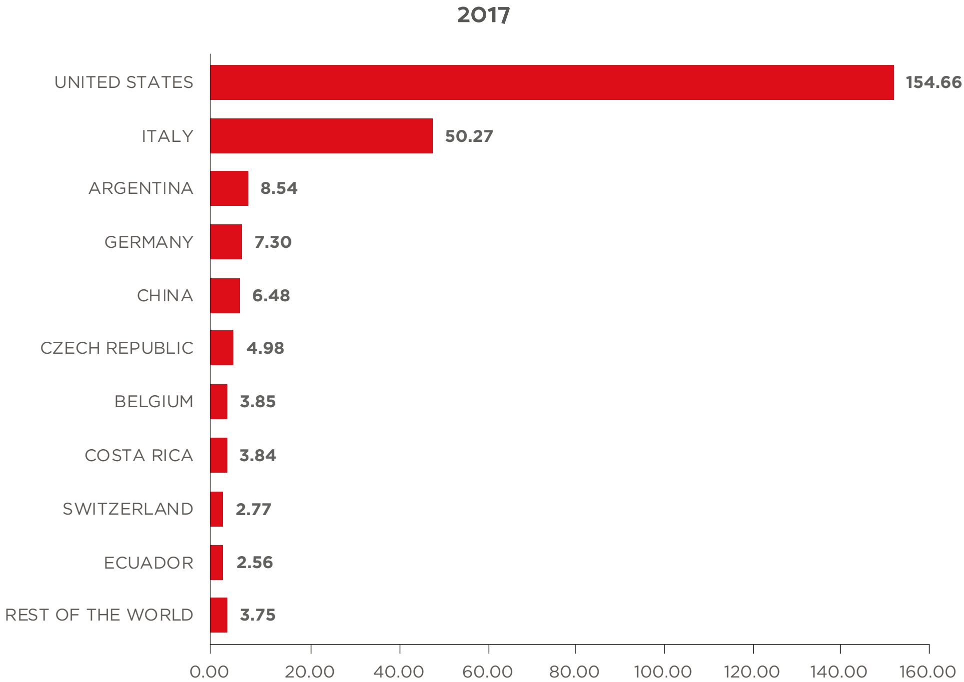
6.8 million tons, increased to 53.7 million tons in 2017. The growth was 688% between the two years. White cocoa-free chocolate was the product that contributed least to the advance of imports in 2017, but even though it was less expressive, the volume of imports also increased, increasing by 147% between 2016 and 2017. By 2016, the amount imported was 1.1 million tons, while in 2017 it was 2.8 million tons.

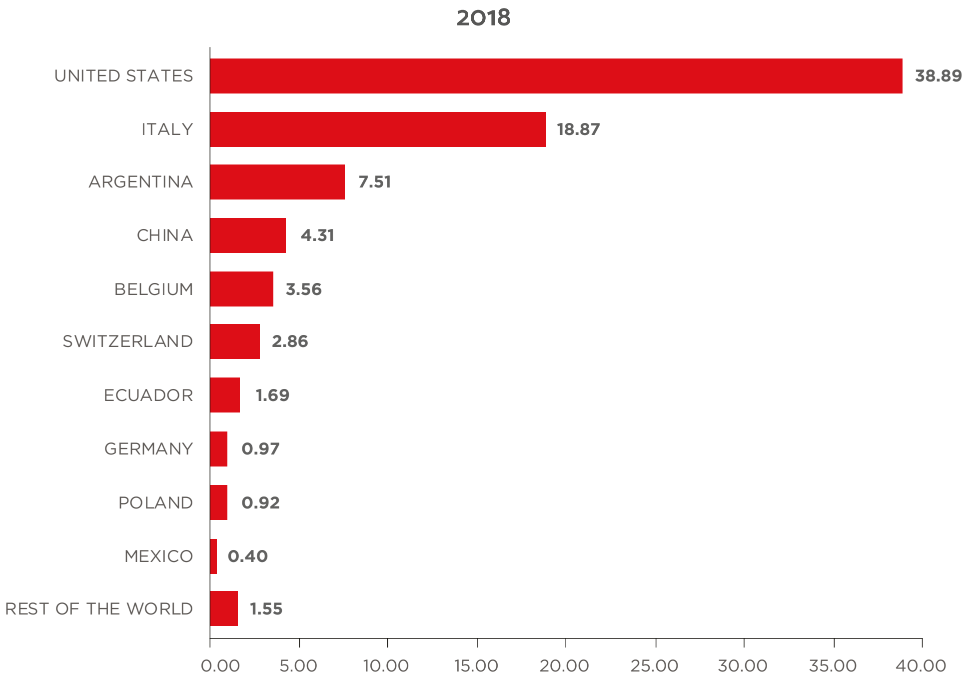
Regarding the origin of these Brazilian imports of chocolate, Graph 12 presents the main chocolate exporting countries for Brazil in 2016, 2017 and 2018. In 2016, Argentina was the country that most exported chocolate to Brazil, around 29.13% of the total volume of Brazilian chocolate imported. The United States it is in the second position, responsable for 19.16%. Italy is in the third position, with a 10.62% share of exports to Brazil. Together, these three countries are responsable for 58.91% of the volume imported by Brazil in 2016.

Graph 12

MAIN CHOCOLATE EXPORTING COUNTRIES FOR BRAZIL IN 2016, 2017 AND 2018* (MILLION TONS)







*Values refers to until November 2018.

Source: Comex Stat (2018).[59]

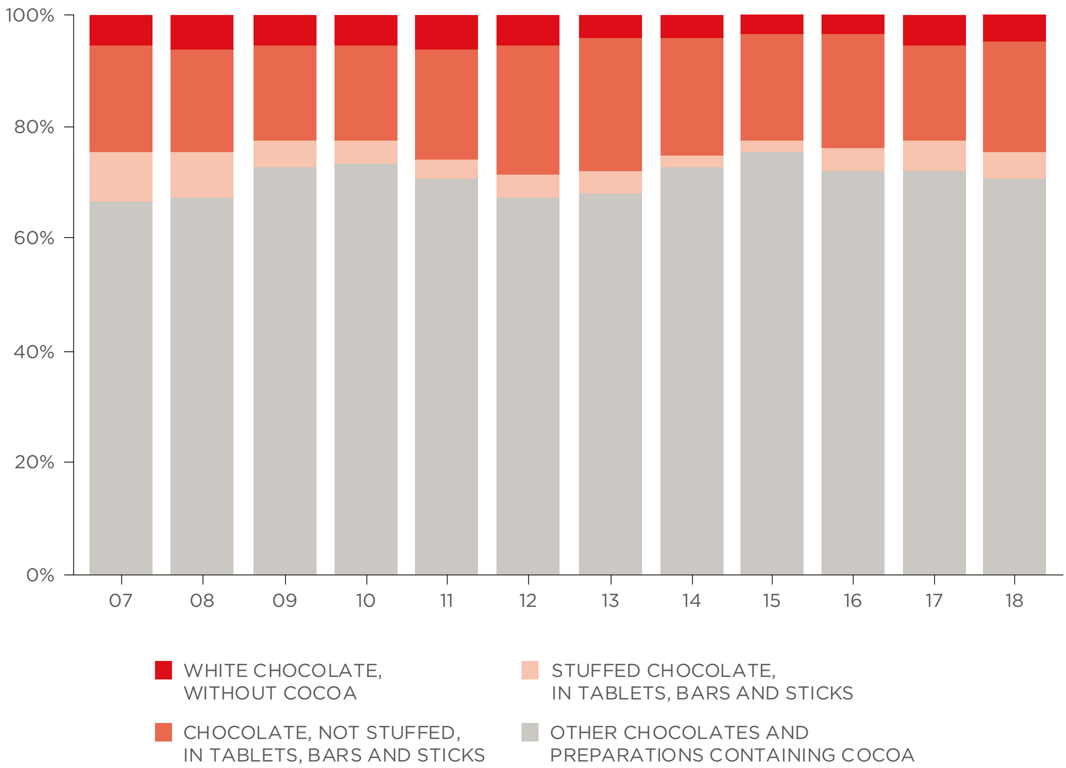
59 Available at: http://comexstat.mdic.gov.br/pt/geral

In 2017, the United States becomes the main exporter of chocolates to Brazil, representing approximately 62.11% of the total Brazilian imports. Italy ranks second with 20.19% of chocolate exports to Brazil, while Argentina drops to third place, covering only 3.43% of exports. The sum of the participation of these three countries grows to 85.73% in total chocolate exports to Brazil in 2017. Looking at the year 2018, the United States continues to be the main exporter of chocolates for Brazilian domestic consumption, with around 47.71% of the total volume. Italy is responsible for 23.15% and Argentina for 9.21%. Together, the three countries represent 80.07% of the exports of chocolates to Brazil in 2018.

Graph 13 evaluates the share of each product in Brazilian chocolate exports between 2007 and 2018. The category of Other chocolates and food preparations containing cocoa is the one that has the largest share of Brazilian chocolate exports over the years. In 2007 it was responsable for 63.93% of the volume exported and 2018 was responsable for 70.89%.

Graph 13

PARTICIPATION BY PRODUCT IN BRAZILIAN CHOCOLATE EXPORTS BETWEEN 2007 AND 2018*



Values refers to until November 2018.

Source: Comex Stat (2018).[60]

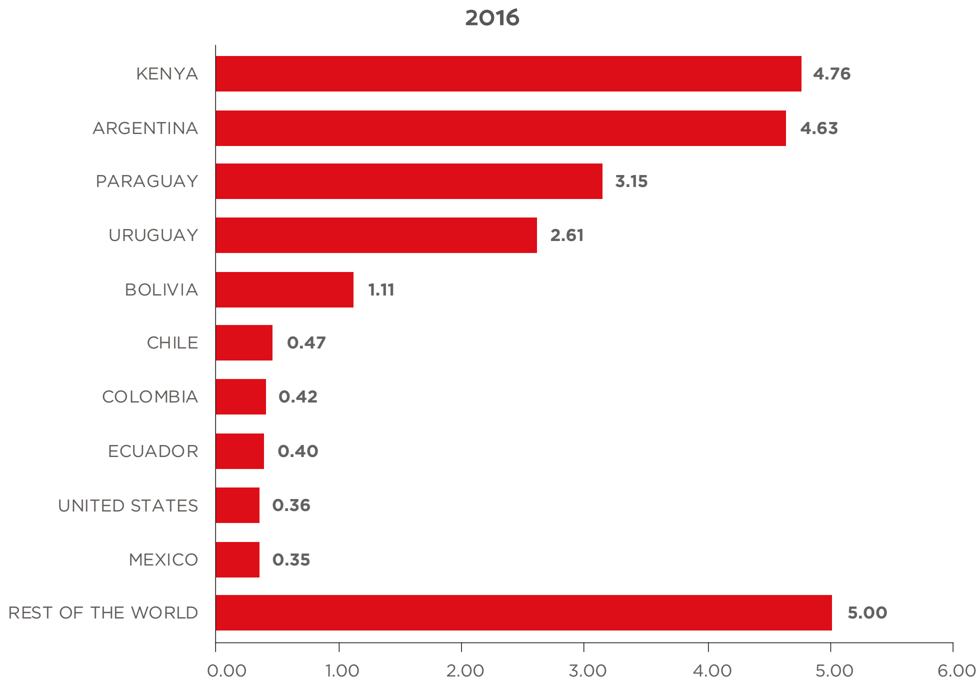
Unfilled chocolate, in tablets, bars and sticks is the second largest type of product that makes up this export list of Brazilian chocolates. In 2007, its share was 19.67%, while in 2018 it was 20.14%. White chocolate without cocoa, had its share of 5.13% in 2007, declined to 4.61% in 2018. And chocolate stuffed into tablets, bars and sticks also had its share reduced. In 2007 it was 8.28% and in 2018 it was 4.36%.

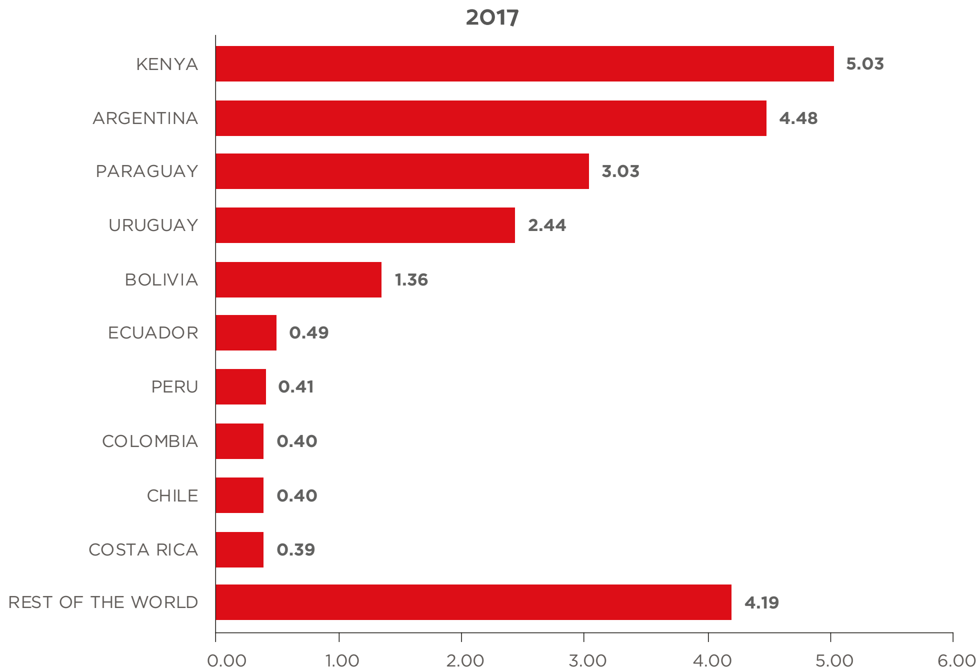
The chocolate exported by Brazil has as final destination several countries. Graph 14 shows the main countries that absorb Brazilian chocolate exports for the years 2016, 2017 and 2018. Kenya is the main importer of Brazilian chocolate. In 2016, the volume imported from Brazil was 20.45%, increased to 22.26% in 2017 and 22.39% in 2018. Argentina appears in second place, absorbing 19.92% of Brazilian exports in 2016, 19, 81% in 2017 and 17.90% in 2018. Paraguay is in third place with 13.53% in 2016, 13.41% in 2017 and 15.42% in 2018. Next, there are Uruguay, which consumes 11.22% of Brazil's exports in 2016, 10.80% in 2017 and 9.79% in 2018. Together, these four countries demand about 66% of Brazilian chocolate exports in 2018.

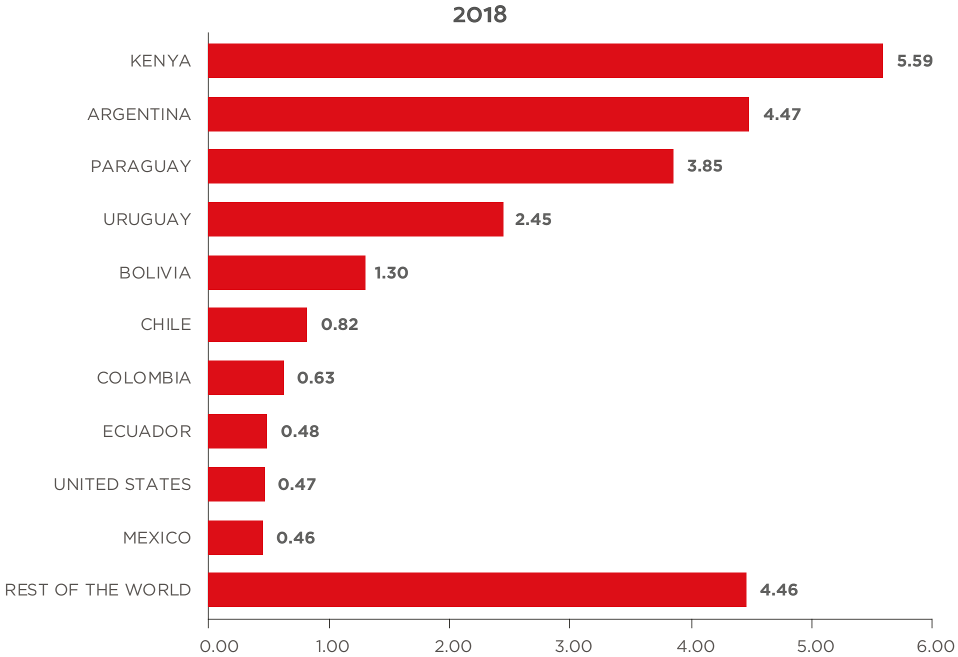
60 Available at: http://comexstat.mdic.gov.br/pt/geral

Graph 14

MAIN CHOCOLATE IMPORTING COUNTRIES FROM BRAZIL IN 2016, 2017 AND 2018* (MILLION TONS)







Values refers to until November 2018.

Source: Comex Stat (2018).[61]

Another relevant point is that the category Rest of the world is quite representative within the series. Covering 21.52% of the Brazilian export volume in 2016, 18.51% in 2017 and 17.87% in 2018. This data demonstrates how the export of Brazilian chocolate is dispersed and does not depend exclusively on any specific destination.

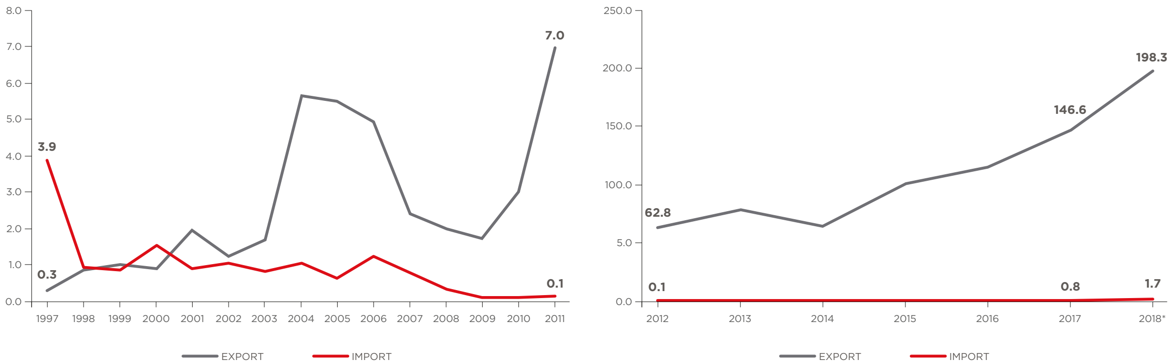
2.2 PEANUTS

Peanuts are a food consumed worldwide. It has a characteristic and well accepted flavor, a fact that makes its use strongly used in the world food industry. Over the last decades, it has had both world production and national, growing, gaining more and more space in international trade. In this sense, Graph 15 illustrates the evolution of this peanut trade between 1997 and 2018.

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

Graph 15

INTERNATIONAL EVOLUTION OF PEANUT[62] TRADE BETWEEN 1997 AND 2018* (MILLIONS OF TONS)



Values refers to until November 2018.

Source: Comex Stat.[63]

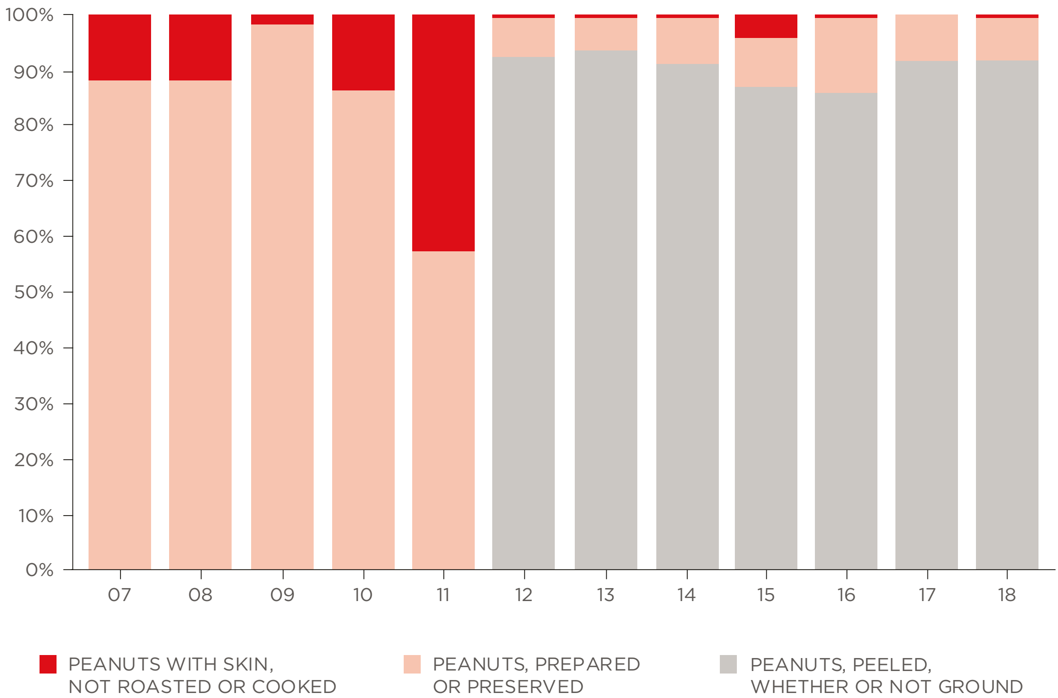
Between 1997 and 2010, Brazilian peanut exports did not exceed 6 million tons, while imports, despite the year 1997 (in 1997 the volume was 3.9 million tons in 2010 was 0.1 million tons), were only 1 million tons, putting Brazil as an exporter of this product. Besides, in 2011 Brazilian peanut exports hit the record volume of the exported volume of its balance, about 7 million tons. Since then this has been a constant for Brazil, year after year the country has been hitting export records with quite expressive growth rates.

62 The products listed in Annex 1 have been considered.

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

Graph 16

BRAZILIAN PARTICIPATION BY PRODUCT OF PEANUT EXPORTS BETWEEN 2007 AND 2018*



Values refers to until November 2018.

Source: Comex Stat (2018).[64]

In the period of just one year, between 2011 and 2012, the volume exported increased by 798.56%, from 7 million tons in 2011 to 62.8 million tons in 2012. The movement of exports, in most of the years, makes 2018 the year with the highest volume of exports, about 198.3 million tons, an approximate growth of 215.83% over 2012.

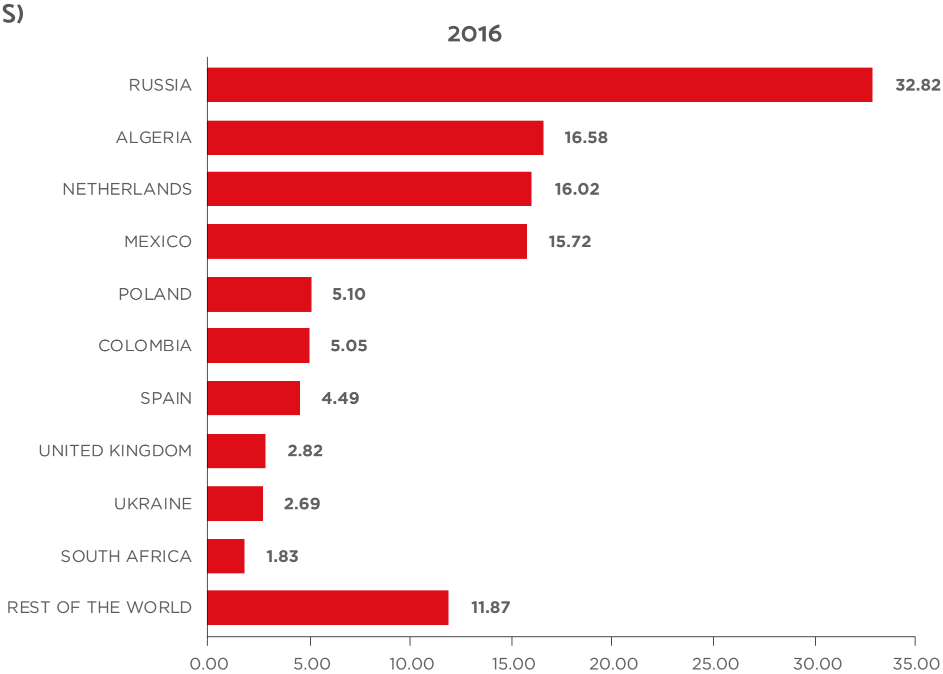
The main destination of these exports, has been Russia, see Graph 17. In 2016, Russia was responsible for consuming 28.54% of Brazil's peanut exports. In 2017, this number increased to 33.32% and in 2018 reached 38.24% of Brazilian peanut exports. In 2016, Algeria comes second with 14.42% and the Netherlands and Mexico are third and fourth, with 13.94% and 13.67%, respectively. In 2017 Algeria remains in second place with 17.11%.

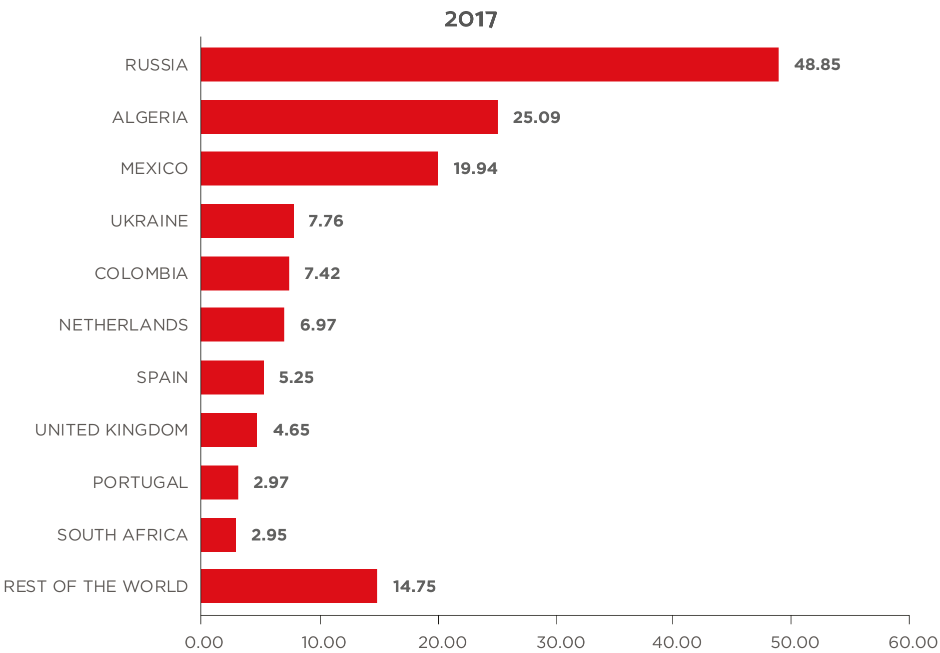
64 Available at: http://comexstat.mdic.gov.br/pt/geral

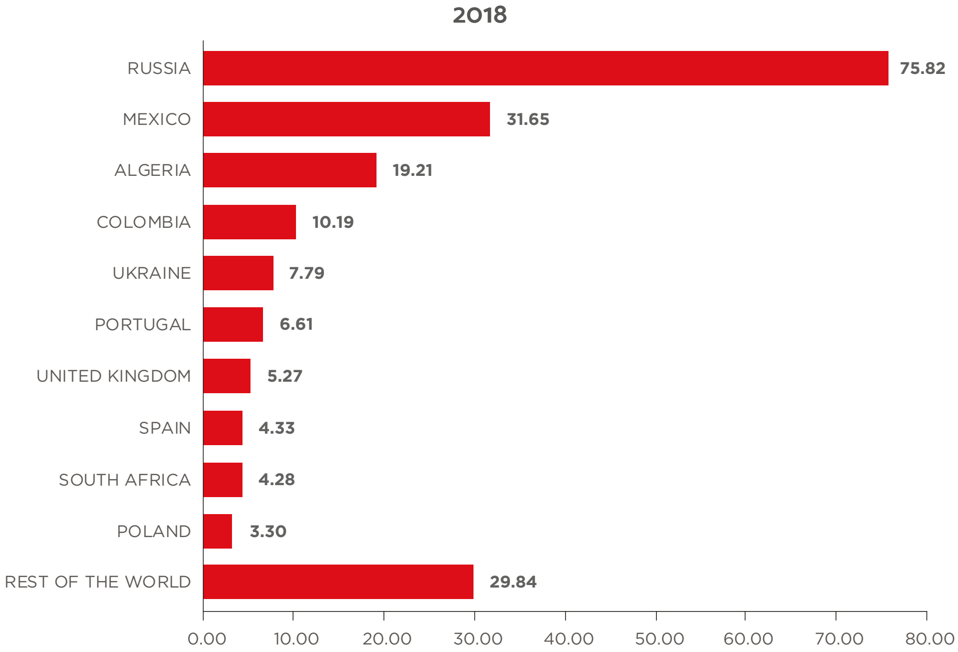
However, Mexico climbs to third place with 13.60% and Ukraine appears in fourth place with 5.29%, followed by Colombia with 5.06%. In the year 2018, Mexico jumps to second place with 15.96% and Algeria descends to the third position with 9.69%. Colombia is fourth with 5.14% and Ukraine fifth with 3.93%.

Graph 17

MAIN COUNTRIES IMPORTING PEANUTS FROM BRAZIL IN 2016, 2017 AND 2018* (MILLION TONS)







Values refers to until November 2018.

Source: Comex Stat (2018).[65]

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

3. BARRIERS TO THE COMMERCIALIZATION OF CHOCOLATE AND PEANUTS FROM BRAZIL

3.1 CHOCOLATE

Throughout this study, it was possible to observe that the world production of cocoa has been growing over the years, mainly driven by the increase of cultivated area. The sector's global productivity has been declining and it is essential that investments in technologies are made so that production can be optimized and yield better gains.

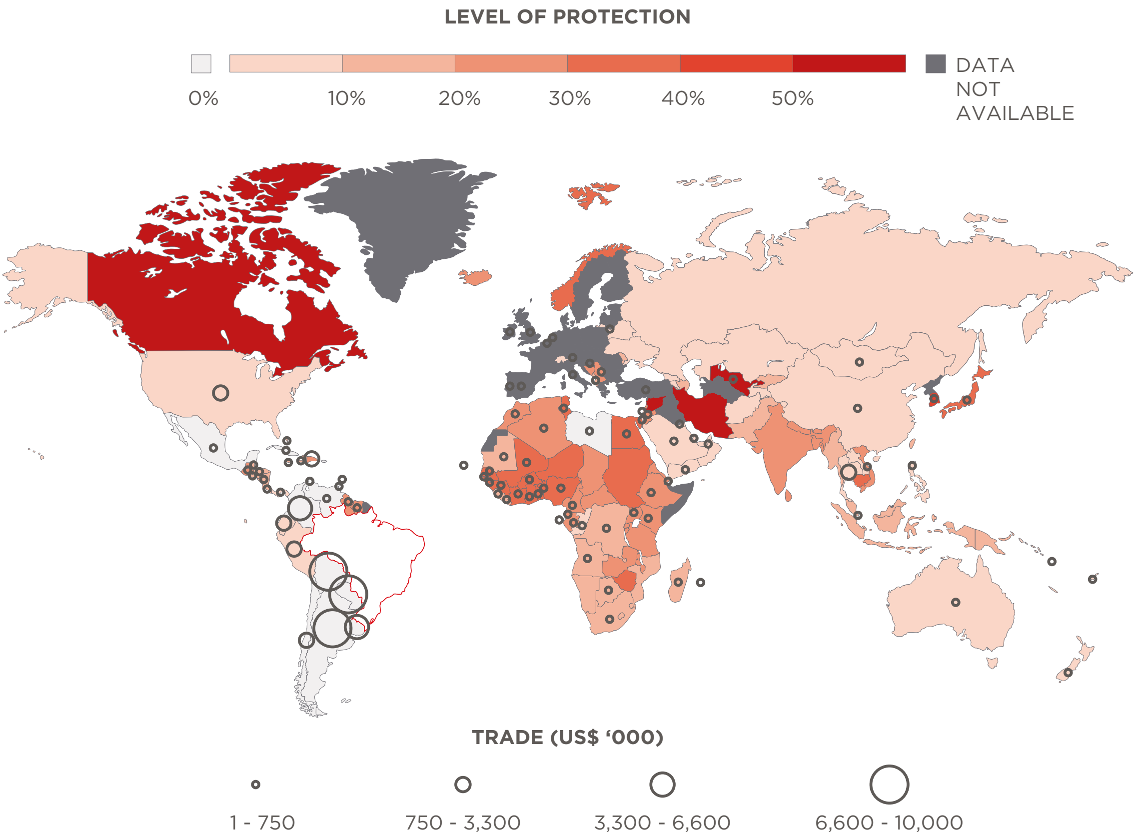
Cacao cultivation is very vulnerable to adverse climate conditions in the producing regions. Brazil's need to import grain is essential for the industry, especially in times of drought, when domestic production is severely impacted, compromising the supply of the internal market.

In the last five years, due to the contamination of cacao from the Ivory Coast, Brazil became dependent on Ghana to supply domestic demand, which caused the prices of the product to rise. Thus, it is exposed how phytosanitary requirements on the part of the Brazilian government can have impacts on imports and consequently on the productive chain of cacao in Brazil. The control of diseases that can affect the planting of cocoa is also a matter of great importance. As already mentioned in primary production, the witch-broom disease, for example, negatively impacted national production from the 1990s.

In relation to exports, Figure 1 illustrates the level of protectionism practiced by the countries that import Brazilian chocolate. Considering the main importing countries of Brazilian chocolate in 2018 (Graph 14), Kenya, the largest consumer of Brazilian exports, practices an import tariff of 25% on Brazilian chocolate. Argentina, Paraguay and Uruguay, Bolivia, Chile, Colombia and Mexico do not apply any taxes on imports of chocolate from Brazil. Ecuador establishes a 3% tax and the United States imposes a rate of 9.09%. The country with the highest tariff is Canada, which taxes the product at 92%.

Figure 1

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



Source: Adapted from Macmap (2018).[66]

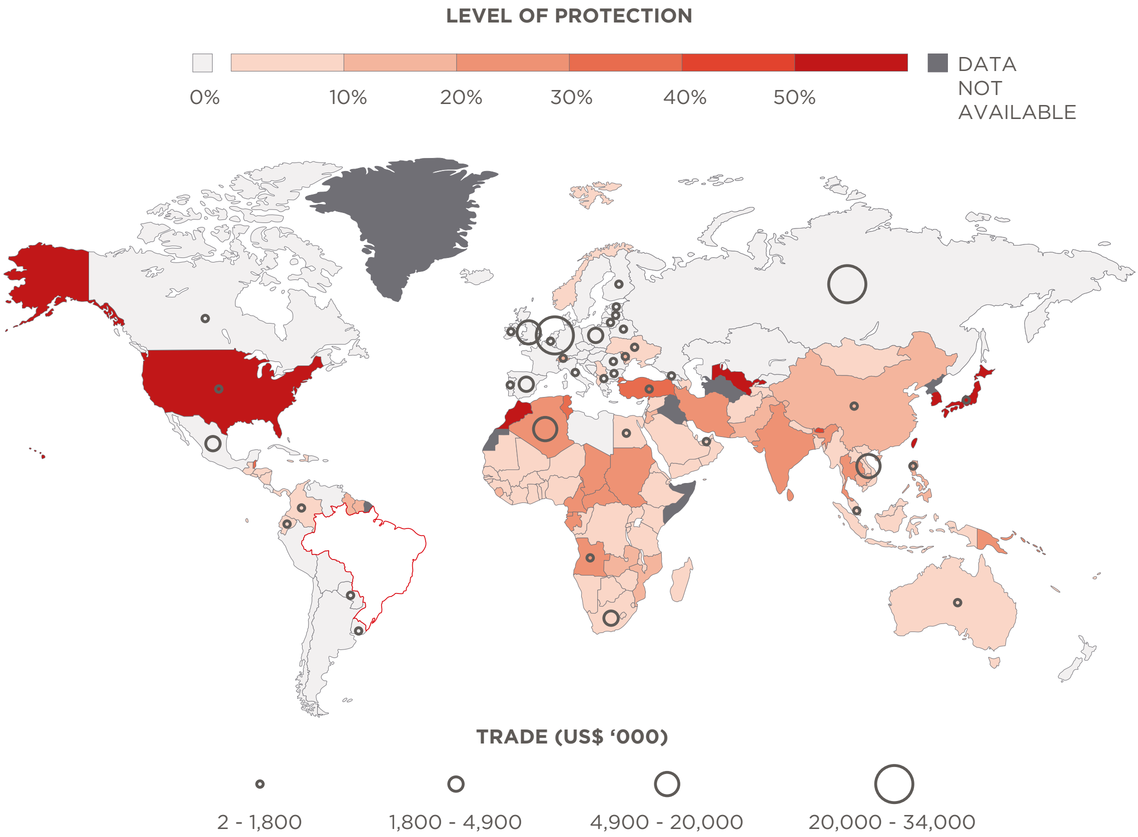
3.2 PEANUT

National peanut exports are also impacted by the existence of tariff barriers imposed by the rest of the world. Associating the main trading partners of Brazil in 2018, according to Graph 17, with the tariffs practiced by each country, shown in Figure 2, it is exposed that the three largest Brazilian peanut importing countries: Russia, Mexico and Algeria do not apply any import tariff to the product of Brazil. Colombia practices a rate of 0.90% and Ukraine imposes a 10% tax. The United States imposes a tax of 68.10% on Brazilian peanuts. The highest import rate is from Japan, about 183.42%.

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

Figure 2

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



Source: Adapted from Macmap (2018).[67]

67 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
12024200	Peanuts, peeled, whether or not ground
20081100	Peanuts, prepared or preserved
12024100	Peanuts with skin, not roasted or cooked
12021000	Peanuts with skin, not roasted or cooked
18069000	Other chocolates and preparations containing cocoa
18063210	Chocolate, not stuffed, in tablets, bars and sticks
18063110	Stuffed chocolate, in tablets, bars and sticks
17049010	White chocolate, without cocoa

ATTACHMENT 2

LIST OF ABBREVIATIONS

ACRONYM	DESCRIPTION
ABICAB	Brazilian Chocolate, Cocoa, Peanuts and Candies Industry Association
CEPLAC	Executive Committee of the Cacao Plan
FAO	Food and Agriculture Organization of the United Nations
IBGE	Brazilian Institute of Geography and Statistics
IPCA	Broad National Consumer Price Index
NCM	Southern Common Nomenclature
PIA	Annual Industrial Survey

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