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# **The Coffee: Overview Of The Global Market, The Performance And The Business Strategies In Colombia**

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## ABSTRACT

The purpose of this thesis is to examine and analyze in a qualitative and quantitative way the global coffee market, with a deeply focus in the Colombian one. Starting first by a description of the coffee bean, its history, types of coffee and production process. The document will analyze then the international markets dynamics, identifying main coffee players, characteristics, and financial performance (with the help of the database provided by Bureau Van Dijk, ORBIS). With a clear overview of the global coffee market, the document targets the attention in the Colombian coffee market, with a brief story of the coffee in the country, analyzing the market dynamics and identifying main coffee players at the national level. Finally, the most important actor of the Colombian market is analyzed, the National Federation of Coffee Growers in Colombia, with its business strategy: Vertical Integration. This entity is unique in the world, with both private and public tasks, allowing it to dominate and control the Colombian coffee market.

## Table of contents

<b>1. THE COFFEE .....</b>	<b>5</b>
<b>1.1 DEFINITION AND ETYMOLOGY.....</b>	<b>5</b>
<b>1.2 HISTORY .....</b>	<b>5</b>
<b>1.3 PLANT DESCRIPTION AND TYPES OF COFFEE .....</b>	<b>7</b>
1.3.1 <i>Coffea Arabica:</i> .....	8
1.3.2 <i>Coffea Canephora:</i> .....	9
1.3.3 <i>Coffea Liberica:</i> .....	9
1.3.4 <i>Green Coffee vs Brown Coffee:</i> .....	10
<b>1.4 COFFEE PROCESS: FROM THE SEED TO THE CUP .....</b>	<b>10</b>
1.4.1 <i>Coffee cultivation:</i> .....	11
1.4.2 <i>Coffee harvest:</i> .....	11
1.4.3 <i>Drying of the Coffee:</i> .....	12
1.4.4 <i>Coffee Threshing:</i> .....	14
1.4.5 <i>Coffee roasting:</i> .....	14
1.4.6 <i>Grinding:</i> .....	15
1.4.7 <i>Instant Coffee:</i> .....	15
1.4.8 <i>Packaging:</i> .....	16
<b>1.5 NUTRITIONAL PROPERTIES.....</b>	<b>16</b>
<b>2. INTERNATIONAL COFFEE MARKET.....</b>	<b>19</b>
<b>2.1 COFFEE SUPPLY CHAIN .....</b>	<b>19</b>
<b>2.2 GREEN COFFEE PRODUCTION (SUPPLY) .....</b>	<b>20</b>
<b>2.3 GREEN COFFEE IMPORTS AND EXPORTS .....</b>	<b>24</b>
<b>2.4 COFFEE DEMAND .....</b>	<b>27</b>
<b>2.5 COFFEE PRICE.....</b>	<b>32</b>
<b>3. MOST IMPORTANT COMPANIES IN THE INTERNATIONAL MARKET .....</b>	<b>36</b>
<b>3.1 STARBUCKS CORP:.....</b>	<b>39</b>
<b>3.2 JACOBS DOUWE EGBERTS PEET'S: .....</b>	<b>42</b>
<b>3.3 LUIGI LAVAZZA S.P.A. ....</b>	<b>46</b>
<b>3.4 NESTLÉ FRANCE .....</b>	<b>49</b>
<b>4. COLOMBIA AND ITS COFFEE HISTORY .....</b>	<b>54</b>
<b>5. COLOMBIA'S COFFEE MARKET .....</b>	<b>61</b>
<b>5.1 GENERAL ASPECTS OF THE MARKET .....</b>	<b>61</b>
<b>5.2 COFFEE SUPPLY CHAIN .....</b>	<b>62</b>
<b>5.3 COFFEE PRODUCTION.....</b>	<b>63</b>
<b>5.4 COFFEE EXPORTS AND IMPORTS .....</b>	<b>67</b>
5.4.1 <i>Exports:</i> .....	67
5.4.2 <i>Imports:</i> .....	72

5.5	COLOMBIA'S COFFEE DEMAND .....	73
5.6	COLOMBIAN COFFEE PRICE .....	77
5.6.1	Colombian global coffee price: .....	78
5.6.2	Colombian internal coffee price: .....	79
6.	<b>MOST IMPORTANT COMPANIES IN THE COLOMBIAN NATIONAL MARKET</b> <b>83</b>	
6.1	RACAFE & CIA S C A.....	85
6.2	INDUSTRIA COLOMBIANA DE CAFÉ SAS.....	89
6.3	OLAM AGRO COLOMBIA SAS.....	93
6.4	COMPAÑIA CAFETERA LA MESETA S.A .....	97
7.	<b>SPECIAL CASE: NATIONAL FEDERATION OF COFFEE GROWERS OF</b> <b>COLOMBIA.....</b>	<b>101</b>
7.1	WHAT IS THE FNC? HISTORY, STRUCTURE, OBJECTIVES .....	101
7.2	COMPANIES PART OF THE FEDERATION, SUBSIDIARIES? .....	108
7.2.1	National Center of Coffee Research CENICAFÉ .....	108
7.2.2	Almacenes Generales de Deposito de Café S.A (ALMACAFÉ) .....	109
7.2.3	BUENCAFÉ.....	111
7.2.4	EXPOCAFÉ .....	112
7.2.5	AGROCAFÉ.....	113
7.2.6	Promotora de Café de Colombia S.A PROCAFECOL .....	114
7.2.7	Manuel Mejia Foundation.....	117
7.3	FINANCIAL ANALYSIS OF THE FNC.....	118
7.4	VERTICAL INTEGRATION AS A BUSINESS STRATEGY .....	122
7.4.1	What is Vertical Integration? .....	122
7.4.2	Examples of Vertical Integration .....	123
7.4.3	FNC Vertical Integration business strategy .....	124
7.4.4	FNC business strategy vs Market competitors .....	128
7.5	OTHER MARKET STRATEGIES FROM THE FNC .....	133
7.5.1	Paisaje cultural cafetero PCC .....	133
7.5.2	Parque Nacional del Café.....	135
7.5.3	National Federation of Coffee Growers and the sports .....	136
7.5.4	Other strategies and marketing campaigns .....	137
8.	<b>FUTURE MARKET TRENDS AND CONCLUSIONS .....</b>	<b>139</b>
8.1	FUTURE MARKET TRENDS .....	139
8.1.1	International trend.....	139
8.1.2	Colombia national trend .....	140
8.2	CONCLUSIONS.....	143
9.	<b>REFERENCES .....</b>	<b>145</b>



# **1. THE COFFEE**

## **1.1 DEFINITION AND ETYMOLOGY**

The etymology of the word “coffee” is not certainly known, but there are various approaches and arguments of it. The term coffee derives from the Arabic word *qhawah* that means “wine that is extracted from the bean” [1]. The word was used to define beverages or infusions that come from the plants and that were consumed as liquors; the coffee was related with the wine due to the similar effects (exciting and stimulating effects) that the caffeine has in comparison with the alcohol [2]. The toponym of the word is Kaffa, a region from Ethiopia, meaning that the coffee comes from Africa from around the XIV century.

Then, the word was adopted by the Turkish culture, which changed the term to *kahveh* which means exciting. This was the term that arrived to Europe and was learned by the European languages around the 1600s [3]. Each European culture varied the word *kahveh* to their own language, being the dutch people the first ones that commercialized the coffee and they applied the term *koffie*. The Italians, with the influence of the Latin, adopted the term *caffè*, same as French, Spanish and Portuguese people with the term *café*, the English people adopted the word *coffee* [4].

Nowadays, the scientific name that identifies the genus of the plant is *coffea*, which has different species (around 60) due to the different characteristics of the environment (climate, temperature) of the countries in which the plant is produced.

## **1.2 HISTORY**

The starting point of the coffee is Africa, in the Ethiopian region. There are many legends about the origin of the coffee and its consumption, the most famous and usually accepted is the one of the shepherd called Kaldi. He lived in the province of Kaffa around 300 AD, and the story establish that one day, his goats ate some berries of a stranger tree, and after that, their behavior was different, they were very energetic and didn’t want to sleep that night. The shepherd reported this stranger behavior to the abbot of the local monastery, who made a drink with the coffee berries, discovering that thanks to the beverage, he was able to stay all the night praying with a lot of energy. The new discovery was shared with the other monks of the monastery, and the information of the coffee berries was spread. [5]

There are proofs that the coffee was cultivated in the XV century in Yemen, and the slaves used to eat the fleshy part of the coffee cherry across what is known today as Yemen, Sudan and Arabia . [6] The first coffee houses were in Mecca, and their name was *qahveh* or *khaneh*. This type of facilities were spread around all the Arabic world at the Near Est, and were the place in which people gathered not only for drinking coffee, but also for playing chest, dancing, exchange information about politics and economics, or make some businesses. The importance gained of these coffee houses was so big that the government ordered to close the facilities, because many criticisms of the power exercised by the government were carried out in these places and it was feared that a threat to public order would be created. Also, as

the coffee was associated to an alcoholic beverage, it was against the doctrines established by the Coran.

In the XVI century, German, Italian and Dutch botanists, and travelers brought information about the strange dark beverage that was consumed in the Arabic world. At the beginning of the 1600s, the coffee arrived in Europe. More exactly, in 1615 some merchants brought the coffee beans and cherries to Venice. During this period, other two famous hot beverages also had already arrived in Europe, the hot chocolate in 1528 thanks to the Spanish that brought it from America and the tea in 1610. People reacted in different manners with the arrival of the coffee, some of them became coffee drinkers, while other related the product as a “invention of Satan”, because they believed that coffee was a substitute of wine which had been sanctified by Christ. The controversy was so big that the Pope Clement VIII was asked to intervene, he drank the beverage and was captivated with the taste, smell, so he gave the papal approval. [5]

The first coffee shop in Europe was opened in Venice, in 1683, and in 1720, the famous coffee shop called Caffè Florian opened in Piazza San Marco, which stills today open to the public as the oldest coffee shop in the world.

People started to like going to coffee shops, and that's why in the 17<sup>th</sup> century, there was a tendency to open coffee facilities, for satisfying the increasing demand. As in the Arabic region, the shops were places in which people used to talk about politics, religion, art, and other important topics. Therefore, at the middle of the century there were around 300 coffee houses in London, some in Paris, and another few quantities in Vienna. [5]

The Dutch people were the first one that tried to cultivate the coffee in their colonies. In 1658 they started the cultivation in Ceylon, and in 1696 they brought some coffee plants to Java, what is known today as Indonesia. With this procedure, the Dutch colonies became the principal coffee supplier for Europe. [3]

In America, the first reference of a person drinking coffee was in 1668, in New York, with coffee that was brought from Europe. Despite that American people liked this new beverage and that coffee shops started to spread around the country, the tea continued to be the favorite drink. However, in 1773, the United Kingdom created the “Tea Law”, which taxed the importation of tea from the metropolis, in benefit of the British East India Company. The Americans colonist, against this new law, planned and elaborated the Boston Tea party, in which a group of settlers disguised as Amerindians dumped the cargo of tea from three British ships into the sea. Since this moment, as a form of protest, the consume of coffee increased, becoming the favorite and the most important beverage in USA. [5]

Finally, there is also a story about the first cultivation of coffee in America. In 1714, the Dutch had extended the cultivation of coffee plant across most of their islands of the Netherlands indies. Then, some samples of these islands were moved to some botanical gardens in Amsterdam. In 1714, as a result of a negotiation between the French government and the municipality of Amsterdam, a young coffee plant of five feet tall was sent to king Louis XIV and was planted in the botanical garden of Paris. The tree was destined to be the progenitor of most coffees of the French colonies, in South America, Central America and

the Caribbean. Consequently, a young man called Gabriel Mathieu de Clieu, who was a French naval officer on duty in Martinique, oversaw this task. [3] He took one of the coffee trees that were in the botanical gardens which the progenitor was the tree gifted by Amsterdam. He installed the plant in a box and left on the deck to keep it warm and not be damaged by the salt water (Figure 1). The trip was full of incidents such as Tunisian pirates chased the ship, a strong storm which caused the coffee tree had to be moored, a confrontation with an enemy on board who was envious and tried to sabotage the bush, a violent fight in which one of its branches broke, and the most famous one, the instant in which ship was immobile due to lack of wind and drinking water was rationed. For De Clieu it was clear that the tree was the most important objective, so he gave up most of the water that corresponded him to the coffee tree. The coffee tree survived and so did he. [3][6].



Fig. 1: Illustration of de Clieu's mission.

In the next 50 years, there was a spread of approximately 18 million of coffee trees in the island thanks to this first initial tree. Meanwhile, the Dutch and the British people also started moving the coffee to America, around 1720s some trees and seeds arrived in Surinam, French Guyana and finally Brazil.

Nowadays, thanks to this long story about the coffee and its expansion in Africa, Asia, Europe and America, the word coffee and its meaning is the same in all the world. Coffee have become one of the most valuable products in the world. The cultivation, transportation, roasting, trading, and marketing provides employment to many people. There is a completely “culture” around the coffee and its consumption, inherited from all the complex story that is behind it.

### 1.3 PLANT DESCRIPTION AND TYPES OF COFFEE

The coffee plant, which its gene is *Coffea*, pertains to the botanic family called *Rubiaceae*. This family contains approximately a quantity of 500 different genes, and in total 6000 species. *Coffea* is one of those genes and comprises 103 species that are distributed in Latin America, Asia, and Africa. This is the ideal location because of the soil, the temperature (between 17°C and 33°C) and the rainfall. They are small shrubs, that with the time develop in some small trees of 3 or 3,5 meters [7]. After that, the trees could grow from 5 meters until 12 meters but in the crops, they are pruned to stay with a height of 3 meters, making easier

the process of harvest as well as the ventilation of the plants. Their leaves are elliptical, and have different colors such as lime green, dark green or bronze.

During the whole year, the coffee plant is constantly blooming, after each rain. In the flowers that bloom from the plant, after some days, appears a fruit very similar to a cherry, containing two seeds which are the coffee beans (9 months is the duration from flower to fruit). The fruit could be green or red, depending on the ripeness. Due to the fact that during the whole year the plant is blooming cherries, the degree of ripeness is different in each fruit [8].

From an economic point of view, there are only 2 *Coffea* species that are widely cultivated; the *Coffea Arabica* (Arabica Coffee) and *Coffea canephora* (Robusta Coffee). The first one corresponds the 60% – 65% of the total world production of coffee, while the other one has the 40% - 35% of the market share. There is another specie called *Coffea liberica* (Coffee Liberica) that has less than the 1% of the global coffee production. [9]

### 1.3.1 *Coffea Arabica*:

The Arabica specie is native from the highlands of southwestern Ethiopia and was spread to Ceylon, Indonesia, and India. It is characterized to be self-pollinating and has a total of 44 chromosomes (allopolyploid), his origins comes from a interspecific hybridization between two species: *Coffea eugenioides* and *C. canephora* [7]. This specie has 2 famous varieties which are called “Typica” and “Borbón” and from these two, other typical strains have been developed, for example the Caturra that is the one from Brazil and Colombia [10]. The specie is a large bush, of around 3-5 meters height, with shiny dark green leaves (Figure 2). The flowering of the plant occurs after the raining season and are arranged in clusters that have a white color; the oval fruits, blooming from the flowers, are green and then become red when they mature, after 7-9 months (Figure 3). Each fruit contains 2 seeds that are the coffee beans.



Fig. 2: Green coffee bush



Fig. 3: Mature coffee bean

This specie is susceptible to pests and diseases, that is why this is the type of coffee plant that needs more attention, also it cannot bear extremely weather conditions such a heavy rain or wind, so the level of protection must be high. During the roasting phase, the temperatures

and times must be very precise in order to keep all the qualities of the coffee bean. That is why this type of coffee is chosen as the best by the coffee experts and is the most commercialized in the world. The quantity of caffeine is lower than the Robusta coffee, just about 1.4%. It is cultivated in Latin America, Central and East Africa, India, and Indonesia

### **1.3.2 *Coffea Canephora:***

Is native from the tropical Africa, more precisely, in the central and western region. One variety of this specie is the Coffee Robusta which is the widely known in the world and the second best-selling coffee specie. It is different to the Arabica, has a total of 22 chromosomes (diploid) and is allogamous, this mean that needs two plants to pollinate and reproduce. [7]

It is a tree that can grow until the 10 meters height and has a shallow root in comparison with the Arabica. It is not only more tolerant to the climate conditions and the composition of the soil, but also more resistant to the pests and diseases, making it a high productivity coffee plant. Because of this, the cost of having this type of coffee plant is lower, therefore, it has been widely cultivated in the last decades. The cherry takes eleven months to ripen, the coffee seed is elongated and smaller than that of the Coffee Arabica. The flavor and aroma are inferior to that of Arabica [7], the berries are more bitter, less acid and contains a higher quantity of caffeine (2% - 4%). It is cultivated in Central and west Africa, Asia, and a small quantity in Brazil. Vietnam is the major producer of this type of coffee, and in the recent decades has become the 2<sup>nd</sup> larger coffee exporter of the world.

### **1.3.3 *Coffea Liberica:***

It is a specie of coffee native from Liberia, Congo and Ivory Coast. It is a less diffuse coffee and only has less than 1% of the market. Is a very strong tree, and one of the tallest of the coffee species, could grow until the 18 meters height [10]. Is harvested with ladders unlike Arabica and Robusta due to its high height. The seeds have almost a double size in comparison to the ones of the Arabica specie and are asymmetric (Figure 4). The demand of this type of coffee is very low due to the aroma and flavor characteristics, it is considered a low quality coffee [9]. Nowadays it is cultivated in Malaysia, West Africa, and the Philippines, being in the latter 4% of the national production of coffee with a growing tendency.



Fig. 4: Example of type of coffee beans



### ***1.3.4 Green Coffee vs Brown Coffee:***

The green coffee beans are the beans in its raw form, without roasting it. Is the final product of a whole process after the harvest, the pulping of the fruit, the fermentation, the washing of the bean, the drying and the threshing. Its flavor is unpleasant to consume because they have a bitter acidic taste, and the quantity of caffeine is of 0.1 mg/cup. However, they also have some benefits for the human's health; these beans without roasting have a compound called chlorogenic acid, that is responsible for contributing to the weight loss of the body, thanks to the stimulation of lipid metabolism, and it prevents the concentration of fats. Also it is a great antioxidant and prevents diseases related to oxidative stress [11]. It has good effects for the hearth health and helps against neurological diseases.

On the other hand, the brown coffee beans are the ones that had been roasted. There could be 2 kinds of beans, light roast (brown beans) and dark roast (black beans). However, some producers like the National Coffee Federation of Colombia establishes a medium level of roast, through a medium heat transfer, that is optimal for filtered coffee and espresso [12]. The cup has more calories (120 against 70-11 of green coffee) and its content of caffeine is about 60 mg/cup [13]. In the Figure 5 an example of both kinds of coffee is presented.



*Fig. 5: Example of roasted coffee vs green coffee*

## **1.4 COFFEE PROCESS: FROM THE SEED TO THE CUP**

Coffee is catalogued as one of the major commodities in the world. It is a product that is consumed around the whole planet; but what is behind the cup of coffee that a normal person drinks every morning? The answer to this question is all the coffee process that starts from the seed of the tree until the cup in the hand of that person. In this section a summary of the coffee process will be presented, a procedure that is almost the same in all the world. However, some Colombian traditions will be considered in order to establish the parameters based in this country.

#### ***1.4.1 Coffee cultivation:***

When the process of coffee is analyzed, usually the analysis starts with the harvesting, however, in the cultivation procedure there are also important aspects to consider. In Colombia, this is one of the crucial phases to have the best quality coffee. The first step of this phase is the selection of the seed which could be done in 2 ways. The first way is the selection of the seed from the best coffee plant, this means healthy trees with the highest rate of production. The second way is buying the certified coffee seeds from the cooperatives of coffee growers. After the seeds are ready, they are sown in germinators where they last for approximately 55 days or 2 months. These germinators are usually in a nursery, which in Colombia is called coffee seedbed and its main purpose is that the seeds take root and the growing of the first two leaves [14].

After the 2 months, the plants are translated to the seedling nursery, in which the plants are put in bags that contain a mixture of soil and decomposed coffee pulp that serves as fertilizer. The plants will remain in this stage for around 6 – 8 months. The objective of this phase is to be able to develop the crop and select the plants that will go on to the final crop.

Having selected the final plants, these are translated to the cultivation field. This planting ground must be prepared, defining the distance between each coffee plant, how the trees will be distributed (single or double rows, square or triangle shape) and if the coffee growing will be located directly under the sun, under shade or semi – shade (depending on the location of the cultivation, if there is not much enough rain and the weather is too hot, the coffee plants require a shaded crop). After approximately 18 months the plant gives the first coffee cherries, and the maximum production capacity is reached after 3 years [15].

#### ***1.4.2 Coffee harvest:***

For the majority of analyst, this is the crucial process for a high-quality cup of coffee, however, the cultivation could be at the same level of importance or with a higher level. The quality of coffee depends on the degree of homogeneity of the harvest in terms of maturity of the cherry. If the fruit is still unripped, it means, has a green color, the final taste of the drink will be astringent. On the other hand, if the fruit is excessive ripped, the flavor will be rancid [16]. The process of collecting the cherries could be manual or mechanical, being the manual the one used for high quality coffees. Moreover, the manual procedure can be divided also in two ways: picking and stripping.

The picking process is the one in which the coffee growers collect one by one the coffee cherry. The farmer just takes the fruits that are ready (perfect degree of maturity) and leave in the tree the other ones to collect them later. This is the process that gives to the market a homogeneous and high-quality product. In Colombia, this is the unique process used to obtain the uniqueness of the Colombian coffee (together with the cultivation process); the coffee that is picked is the one that have a red-yellow color (perfect maturity)[14]. The disadvantages of this method are in terms of cost and time.

The stripping processes consist in removing all the cherries from the plant, without considering the degree of ripeness that they could have. After having then all the fruits collected, they are separated in different groups depending in the level of maturity, this could be manually or by flotation in a tub of water. This is a cheaper process, but the quality and homogeneity of the products are less.

### ***1.4.3 Drying of the Coffee:***

Process that could be done through the dry method or the wet method:

#### Dry method:

In this method, the fruits are spread in the sun to dry them. In order to avoid any kind of fermentation the fruits are constantly shacked; the operation can also be done in dryers which give a faster result but low in quality. When the pulp is dry, the pitting is carried out; the cherries are passed through a hulling machine that breaks the peel and the parchment, leaving just the beans. To separated and have homogeneous beans, a sieving process is done classifying them with respect to their size. The coffee bean produced in this way is called natural or unwashed coffee. This method is often used in coffee beans harvested by the stripped procedure [16].

#### Wet method:

##### Coffee Pulping:

The objective of this phase is to separate the coffee seeds or bean from the rest of the fruit. This process must be done within six hours of having collected the coffee fruits. It is done in a machine known as pulper, and the process consist of passing the fruit between one surface smooth and the other one jagged at the same time (two surfaces); by the pressure exerted the beans of the coffee tree are expelled from the skin or pulp that contains them. Finally, the machine separately expels the coffee beans and the pulp. This pulp is the residual product of the process (40% of the fruit weight), and is used as fertilizer in the cultivation of the coffee seeds (first step) [14].

##### Coffee Fermentation:

The coffee beans, after the pulping, are wrapped in a parchment along with a gelatinous shell that covers all the coffee parchment. This gelatinous component is called mucilage, that is an organic compound soluble that provides many nutrients and is recommended for people with high cholesterol, blood sugar problems or is used for weight loss. The mucilage must be removed from the coffee bean for extract the pure bean; this process is done through the fermentation. The coffee beans are introduced in a tank with fresh and clean water for around one to three days; there, the mucilage is dissolved in the water. This process is very important because defines the quality of the cup of coffee and also helps to select some beans that are not in good conditions or are too mature which are the ones that remain floating [15] [17].



### Coffee Washing:

When the bean is already fermented, immediately the coffee must be washed. In Colombia this is done usually in a channel called “Canal de correteo” that consist in a canal with different levels of height in which the coffee is moved with the water and the difference of density along them.

### Coffee Drying:

After all the beans are washed, the drying part is the next one. The objective is that the drying must occur in all the coffee bean in a uniform way, therefore, they are placed in a flat surface in thin layers of no more than 3 cm thick, and they must be stirred several times per day to achieve a uniform drying in every side of the bean.

### Quality Control:

When the beans are already dried, they are subjected to quality control. There is a standard of which types of defects could be found and how many of these defects can be tolerated by a roasting company. The standard is established by the FAO (Food and agriculture organization of the United Nations) and can be consulted in the following table (Table I), in which is described the defect, the cause, the effect, and the solution to avoid it.

TABLE I:

*Most common types of coffee defects*

DEFECT	DESCRIPTION	CAUSE	EFFECT	SOLUTION
Extremely black coffee	The coffee beans will look black and shriveled. Too wide the crack in the center of the bean.	Fungal diseases and nutritional deficiencies. Also lack of water during the growth period. Over fermentation of the beans or overripe cherries selected.	Disgusting aroma and flavor. Create a phenolic or fishy note.	Be careful with the plant nutrition and the providing of water. Be strict with the fermentation process time.
Sour Beans	Coffee beans will have a light brown, yellow or red color. If they are scratched, they will have a vinegary smell.	Delays in the harvesting process, the pulping process or both, that causes an over fermentation. Also, the use of dirty water or the storage of the beans in a moisture content.	Tart or herbaceous flavor.	Use always clean water. Do the process of pulping as quickly as possible.
Split Beans	The beans will have fractures or will be broken.	Harvesting of green cherries (unripe fruit), low content of moisture in the bean. Caused by the machinery of the pulping, drying or threshing process.	An unbalanced and inconsistent flavor due to the inadequate roasting process. The heat transfer will not be in a uniform way	Take care about machinery, and if the coffee is already ripe or not.

DEFECT	DESCRIPTION	CAUSE	EFFECT	SOLUTION
Quakers	Smaller, unripe, and low-density beans. Difficult to detect in pulping process, but easy to detect them in the roasting process, their color is lighter.	Poor nutrition, poor harvesting practices and droughts.	Dry taste.	Just harvesting the ripe coffee
Damage caused by insects	The beans usually have small holes, that can also be detected in the cherry during the harvesting.	A wide variety of insects feed of the coffee cherry when it is in the tree or feed the coffee bean when it is storage. The coffee berry borer is one of the pests that most infest the crops.	Reduce the coffee and generates sour flavor.	Use of pesticides, insects' traps
Fungi or Mold	White, yellow, red, or gray spores in the grain.	Humidity: too long fermentation periods, interruptions of drying process, storage of beans in a moisture content. Beans that are cracked or with holes are more susceptible. The mold infests the entire batch because the spores spread from bean to bean.	Over-fermented flavor, moldy flavor.	Quickly classification of the beans if one of them have mold. Take care about machinery and unexpected rains.
Potato flavor defect	Is difficult to recognize this defect. Is another type of defect caused by insects.	Caused by the insect " <i>Antestia</i> "	The roasted coffee tastes and smells like potato or raw potato.	Use of pesticides, detect insects.

Source: [18] [19]

#### **1.4.4 Coffee Threshing:**

At this moment, the coffee that arrived here is called parchment coffee, because it has a yellow film or husk that is the parchment. It is removed through a friction process, leaving the coffee ready for exportation and roasting. This is the final green coffee, and could be packed in sisal sacks, in bulk, big bag or vacuum packaging.

#### **1.4.5 Coffee roasting:**

Process that transforms the raw bean to the final bean that is commonly known by the consumers. It is a delicate process that defines the final balance in flavor, acidity, aroma, aftertaste, and body of the coffee cup. The level of roasting depends on the country and type of client in which the coffee will be consumed. In Italy, for example, the level of roasting is very high, they consume a dark coffee bean because they prefer a strong flavor. On the other hand, in Colombia, the coffee bean reaches a medium roasting level due to their preferences of a soft and low acidity coffee.

The coffee bean loses between 15% - 20% of their weight, due to the evaporation of humidity and other components. The volume of the bean increases around 100% - 130% depending on the time of roasting. The sugars caramelize and there is a little loss in caffeine due to high temperatures. The time and temperatures depend on the result that the company wants to obtain, but they vary between 12 – 25 minute and 200 °C - 250°C. It is important to mention that most of the coffee exported is green coffee, and the roasting process occurs after the coffee is imported, because after roasting, the bean becomes extremely sensible to humidity and absorption of external odors, as well as the aroma is lost more quickly [20].

The roasting process pass through different stages, including the dehydration and drying in which the beans lose their humidity and their volume expands, the coffee absorbs energy. Then, the caramelization occurs in which the sugars begin to melt (fructose, glucose and sucrose) followed by a thermic transition phase in which the first “crack” occurs, when the coffee reaches a temperature of 200°C. Coffees with a light to medium roast only manage to go as far as the first crack. Coffees that are darker roasted will reach the second crack which starts at around 225°C temperature; this occurs in the phase called bean development, the roaster decides until which temperature the coffee will be subjected, depending on the desired flavor and acidity. A lot of CO<sub>2</sub> gasses also are expelled in this phase. The next stage is the finishing and cooling, in which the coffee must reach the room temperature in less than 3 minutes, this is important because the grain seals its pores in order to preserve the aroma and flavor. The last phase is the degassing, the gas is eliminated from the coffee through a dispersion process and is in done in some storage silos. This must be done to not affect the quality and conformity of the coffee, and the packaging, which would be inefficient if the coffee stills emitting gases.

#### ***1.4.6 Grinding:***

This is an optional phase, because there are people that used to buy the coffee beans and grind it by their own way, while there is other kind of people that prefer to buy fresh grinded coffee. The coffee beans have inside some flavors and aromas that are released with the grinding process. There are different levels of grinding: fine, medium, or coarse grinding. This depends on the type of coffee beverage to prepare, and the method used for the preparation. The grinding is done by mills, which could be industrial mills or small mills for the house using.

#### ***1.4.7 Instant Coffee:***

This type of coffee can be obtained by two different methods: spray drying or lyophilization. The 2 methods start with the infusion of coffee, that is obtained when the grinded coffee is put in contact with fresh clean water, and the soluble components of the coffee are extracted. The first method consists in translating this infusion to a chamber with hot dry air at 250°C, it is centrifuged and then the water is removed in stages. The other method consists in put the infusion in low temperatures (-5°C) and then through the cryoconcentration the water is removed from the infusion. Then, the infusion is translated to a cool room which is freezing at -50°C. It is granulated and classified in a vacuum heating, in which the final content of water is eliminated by sublimation, obtained a freeze-dried coffee.

#### **1.4.8 Packaging:**

This is a very important phase in order to safe and protect the organic properties of the final product (roasted coffee), such as the aroma, flavor and taste. It protects the coffee from the humidity and oxygen. It avoids the deterioration of the coffee; therefore, depending on the type of final product, different types and techniques of packaging can be adopted. The ground coffee tends to deteriorate more rapidly than the coffee beans, because it has a greater exposure with air, so this is a cause to define a specific packaging technique (bags, jars, capsules, pods, single portions.) [21]

The vacuum packaging mainly concerns to the grinded coffee. The bags are filled with the coffee and then are deprived of the air present and hermetically sealed. The method must be done after a correct degasification of the coffee because it would be inefficient if at the end, the coffee release CO<sub>2</sub>. It could remain packaged for around three years.

There is another technique called the non-return valve, that concerns essentially to the coffee beans. After the coffee is degassed, it is put in a package equipped with a non-return valve that allows internal CO<sub>2</sub> gasses to escape and on the same time prevents the entrance of external air. This helps to conserve the aroma of the coffee. The coffee could be packaged for around two years. This process also can be done and is more effective using an inert gas, that in general is nitrogen, that is blown into the package during the packaging; this eliminates the air and oxygen and prevents the loss of aroma and other organic qualities.

In the recent years, other type of packaging has spread: the pods and capsules. In the pods, the coffee is covered in a paper filter made of cellulose that could be biodegradable. To maintain the aroma because the pods are not self-protected, a film is used to package the pods. On the other hand, in the capsules the coffee is enclosed in a plastic or aluminum casing that allows to preserve and retain the aromas. There is also used the technique of adding nitrogen to eliminate the oxygen and keep the aroma.

### **1.5 NUTRITIONAL PROPERTIES**

For a long period of time, the coffee was associated with health problems and were one of the first foods that were banned by the doctors when there were health problems associated with the hearth, brain, or general parts of the body. However, in the last years, scientific studies had found that, on the contrary, the coffee has most of the time beneficial consequences for the human health; of course, consuming it in adequate quantities and not exaggerating (maximum 4 cups of coffee per day), It gives nutritional benefits that can help to have a better life style [22].

Coffee is well known for one of its most famous components, the caffeine, usually associated with a stimulating impact for the body, making people full of energy, ready for the normal day activities. However, the coffee contains another components that also impact the health of the human body. On the following table (Table II), some nutrients and their respective quantity in 100g of green coffee is presented, showing that coffee is also a source of vitamins, carbohydrates, minerals, fibers, and antioxidants [23].

TABLE II:

*Some nutrients contained in Arabica Coffee*

NUTRIENT	AMOUNT (100g)
Energy (kcal)	460
Water (g)	1,7
Protein (g)	5,29
Carbohydrate(g)	74
Fat (g)	15,87
Fiber (g)	1,9
Sugar (g)	58,2
Calcium	271
Magnesium (mg)	68
Phosphorus (mg)	251
Potassium (mg)	1033
Sodium (mg)	317
Niacin (mg)	2,2
Folic acid (µg)	9
Vitamin A (µg)	1
Vitamin K (µg)	1,5
Caffeine (mg)	360

Source: [23]

There are some proven positive effects that coffee has in the life of people. Some of them are the following [24]:

- Helps us to be alert: coffee improves the functional aspects of the brains including the memory, mood, energy levels and reaction function thanks to the caffeine. As a disadvantage is that this function could also cause sleep disorders.
- Helps us burn fat: Coffee, with the caffeine, is a natural substance that helps burning fat, however, if it is drunk too much, the effects are diminished.
- Improve the physical performance: Caffeine increments the level of adrenaline, so the consumption of coffee is usually used by athletes before a competition or a game. The adrenaline makes that the fat cells decompose the fat of the human body, which can be used as a combustible in the physical exercise.
- Coffee contains nutrients as riboflavin (B2 vitamin), pantothenic acid (B5 vitamin), manganese, potassium, magnesium and niacin. Also, it is a source of antioxidants, more than most fruits and vegetables.
- Decreases the risk of having some diseases: A big quantity of studies have shown that people that consumes coffee have between 23% to 50% less risk of having diabetes. The reasons are not clear yet, but the fact that coffee reduces the risk for having this disease is proven. Also, it has been demonstrated that caffeine decreases the risk of having neurodegenerative diseases; the risk of having Alzheimer decreases in 65% and the risk of having Parkinson in a 50% with people that drink 3 cups of coffee

daily. Moreover, other studies also proved that people that drink more than 4 cups of coffee per day have 80% less probability of being with cirrhosis disease.

- Reduce the risk of having Colon cancer: The American National Society of Nutrition proved that the high coffee consumption reduces the risk of suffer colon cancer and breast cancer.
- Reduces the risk of having a heart attack: Consuming coffee in adequate quantities reduces the risk of having a heart disease, however, these advantages are eliminated if the coffee is consumed in an exaggerated quantity.

As it can be read, coffee has a lot of important effects in the human's health, preventing diseases, incrementing the energy levels and the physical performance. The most important components that helps in this performance of the coffee are the caffeine, the chlorogenic acids, and the fibers.

Caffeine is an alkaloid that is found in coffee, as well as in chocolates and teas. The main consequence of consuming this compound is the stimulation of the central nervous system and the prevention of diseases [23]. About the chlorogenic acids, there have been identified around of 11 different types of this components in the coffee. They are generally related to anti-inflammatory, anti-bacterial and antioxidant activities. Finally, fiber helps in the good digestion process of the colon, its consumption is degraded by the colon microbiota to short-chain fatty acids. It lowers the pH levels in the colon and prevents the growth of microorganisms and destructive bacteria. Moreover, the high intake of fiber is associated with a beneficial physiological and metabolic effects in the regulation of blood glucose, insulin and cholesterol [23].

## 2. INTERNATIONAL COFFEE MARKET

The objective of this chapter is to have an overview of how the Coffee market works around the world. Therefore, we are going to analyze how is the supply chain of the industry, the coffee supply and demand situation, the description of the coffee's exports and imports and how the coffee prices are determined.

### 2.1 COFFEE SUPPLY CHAIN

As in many industries, the coffee supply chain contains so many actors and phases, and each of them are important for reaching the final user. The following chart (Fig.6) represents a general supply chain of the coffee industry, nonetheless, the composition and the functioning of the chain could vary among all the countries of the globe.

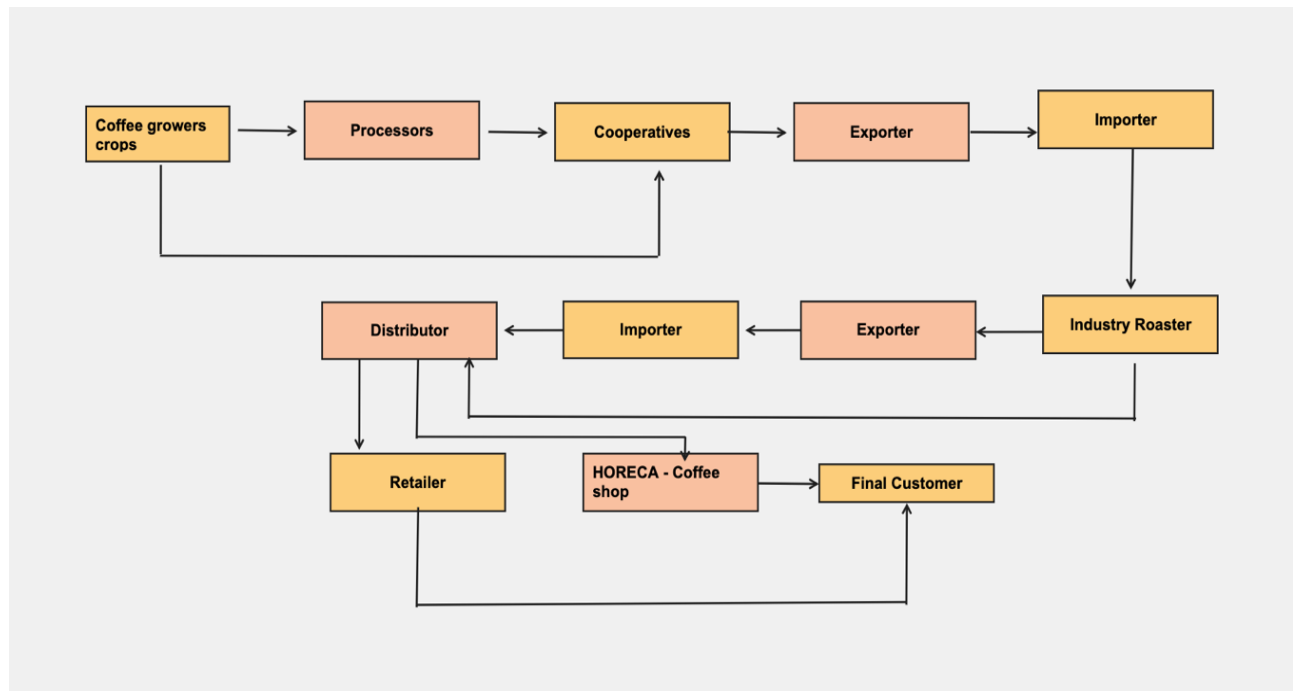


Fig. 6: General Coffee supply chain

The chain starts with the coffee growers, they oversee the crops and then sometimes the cherries are given to the processors which process the cherries until obtain the green coffee bean. After having the green coffee, it is sold to the cooperatives; most of the times the coffee growers pertain to the cooperatives and also are the ones in charge of the coffee processing, however, here is specified each part of the chain. Then, the cooperatives sell the green coffee to the roasters, if it is selling abroad the country the coffee need to be exported and imported, in which in some cases some intermediaries are needed to perform these activities. On the other hand, if it is sold inside the country, there is no need of intermediaries in terms of exportations. When the Roaster industry (such as Lavazza, Starbucks among others) has the green coffee, they do all the roasting process (which was explained in chapter 1) transforming the green bean into roasted coffee. Then, this industry exports the roasted coffee across the world, again some intermediaries could be needed; in each country, a distributor (could be

the same coffee industry) oversees distributing the coffee to a retailer or directly to hotels, restaurants and Caterings or specific coffee shops. These final participants are the ones who sell the coffee to the final customer. The final customer could buy the coffee in different ways, such as grinded coffee, instant coffee, the coffee beans, or the cup of coffee, the first three depends on the transformation that the roasting company decides to do, the last one depends on the transformation done by the HORECA.

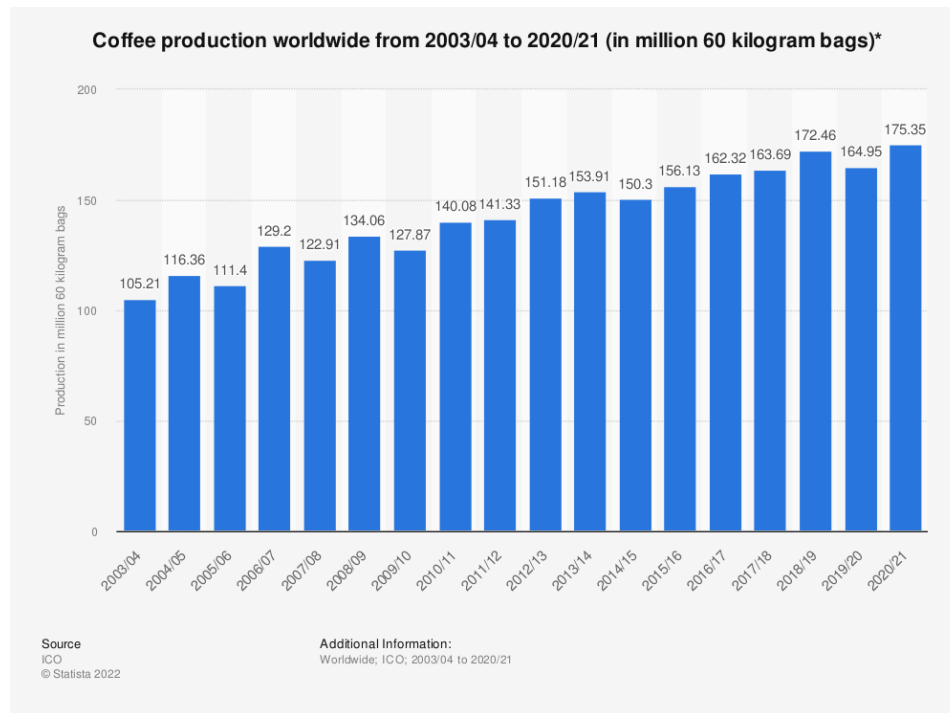
As it could be analyzed also in the chain and in the actual market, some industries are part of one phase of the supply chain while others are part of more than one stage, as they can also be part of the whole supply chain. Some studies have found that the distribution of the coffee supply chain is divided into 70% control by the multinational industries and 30% control of industries in the countries of origin of the coffee bean. The low price of the green coffee bean in the international markets, and the low negotiating powers against big intermediaries and multinational makes that the participation of producers in the value of the chain is very small, and in average they take no more than 10% of the selling price of the coffee to the final consumer [25]. This is the moment when a phenomenon called “Vertical Integration” appears in the market, and some companies, depending on the feasibility; not only economical, but also geographic; decides to participate in more than one stage of the chain. This is the case of Starbucks, which are owners or buys coffee of coffee lands in South America (Colombia is included) and they have their own coffee growers which to whom they teach all the good practices of coffee cultivation, as well as they help in socio-economic aspects. Also, they have their own roasting plants and their own coffee shops. The National Federation of Coffee Growers in Colombia (FNC) is also part of this phenomenon, adopting the same strategy of Starbucks with their own Juan Valdez coffee shops. The FNC has their own federated growers and cooperatives, their roasting plants, and their own coffee shops. On the other hand, there is the case of Lavazza or Illy caffe, which are in more than one stage of the chain but not in all of it, they buy the coffee from the exporting companies or cooperatives, they have their own roasting plant and their own coffee shop. The decision of being in more than one phase of the supply chain will be discussed later in this document.

## **2.2 GREEN COFFEE PRODUCTION (SUPPLY)**

Coffee today is synonym of a lot of things, people could drink it for pleasure or for energy, and could drink it in diverse types of environments, such as the office, house, hotel, restaurant, or exclusively coffee shops. It has evolved into a perfect drink for doing different activities included friends’ interactions, work meetings, family meetings etc. It is catalogued as one of the most traded commodities, some experts established that it is the 2<sup>nd</sup> most traded commodity in the world, after the petroleum; however, this information is not verified with data. Production is concentrated in the equatorial countries, but its processing and marketing is concentrated in the countries of the north. After water, is the 2<sup>nd</sup> most consumed beverage in the world [26].

Worldwide production is as usual, related to the coffee demand, however, external situations could also affect the production. These external situations are mostly pests and fungus such as rust, or situations of extreme rain and drought. Nevertheless, the coffee market in the last years has shown a growing trend as can be seen in Fig. 7.





*Fig. 7: Historical worldwide coffee production Source: Statista[27]*

As it is evidenced in the graph, the growing trend of the coffee production has been a constant in the last 20 years. There have been years in which the production has decreased, but in general the tendency is the contrary. The years in which there is a decrease in the production has been due to external situations, such as in 2010 when Colombia suffered an extreme climatic situation with heavy rains, floods, and pests in coffee crops. Another clear example is in the year 2019/2020, when the world suffered the COVID 19 pandemic, and the coffee production was affected like most markets around the world. Isolation, uncertainty, and the focus of governments on directing the budget towards other aspects related to the pandemic affected the capacity of the growers to continue their usual coffee production. Logistics problems in terms of transportation from the field to the places of exportation were a constant. However, in the year 2020/2021, the panorama changed, the pandemic began to be controlled, the markets began to function as before and the coffee production closed the year with 175 millions of 60 kilograms bags of green coffee, a record never registered.

From the total quantity of coffee produced, Arabica and Robusta are the coffee types dominating the production, they represent the 99% of the total coffee production, leaving less than the 1% to the Liberica specie. In the Fig. 8 the production trend of Arabica and Robusta could be appreciated.

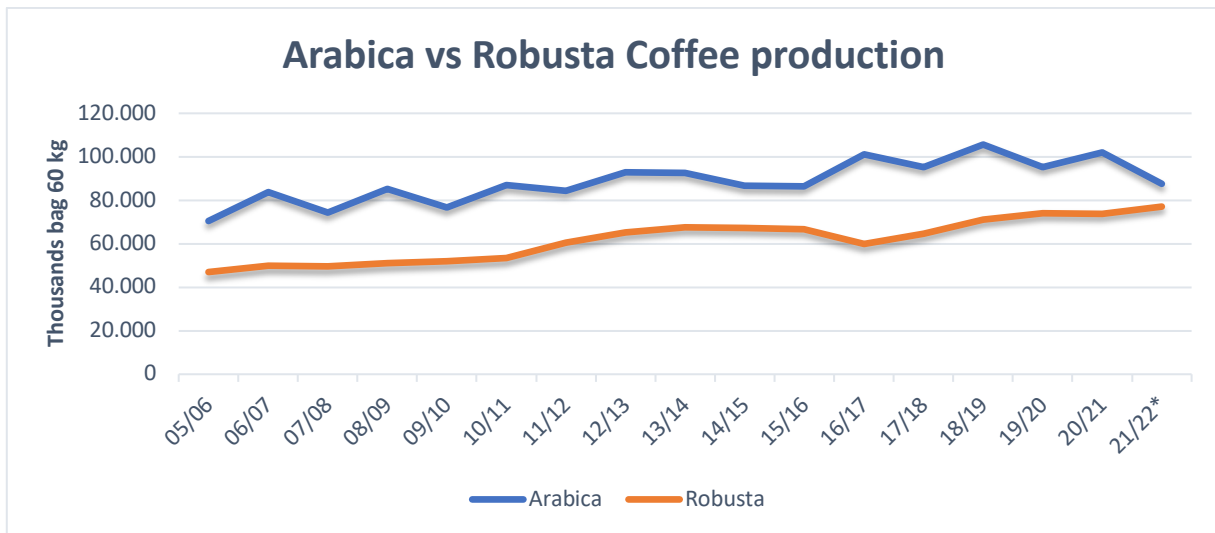


Fig. 8: Arabica vs Robusta worldwide coffee production. Source: STATISTA [27]

With the graph we could understand that the Arabica type of coffee has always been dominating the market, with the Robusta some steps behind. However, in the last 6 years the Robusta specie presented a growing tendency, influenced by the actions of Vietnam in the coffee market (major Robusta producer) and Brazil, that is implementing a policy of increasing the Robusta crops rather the Arabica crops due to the easiness of all the cultivation process.

Not all the countries around the world are green coffee producers, the main cause of this situation is that the cultivation of coffee requires specific environmental conditions. That is why during all the history, some specific countries have always been the producers of coffee. These are the countries which are located near the equator of the world and present a weather that is not extreme and in which the rains are necessary. In the following graph (Fig. 9), the leading countries in the production of green coffee are presented.

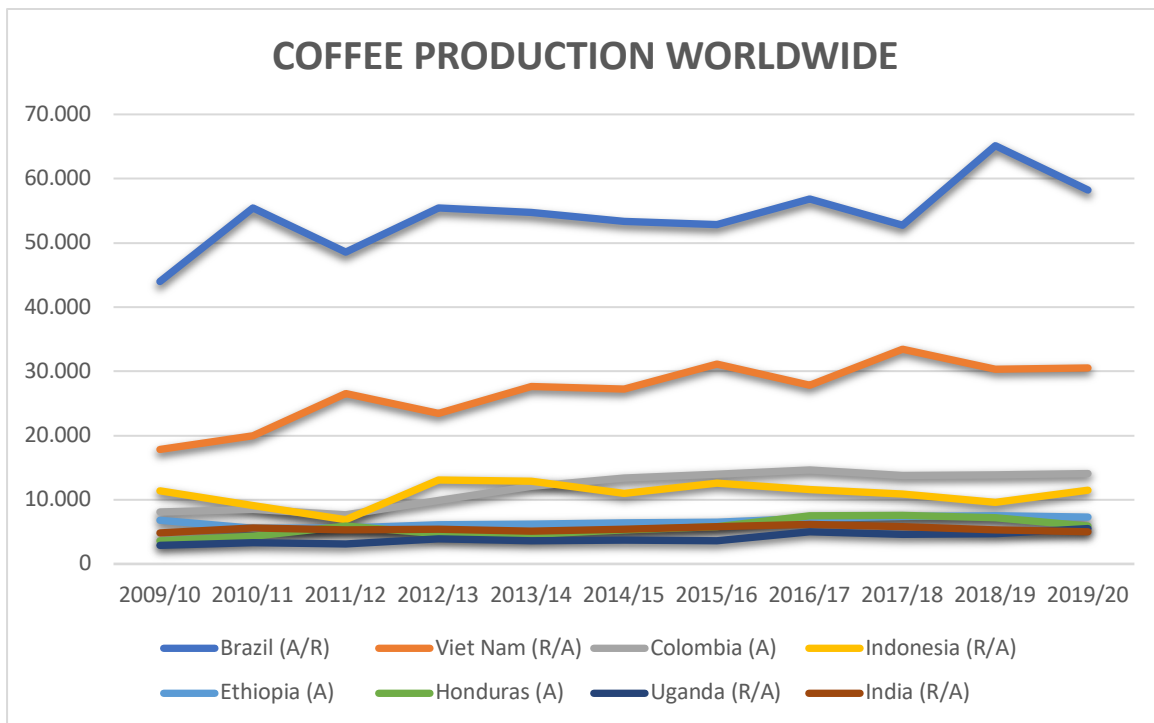


Fig. 9 : Last 10 years coffee production in 1000 60 kg bags. Source: ICO [28]

As it can be seen, Brazil has been the leader in the green coffee production sector, and if we analyze decades before 2009, Brazil historically has been the one leading. It is a country with a lot of land for producing coffee, and they take advantage of this opportunity cultivating both types of coffee. Their production is mixed between Arabica and Robusta coffee type, having a distribution of 70% - 30% respectively. In the second place we found Vietnam, an actor that recently has been leader in this sector; specifically, after 1990 when the country decided to enter completely in the coffee market. The government created a policy that enables the development of the coffee sector. The Vietnam Coffee and Cocoa association (VICOFA) was created, following the dynamics of the Colombian coffee sector, and it passed from producing less than 2 millions of bags of green coffee per year in 1990, to produce 12 millions in 1999 and becoming that year the 2<sup>nd</sup> largest player in the green coffee market. However, is important to mention that is a country only producing Robust coffee beans, a type of coffee in which its market is growing but is still lower than the Arabica sector. Colombia, another important player in the history of the green coffee is the 3<sup>rd</sup> important player, having Indonesia very close to them. Until 1999, it was the 2<sup>nd</sup> player, but the efforts of the government of Vietnam put Colombia in the 3<sup>rd</sup> place. However, the main difference, is that in Colombia only the Arabica coffee is produced, and this type of coffee has a market premium for its quality. Finally, Indonesia is on the verge of stealing Colombia's position as the third largest producer; in this country, around the 10% - 20% of the coffee produced is Arabica and the rest of them is Robusta [28]. It is important to mention that in Indonesia is produced a type of coffee catalogued as the most exotic and expensive one, this coffee is Kopi Luwak (civet coffee), a coffee that consists of partially digested coffee cherries. These cherries have been eaten and defecated by the Civet. However, experts have argued that the taste is not good, and that is a coffee sold just for their story [29].

## 2.3 GREEN COFFEE IMPORTS AND EXPORTS

As coffee is the 2<sup>nd</sup> most traded commodity in the world, it is important to analyze the dynamics of the exports and imports in the market. In many countries, during a big period, coffee was the most important asset to export, and was dominating their exportations; however, with the arrival of oil and the technological development of many countries, coffee was losing the first places and other materials for these markets were becoming main sources of exports. Besides this situation, there are still countries in which the coffee is their main commodity for exports.

As a law of supply and demand, the imports and exports behavior are similar. The quantity that is exported from one country is imported in other one, in the following graph (Fig. 10), it is shown the tendency of this situation in the last years.

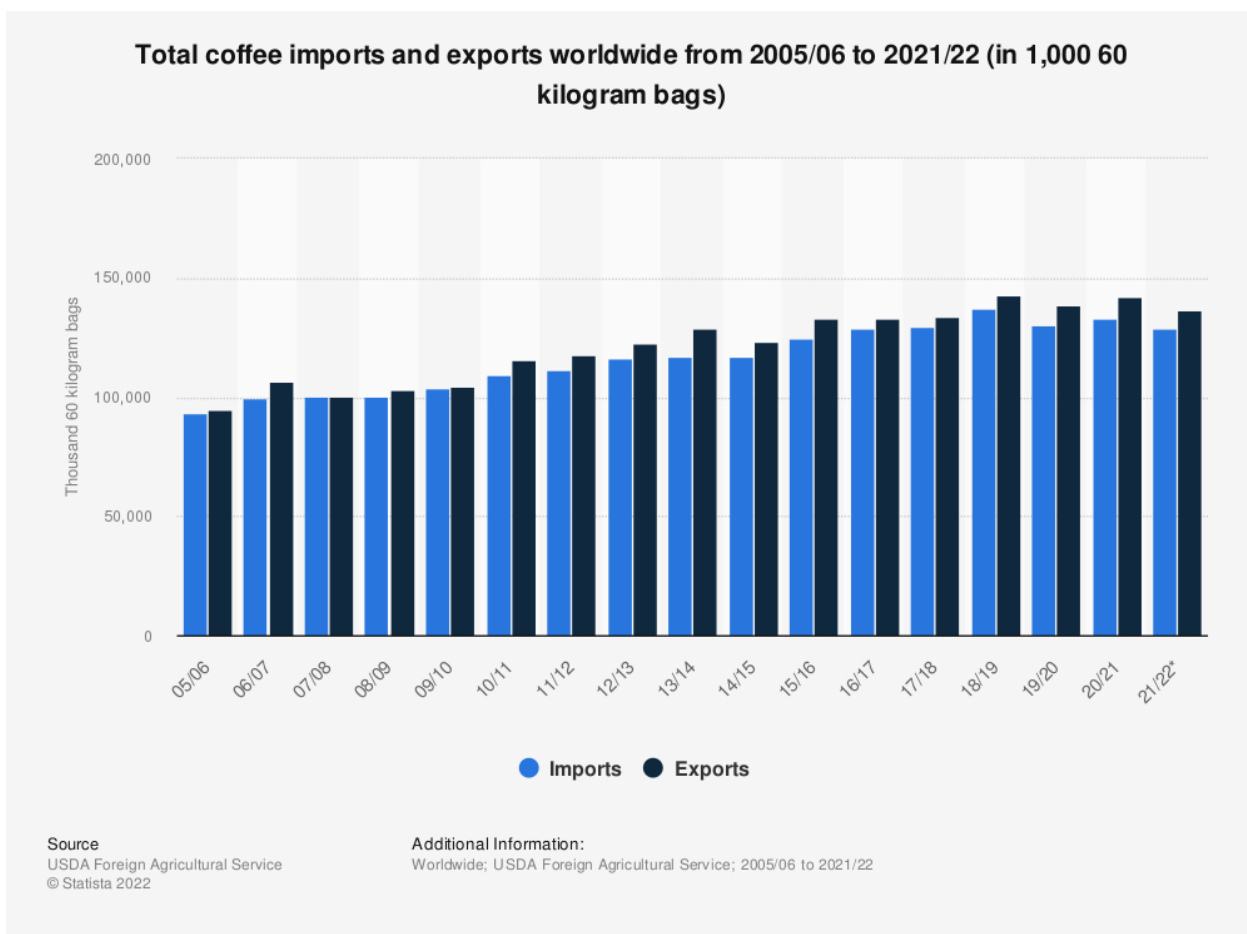


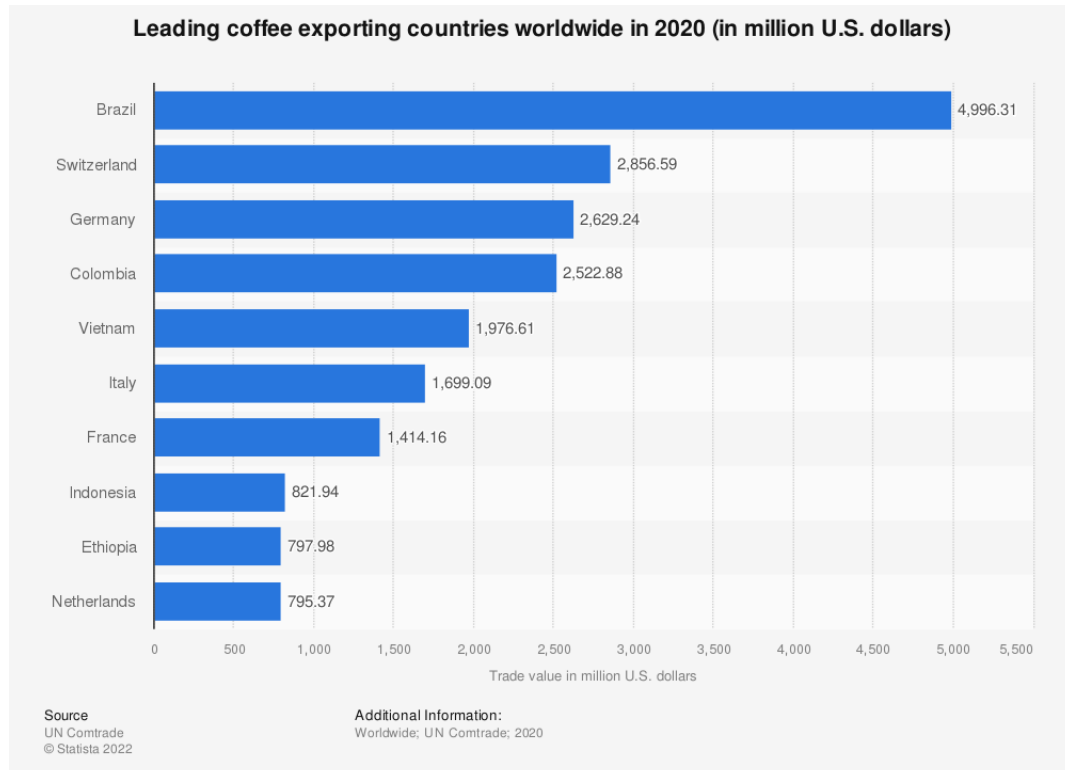
Fig. 10: Worldwide coffee exports and imports. Source: STATISTA [27]

In the graph we can observe a growing tendency in the last 15 years in terms of exported and imported coffee around the world. This tendency is a consequence of the growing fame that the coffee has acquired. Globalization has allowed the world to be connected, spreading the

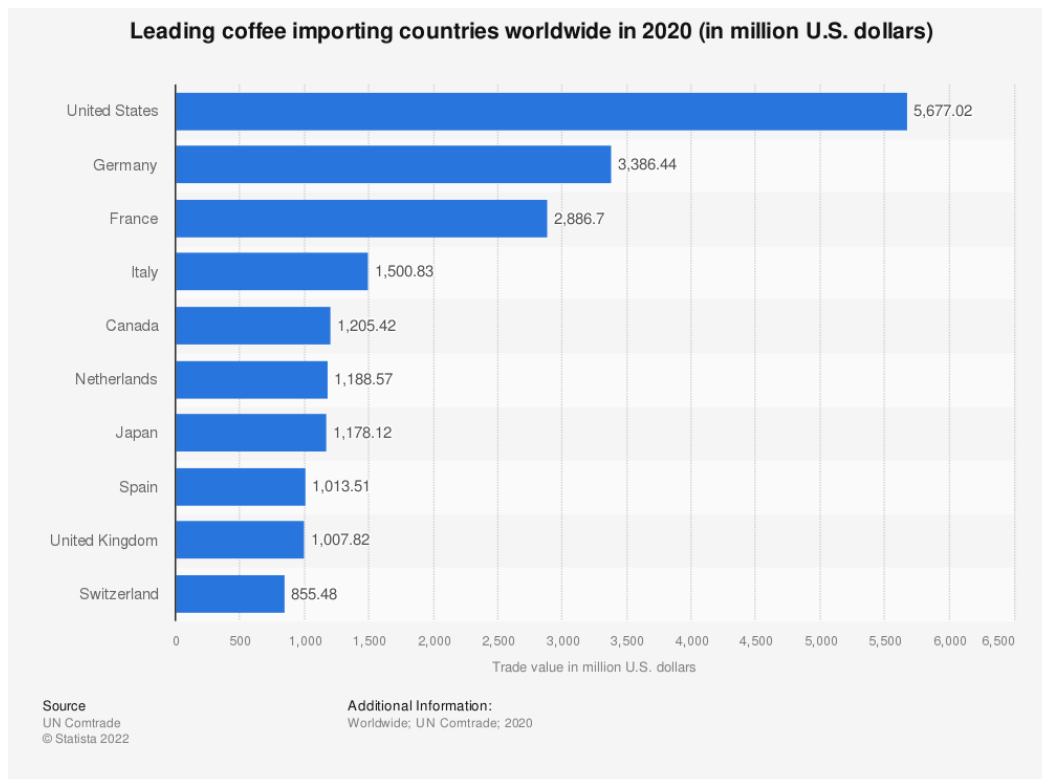
coffee culture around the world. Nowadays it is easy to identify the American coffee culture with the Starbucks chain, or the Italian coffee culture with Lavazza; all these brands are trying to enter in the markets of all the countries. On the other hand, a very big marketing campaign has appeared, focusing the beverage not only for the adults or the seniors, but also with the young people, trying to reach all the sectors. Also is appreciated in the graph that there is a difference between the exports and the imports, the reason is that this market is also characterized by a phenomenon called re-exports, that means when the coffee is imported to a country, and then this country exports it again to other one, in some cases there is a transformation of the bean into roasted coffee (but this would not be more catalogued as green coffee) or it is only sold with the added value of having a label of a very famous brand.

On the year 2021 a total of 142,37 million of bags were exported, while 133,03 million were imported. 2019 presented a decrease in both aspects, but the reason in focused on the COVID 19 pandemic of that year. Quantities of imports and exports are affected by external situations such as the pandemic, weather, economic situation of the country, logistics situations among other. The year 2021/2022 is estimated to be lower in terms of exports, because some countries such as Colombia and Honduras have a reduced exportable supplies and Brazil is experiencing some logistical bottlenecks [30].

Due to some weather characteristics and land conditions, historically there are some countries that are focused on the export of coffee using their higher production rate, and there are some countries focused on the imports of the bean. However, there is a third group of countries that are the re-exporting ones, these countries import the green coffee bean and export it after a roasting process to other countries. Many famous coffee brands have adopted this dynamic, and it is curious that the countries using this strategy of importing and then exporting are earning more money than the ones of exporting the green coffee. In the following figures (Fig. 11 and Fig. 12) we could analyze the leading countries in 2020 in terms of exports and imports.



*Fig. 11. Leading coffee exporting countries 2020. Source: Statista [27]*



*Fig. 12: Leading coffee importing countries: Source: Statista [27]*

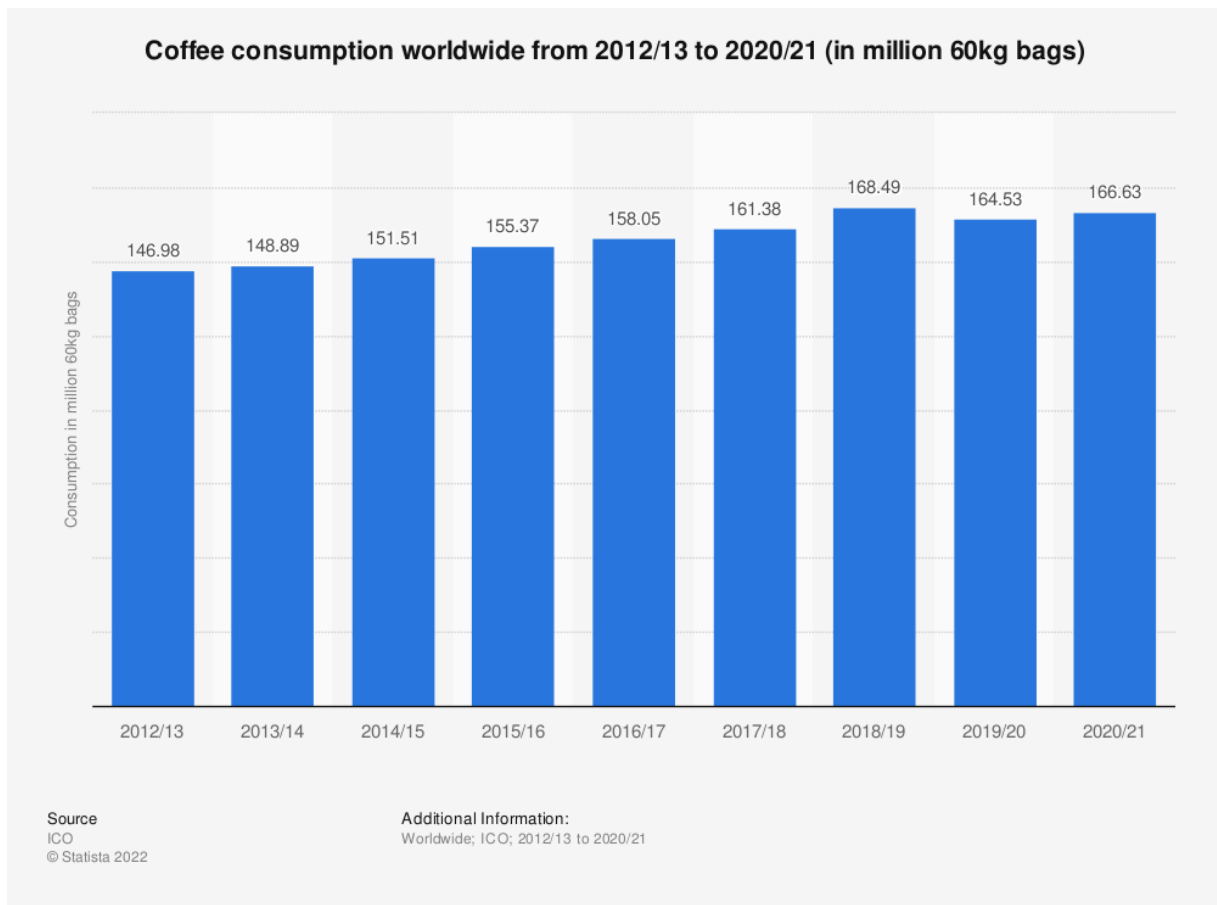
In the Fig.11 we can observe that in 2020, Brazil was the leader in the exports of coffee with a total of \$4.996,31 millions of dollars, this being the constant of the last decades in which Brazil has always been the leader in production and exports, meaning that the big quantity of coffee that Brazil produces is translated in money with the exports. Then, it appears two countries that represent the dynamic of re-exports mentioned before, Switzerland and Germany, countries that are ahead of Colombia and Vietnam even though these last two are the leaders in the coffee production, and that Switzerland and Germany do not produce coffee due to their weather and land conditions. The dynamic that they use is that they import green coffee at a very cheap price, and they sell roasted coffee at a greater price. Nowadays in the market, the biggest revenues are in the roasting sector, that is why Switzerland for example, buys green coffee and they end up roasting it, packaging it, labeling it and putting it up for sale at a much higher price than for example Colombian producers sells it. That is why, very big companies such as Nestle with Nespresso and Nescafé are in Switzerland and have a lot of influence in the exports. Producing countries such as Colombia and Vietnam are behind because the price paid for green coffee beans are minimum compared with roasted coffee; with a cup of coffee paid in New York or London that could cost \$4 dollars, the coffee grower receives \$0,04 dollars. The main reason of this fact is that the market of producers like Colombia, Vietnam, Indonesia or Ethiopia is “not capable of competing with the big industries, between since 70 and 80% of the coffee harvested comes into the hands of producers who are from rural areas that do not have sufficient resources to invest in capital goods that can improve the productivity of their crops or develop their own roasting plant. Also, they are not clients who can access bank loans due to the same lack of resources” [31]. They usually live with the minimum quantity of money, and sometimes due to the volatile prices of coffee they lose money with the sales.

On the other hand, in the figure 12 we have the country leaders in imports. United States (24% total imports of the world) and Germany (18% total imports of the world) are ahead in this aspect, and in the year 2020 they imported \$5.677,02 millions of dollars and \$3.366,04 millions of dollars respectively. With the analysis of the demand, it will be clearer why these countries are leaders, but is important to mention that one of the reasons of this value for the United States is that the coffee company Starbucks is from there, and it is the biggest coffee shop in the world with more than 30.000 shops around the globe from which 16.800 are located in the USA. Another important aspect to mention is the performance of Switzerland, they are in the 10<sup>th</sup> place, behind other countries like Italy or Netherlands, however, they are the 2<sup>nd</sup> largest exporter in the world. This means that the country gets a large amount of profit from the transformation of coffee from green beans to roasted beans., the costs of the imports represent the 29,9% of the money earned by the exports.

## **2.4 COFFEE DEMAND**

Like in all economic analysis, the demand is the important aspect that can't be absent; without demand, there is no market. Coffee demand is very important because from it depends the price of coffee (is one of the aspects that influence it), the production level, the imports and the exports, and the type of product produced. It is calculated that around 2.000 and 3.000 cups of coffee are consumed and the key drivers of this behavior include the growing penetration of upscale coffee retailers in emerging markets, the rising demand instant coffee,

and the redefinition of coffee; it is not only seen right now as a form of caffeine to get more energy, but as an exotic experience that has driven to the premium lines of coffee [32]. In the following figure (Fig. 13) this path of coffee consumption could be seen.



*Fig. 13: Coffee consumption trend [27]*

In the graph it is evidenced that the consumption has increased in the last 10 years, from 146 millions of bags to 166 millions of bags in the year 2021. It is important to mention that the tendency would be different if the pandemic has not arrived in the year 2019. For that year, the coffee consumption decreased from 168,49 millions to 164,53 millions. Despite people stayed at home and could buy coffee to drink there, the HORECA sector that is an important actor for the coffee consumption was very affected, which caused a decrease in the global consumption of the market.

Knowing the historical data about the consumption of the coffee around the world, it is also important to know which are the countries that consume more coffee, this means, the biggest buyers of the multinational companies. In the Fig. 14 is appreciated the counties that consume the most coffee.



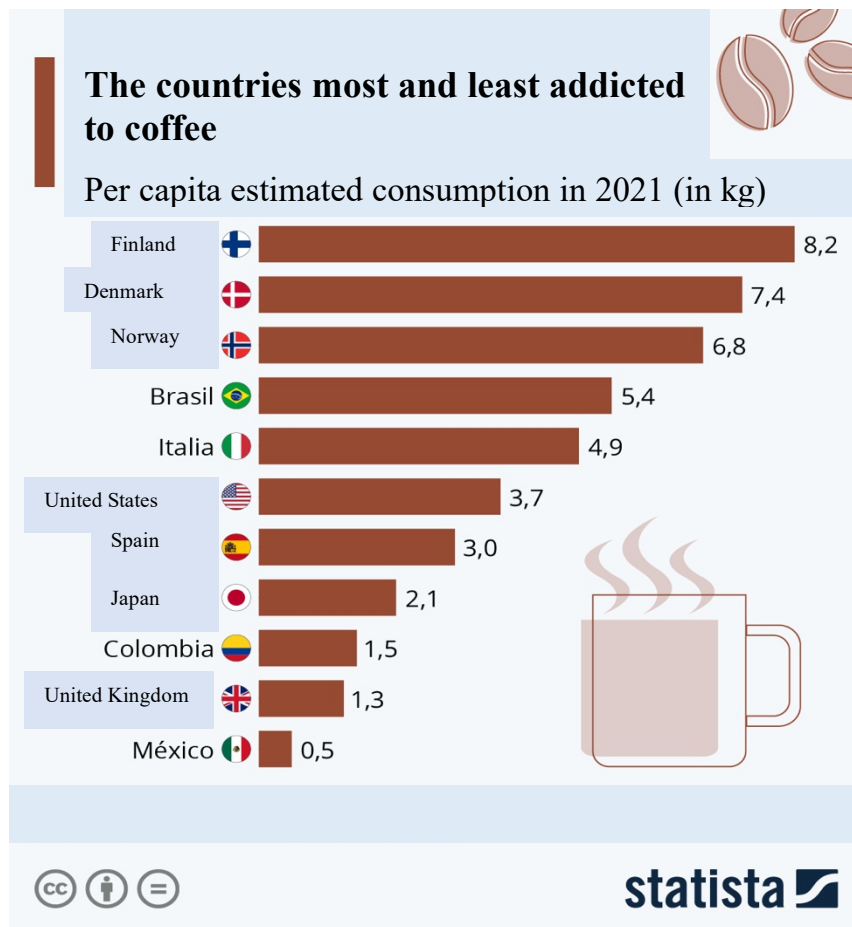


Fig. 14: Countries most and least addicted to coffee. Source: STATISTA: [31]

In the following figure we can see that the countries that consume the most coffee are the Nordic ones. Finland is in the 1<sup>st</sup> place consuming more than 8,2 kg of coffee per person per year. Then Denmark and Norway are following it with 7,4 kg and 6,8 kg of per year. This could be explained by geographical conditions but also by historical situations. The geographical conditions are due to their position in the globe, it is a zone where cold temperatures must be endured for most of the year, and the coffee, as it is a hot drink, is preferred by the people also due to their effects with the caffeine. However, there is an historical issue that also explains the behavior of these countries. There was a time when the alcohol was prohibited in these countries, around the period of 1916 to 1935, and coffee was having a boom in this zone due to the imports done. People, trying to substitute their alcohol needs, started consuming coffee at a higher rate than before, this phenomenon continue in force in these countries until today, where alcohol is no longer prohibited but coffee consumption is still very high [25].

Together with the quantity consumed, it is important also to analyze the revenues generated by the coffee market. The category of beverages is divided in different markets which includes Hot drinks market, Nonalcoholic drinks, Alcoholic drinks among other. The coffee segment belongs to the Hot drinks market, a market divided in 3 segments that are coffee, tea, and cocoa, and with two subsegments in the coffee segment that are Roasted coffee and

Instant coffee. In the Fig. 15 it is appreciated the revenues of this market, also, in Fig. 16 it is appreciated the share of these revenues. [32]

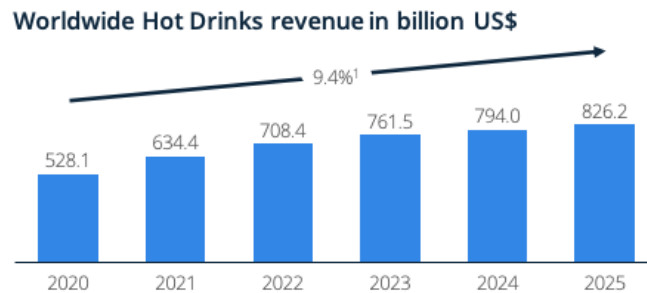


Fig. 15: Hot drinks revenues Worldwide. Source: Statista [32]

**Worldwide revenue share in 2021**

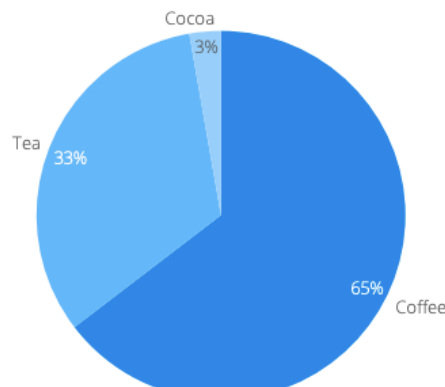


Fig. 16: Revenue share hot drinks market. Source: Statista [32]

As it can be seen in the Fig. 15, the hot drinks market is having a growing trend in their revenues, for the year 2021 the market had a total of \$634,4 billions in revenues and it is expected to close the year 2022 with a total of \$708,4 billions in revenues. For the year 2025 it is forecasted that the revenues will be of around \$826,2 billions with a compound annual growth rate (CAGR) of 9,5%. One of the drivers of this behavior is the coffee, that has surged in emerging countries and markets and also has followed a premiumization trend in the western world [32]. This also is evidenced in the Fig. 16 in which the coffee segment predominates the hot drinks market with a 65% of the revenues that corresponds approximately to \$410 billions, followed by the Tea segment with 33% that corresponds approximately to \$207 billions of the revenues and having only with a 3% (\$17 billions) of the revenues the Cocoa segment.

Focusing only on the coffee segment, there is also a growing tendency that is one of the causes of the growing tendency of the revenues in the hot drinks market. In the Fig. 17 this tendency could be seen, as well in the Fig. 18 is shown for the year 2021 the countries that contributed the most to the revenues of the segment.

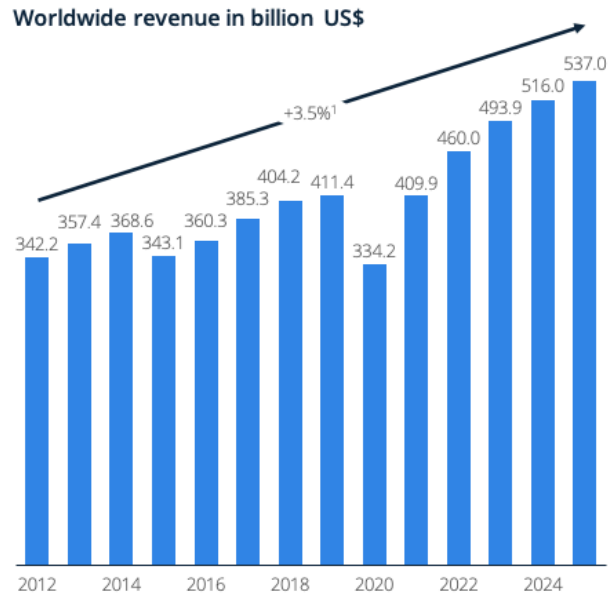


Fig. 17: Worldwide coffee segment revenue. Source: Statista [32]

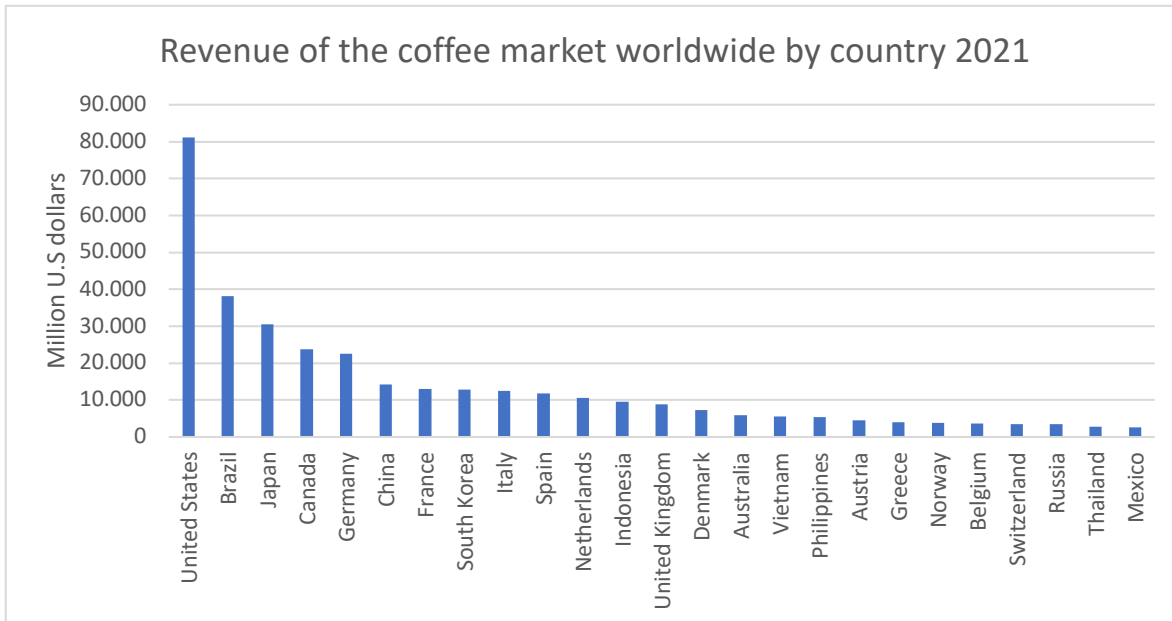


Fig. 18: Revenue coffee market by country 2021. Source: Statista [27]

In the Fig. 17 we can notice a growing tendency of the revenues in the coffee segment, starting from the year 2012 to the forecasted year 2025. There are two years in which the revenues decreased, in 2015 there was a coffee crisis production, Brazil had some problems with the weather and with pests, and this affected the total sales of the sector. In the year 2020 the world was affected by the COVID 19 pandemic, uncertainty, and isolation, were the cause of logistical, economic, financial and social problems in the market, affecting the revenues. However, in the year 2021 the industry recovered thanks to the stability that the planet began to have in terms of the pandemic (vaccines, real knowledge of the virus...) and

the sector obtained a total of \$409, 9 billion in revenues. Following this trend, it is estimated that the value will increase in the next years reaching the in the 2025 a quantity of \$537 billions in revenues and a CAGR of 3,5%.

Fig. 18 explains how was divided by country the revenues that the coffee segment had in the year 2021(that was the one of the recoveries from the pandemic). The United States was the country with the highest revenues, with approximately \$81.000 millions followed by Brazil with \$38.000 millions. It is important to mention that one of the main causes for the 1<sup>st</sup> place of the United States is that companies like Starbucks or Dunkin Donuts are from this country, one of them is the largest industry of the coffee shops in the world and the other one is one of the largest. On the 2<sup>nd</sup> place is Brazil, the biggest coffee producer and exporter in the world, therefore, is a country that can also translate this situation in monetary terms. Some big roasting industries are also in the country, but the majority come from the production. Finally, but not less important, we should notice that, without taking into account Brazil, neither of the biggest coffee producers (Vietnam, Colombia, Indonesia, Honduras...) are in the top 10 of the countries with the highest revenues, showing this that behind the production of the green coffee, there are problems transforming it into money. These problems include not only economical factor, but also social and geographical factors, that do not let them compete with the biggest coffee industries or being in a favorable position for trading and negotiating.

## 2.5 COFFEE PRICE

Another important key aspect of the coffee market is the price, it could be thought that is the final price by which a normal consumer buys the coffee in a cafeteria the one that will be analyzed, but is not this one the one crucial in the market; there is another price that determines this final price and all the other key points of the market such as the level of production and the demand, and this is the Green coffee price.

The coffee price is negotiated in the stock exchange, there are in the world a total of 300 stock exchange, but the coffee is not negotiated in all of them. Some of the markets are the Intercontinental Exchange (ICE) of New York where is negotiated the Arabica coffee (most popular coffee market), the NYSE Euronext, the New York mercantile exchange (NYMEX), the Tokyo grain exchange (TGE), the Intercontinental Exchange Europe (LIFFE), the Singapore Commodity exchange (SICOM) where is negotiated the Robusta coffee and the Brazil Bolsa Bacao [33]. Nevertheless, coffee was not usually traded in stock exchange markets. Until the end of the 1800's, the coffee was traded in physical way, but a continuous problem that this form of trade has was that the merchants did not always have the quantity of coffee required by the buyers. In order to solve this problem, it was created the contracts of physical coffee with future delivery in which the seller agreed with the buyer to deliver a volume of coffee at a certain price in a future date [34]. Over time, this strategy collapsed because even though it gave the vendors a period to obtain the coffee, they couldn't know the price they would have to get it or if the price agreed with the buyer would bring profit. Then, some merchants created the New York coffee stock exchange with the objective that the buyers, sellers, roasters, and distributors were protected from the fluctuation of the coffee prices. For this, they established the standards for the types of coffee to be marketed and for

setting prices. Also, they created the futures contracts, in which it is negotiated not the physical coffee but the speculation of the future coffee price. The value of each future is defined by the possible date in which the coffee producers will sell the coffee in the market and the price of it [34]. An important aspect to take into account is that the coffee market was overregulated in the stock exchange market until 1989, this because there were international trading agreements with the objective of managing the demand and supply of coffee and maintain stable the coffee prices; one of them was the quota agreement. In 1990 the coffee prices started to be set in a free market

In the Intercontinental Stock exchange, the coffee is traded in a “Type C” contract, that means a fixed trading volume of mild washed coffee that meets specified quality standards and is equivalent to integer multiples of 250 bags of 150 pounds each. This mean that a volume of 1000 bags is equal to four future contracts. In the future contracts, it is established the date in which the physical coffee must be delivered to the buyer. Depending on how the price of the coffee is in the stock market, sellers and buyers decides whether or not to enter the auctions depending on their profit expectations [34].

Coffee price in the stock exchange suffers volatility that depends on diverse factors, the supply and demand law is the predominating factor, and is here when the weather plays an important role. When there is over production, the prices decrease, and when there is a shortage, the prices increase. The supply is the one that determines this, and it is affected by the weather, when the environmental conditions are not the best (continuous rains or drought), the supply of coffee decreases, and though the price increases. Weather conditions, geopolitical aspects and economical aspects, such as the fuel price, determines the feeling experimented by the market participants; “when there is calm and confidence that the productions of coffee will be stable, volatility is reduced and prices tend to fall, since buyers do not see the urgent need to ensure supply for the future. On the contrary, when a shortage is feared, volatility tends to increase and buyers begin to make advance purchases of product to guarantee their supply, and prices tend to rise” [33].

One of the biggest players are the big buyers, which have the capacity of buying big quantities of coffee and store them in their warehouses, keeping a high level of stock. This creates a fictitious coffee deficit and force the price to rise; happening this, they start taking the coffee out to auction and can earn profits. The other big players are the speculators, investors that buy future contract and before the expiration of the term they auction them off, making money without having the physical coffee in their hands. They use the same dynamic of the big buyers, if they want to sell futures, they buy many contract to create a deficit and forcing the price to rise, on the other hand, when they want to buy, they release future contracts forcing the price to fall. [34]

In the following figure (Fig. 19) the coffee prices of the Arabica and Robusta types from the last eight years are shown, as well as the forecasted price until 2025.

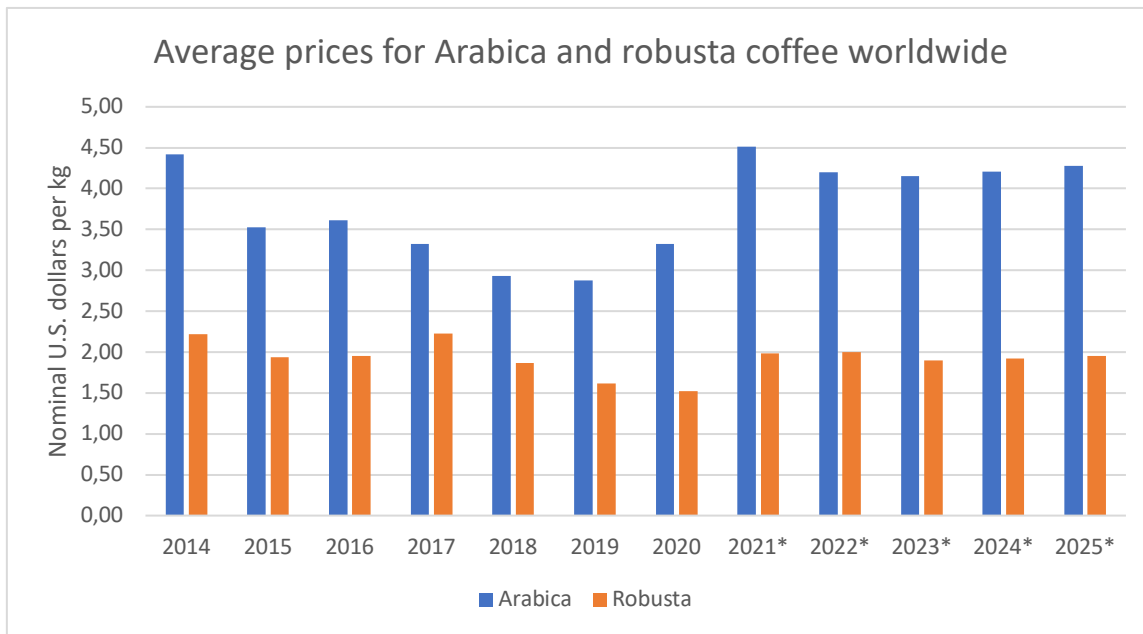
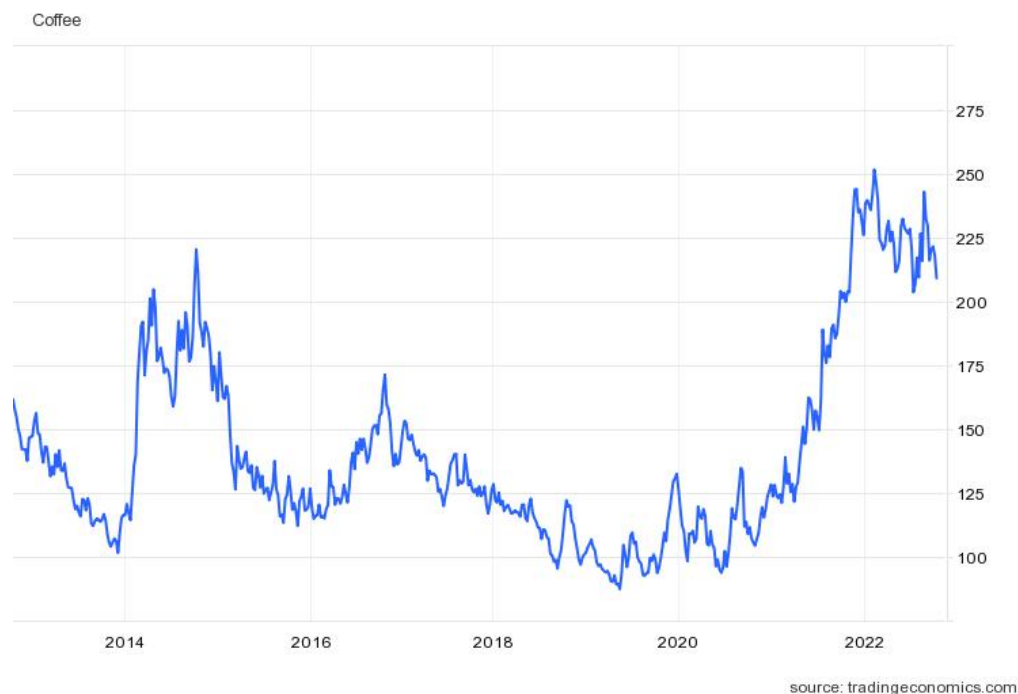


Fig. 19: Historical prices of Arabica and Robusta coffee. Source: Statista [27]

As it can be seen in the graph, Arabica coffee is always traded at a higher price than the Robusta coffee, since the quality of the Arabica beans are rewarded as well as the effort involved in the cultivation process. If we see the Arabica prices, after the 2014 until the 2019 there was a decreasing tendency of the prices, the world suffered an overproduction of coffee, especially led by Brazil, which produced a big quantity of coffee, also, the speculators were very positive of the future of the coffee crops, so there was calm in the market. After the 2019, the tendency changed into an increasing one, and it is expected to continue like that for the next 3 years. First of all, the climatic emergency has created events that have affected the crops of two important countries for the production of Arabica, Brazil with drought and frost and Colombia with floods. Together with this, the price of the fertilizers has increased, with the global inflation that is affecting chemical and industrial components [35]. Finally, but not less important, the coffee market is presenting an imbalance in terms of supply and demand, after the pandemic and the confinement, the consumption of coffee in home has increased, and it is a tendency that is here to stay, even though the world come to the old “Normality” again, that is why it is forecasted that the price will remain at higher level compare to the last decade.

Robusta prices have been changing over the years, but their general trend is remaining in a constant price, some decreases in price shown in the graph are due to the overstock of this type of coffee, being Vietnam’s production levels one of the main causes of this behavior.

In the Fig. 20 there is another example of historical prices of the future contracts of coffee, the way in which they are revealed to the public is different.



*Fig. 20. Historical prices of future contracts. Source: tradingeconomics.com*

In the figure we have in the horizontal axis the years, which is a graph from the last 10 years, and in the vertical axis the prices, talking about future contracts, the prices are in USD cents /lb. The market works in a process of bid and offers, and the minimum price change is \$0,05 cents for 1 pound, the size of a future contract must be of 37.500 pounds (approx. 250 bags), so this mean that the cost of a contract is of \$18,75 dollars. Based on this numbers is how it is established the price of coffee per kg as it was shown in Fig. 19. In the Fig. 20 it is also appreciated the growing tendency that is having the coffee price since the 2020.

### **3. MOST IMPORTANT COMPANIES IN THE INTERNATIONAL MARKET**

After analyzing the functioning of the international market, it is important also to analyze the most important companies, which involves their characteristics, history and financial performance.

Using the database provided by Bureau Van Dijk called ORBIS, the information was obtained. The idea was first to analyze the performance of the market as a whole, in order to compare then each company with the market average. For do this, the research was done applying some filters, the first one was the selection of only active companies, then a filter was applied made by the NACE Rev.2 code 1083, which corresponds to the sector “tea and coffee processing”, as a primary code. To refine the search, another filter was applied using the word “coffee” as primary activity of the company. As there are a lot of producers and roasting coffee companies around the world, to narrow the search only large and very large companies were used. For the database, a company is considered very large if one of the following conditions is satisfied [25]: Revenues are higher than 100 million Euros, total assets valuation is higher than 200 million Euros; there are more than 1000 employees; the firm is listed.

On the other hand, a company is considered to be large if at least one of the following conditions is achieved [25]: revenues are higher than 10 million Euros; total assets valuation is higher than 20 million Euros; there are more than 150 employees; the firm is not included in the category “very large”.

Using these filters, a total of 1019 companies were found, for which the analysis was done. In order to analyze the financial performance of most important companies in the recent years, it is necessary also to establish the average performance of the market to make a reasonably comparison. The parameters used were some profitability ratios that shows the ability of the company to earn profits. The ratios of profitability are used to measure the operating success, the income of a company, for a given period, in this case, the time frame is the last 10 years, from 2012 to 2022. The parameters are the following: operating revenue, net income, total assets, enterprise value, profit margin (Orbis calculates it with the profit before tax), ROA, ROCE, ROE

$$\text{Profit Margin} = \frac{P_{\text{before tax}}}{L_{\text{Sales}}}$$

*Formula (1): Profit Margin formula*

$$\text{Return on assets: } \frac{\text{Net Profit}}{\text{Total assets}}$$

$$\text{Return on assets} = \text{Net profit margin} * \text{total assets turnover}$$

*Formula (2): ROA formula*



$$\text{Return on equity} = \frac{\text{Net profit}}{\text{Total equity}}$$

$$\text{Return on equity} = \text{Net profit margin} * \text{total assets turnover} * \text{financial leverage}$$

*Formula (3): ROE formula*

$$\text{Return on capital employed} = \frac{\text{EBIT}}{\text{Shareholders equity} + \text{Long term liabilities}}$$

$$\text{Return on capital employed} = \frac{\text{EBIT}}{\text{Total assets} - \text{Total current liabilities}}$$

*Formula (4): ROCE formula*

In the Table III the results are shown in thousands of USD, each year has two measures of central tendency (Median and Average) and one measure of dispersion (Standard deviation). In the case of parameters for which the dispersion is high, the Median is a better representation of the data set because is not skewed by a small proportion of extremely large or small values. To understand when a data set has a high dispersion, it is necessary to use another statistical tool that is the coefficient of variation, which is the value obtained by dividing the standard deviation with the mean. If the value obtained is higher than 0,3, then there is a high dispersion and is better to use the Median as a representative measure of the dataset instead of the Average.

TABLE III:

*Historical profitable performance of the coffee market*

		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
<b>Operating revenue (Turnover) (th USD)</b>	Standard deviation	285.660	312.186	364.585	392.619	367.301	433.996	408.264	418.479	240.217	201.836	132.019
	Median	23.904	27.235	23.878	25.673	27.505	28.012	26.736	28.446	28.663	21.037	53.178
	Average	90.568	101.392	111.440	117.304	112.642	118.469	109.109	117.718	94.348	71.947	95.050
<b>Net income (th USD)</b>	Standard deviation	32.204	30.335	38.338	59.399	15.668	31.499	45.897	44.362	37.182	19.405	6.253
	Median	841	1.089	796	762	1.009	996	1.082	1.116	740	913	-207
	Average	6.603	6.243	6.699	7.399	5.247	6.368	7.064	7.597	4.496	4.468	-2.453
<b>Enterprise value / EBITDA</b>	Standard deviation	2,89	1,86	3,91	3,67	4,31	11,88	14,82	8,45	15,06	11,78	n.a.
	Median	9,52	7,44	9,36	9,48	8,71	11,37	11,86	11,95	10,18	11,17	15,91
	Average	9,02	7,68	9,88	10,92	10,69	15,52	17,09	14,82	15,03	16,16	15,91
<b>Profit margin (%)</b>	Standard deviation	10,57	9,48	9,24	11,47	9,03	10,64	14,40	10,73	14,04	11,51	3,53
	Median	4,17	5,38	5,74	5,37	5,66	5,18	6,38	5,19	3,89	4,16	0,52
	Average	5,03	6,27	6,37	5,37	6,08	5,75	6,82	6,19	5,04	5,38	1,07
<b>ROA using Net income (%)</b>	Standard deviation	16,49	14,75	11,50	12,59	9,26	10,28	11,94	10,32	11,74	11,05	4,11
	Median	4,91	4,83	3,79	4,26	4,70	4,44	4,42	4,07	2,76	2,99	0,61
	Average	9,63	8,13	4,37	4,15	6,00	5,56	5,65	5,40	4,26	4,63	0,71
<b>ROCE using Net income (%)</b>	Standard deviation	31,65	31,16	33,81	87,28	51,47	28,41	32,76	38,66	29,22	25,43	47,64
	Median	9,03	8,56	8,73	8,63	9,60	8,52	8,89	8,26	4,80	5,44	-2,53
	Average	11,91	9,53	14,18	10,66	14,49	11,65	10,16	9,53	8,04	6,79	-21,73
<b>ROE using Net income (%)</b>	Standard deviation	52,63	42,87	74,77	60,48	49,50	41,60	47,53	43,98	44,68	62,81	38,93
	Median	10,95	12,07	10,18	10,51	10,74	10,19	9,86	10,34	6,95	7,76	0,14
	Average	18,80	17,38	13,89	14,59	15,17	12,92	13,33	14,40	8,17	4,56	-14,37
<b>Total assets (th USD)</b>	Standard deviation	263.590	562.503	735.501	1.348.487	1.162.048	1.381.690	1.322.238	1.229.941	360.082	337.794	107.176
	Median	16.890	19.350	26.024	25.385	24.933	28.846	27.857	29.947	34.260	34.021	38.912
	Average	78.095	118.331	133.585	192.310	149.673	184.706	184.399	165.241	115.406	110.663	80.406

Source: [36]

The first thing important to mention in the graph is that for the year 2022, the information of most of the companies were not available yet, that is why there are some atypical values in this year compared to the values of the previous ones, and also that is why the dispersion is so high, because there are not enough values in order to establish a central tendency. For this reason, the year 2022 will be excluded of the analysis. Comparing years 2019 to 2020, there is always a decreasing trend, influenced clearly by the pandemic in which the coffee sector

suffered in different aspects as it was explained in the previous chapters. Furthermore, in the majority of the parameters, also for the year 2021 the trend continues decreasing, showing that for that moment the pandemic still has consequences in the market; that is why the year 2022 was expected as the year of the recovery of the market. The net income suffered a decrease of approximately 40,8% in average, passing from 7,6 millions of dollars to 4,5 millions of dollars, of course, some ratios such as ROA and the ROE also suffered a decrease because they are affected by the net income. The ROA (net income / total assets) decreased 21,1% and the ROE (net income / total equity) decreased 43,2 %, the return in the equity of the shareholders suffered. Complementary to this, total assets also decreased, companies in average didn't performed investment in assets and on the contrary, the tendency was selling assets.

For the years 2015 to 2016 a same analysis could be done, because during this period of time also a decreasing tendency is shown. As it was explained in some chapters above, the main reason of decreasing in these years is for the coffee crisis caused by climate disasters.

Having clear the average performance of the market, now it's time to analyze the results of the most important companies in the coffee sector. The revenues were the parameter chosen for selecting the top 4 companies that can be seen in the Table IV, values are in thousands of USD, and the year of reference was the 2021, which was the year in which the majority of the companies has their information available for public access.

TABLE IV:

*Top 4 coffee companies 2021 in terms of Revenues*

Company	Operating Revenue (th USD)
STARBUCKS CORP	29.060.600
JACOBS DOUWE EGBERTS PEET'S	7.929.334
LUIGI LAVAZZA S.P.A.	2.621.192
NESTLE FRANCE	2.546.358

Source: [36]

### 3.1 STARBUCKS CORP:

Starbucks is an American coffee chain company, and as it can be seen in Table IV, was the one with the highest operating revenues in 2020 with 29 billion of USD approximately. The company was born in 1971 in Seattle, and Howard Schultz was the most important president and CEO of the company expanding the idea of the Italian coffee shops to his own business. The company has as an objective to inspire and nurture the human spirit, with an environment in their stores in which they not only serve coffee, but also offer an environment and a place to talk and feel part of a community [34]. The company quickly started their expansion with this new production model and was in 1996 when the company decided to go beyond North America, becoming soon the largest coffee chain in the world, reaching at the end of the 90's, a total of 2.500 stores. At the end of the 2022, the company reported a total of 35.000 stores opened around the world, and with presence in the 5 continents. In the Table V and the Fig.

21, the total revenues, gross profit and net income of the company for the last 10 years can be visualized.

TABLE V:  
Historical Starbucks revenues

	Revenues	Gross profit	Net income
2012	13.276.800	3.575.700	1.383.800
2013	14.866.800	4.232.600	8.300
2014	16.447.800	4.989.600	2.068.100
2015	19.162.700	6.004.000	2.757.400
2016	21.315.900	6.789.800	2.817.700
2017	22.386.800	6.911.000	2.884.700
2018	24.719.500	7.410.700	4.518.300
2019	26.508.600	7.560.100	3.599.200
2020	23.518.000	5.190.600	928.300
2021	29.060.600	8.517.800	4.199.300

Source: [36]

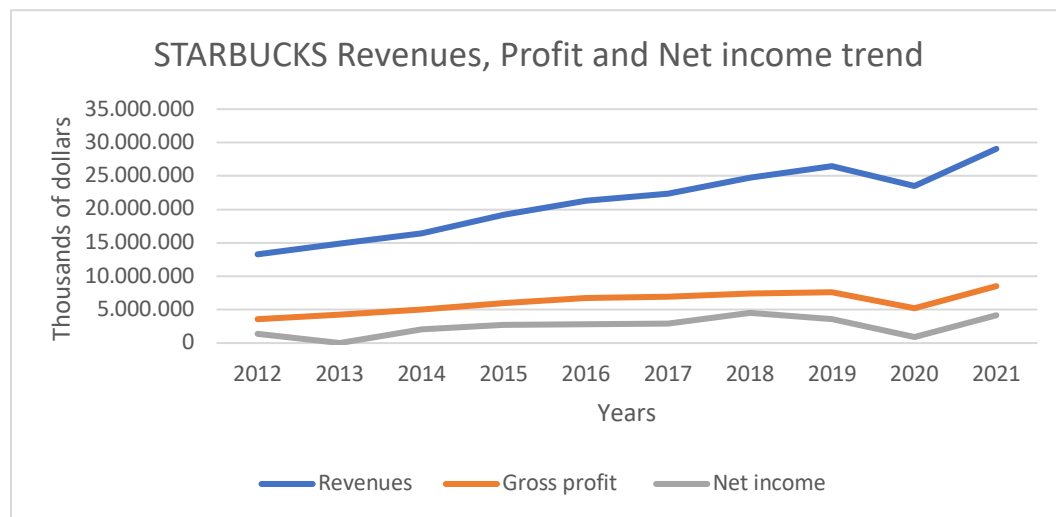


Fig. 21: Tendency of Revenues, profit, and net income in Starbucks Corp

The company, in general, presented a growing tendency in the 3 parameters shown in Fig.21. Until 2017, the CEO of the company was Howard Schultz, who arrived again to Starbucks in 2008 after leaving the company in the 2000s; the reason of why he arrived was the stagnation in the growing process due to a decline in the earnings and a fiercer competition. Schultz decided to close more than 7.000 stores which were unprofitable. During the 2012 until 2017, the company presented a growing tendency in revenues and gross profit; the net income stayed stable with some growing tendencies. Nevertheless, the net income in 2013 presented a decrease, reaching a value of 8,3 millions of dollars; the reason is that in that year the financial expenses of the company were very high, with a value of 2,5 billions of dollar;

this can be evidenced in the balance sheet, in which the long term debt changed from 549 millions USD in 2012 to 1,3 billions USD and the other current liabilities changed from 1,81 billions USD to 4,88 billions USD. On the other hand, the other year that presented a decreasing trend was the 2020, obviously affected by the pandemic of the COVID 19, the revenues decreased in a 11,2% and the net income decreased for a value of 72,4%, again due to a high value of revenues expenses.

In comparison with the average performance of the market (Table III), as Starbucks is the top company of the sector, is so distant to the average, while in 2021 the average of the market was 71,95 million USD, Starbucks presented a revenue of 29 billions USD, having a difference of 402,9%.

In terms of financial ratios, the Table VI gives to us a better perspective and helps to understand the results of the revenues and net income explained before.

TABLE VI:

*Starbucks' historical financial ratios*

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
└ ROE using Net income (%)	27,09	0,19	39,23	47,39	47,89	52,93	386,35	-57,75	-11,894	-78,916
└ ROCE using Net income (%)	23,57	0,59	27,64	32,25	29,69	29,35	25,38	30,11	6,198	20,09
└ ROA using Net income (%)	16,84	0,07	19,23	22,21	19,69	20,08	18,70	18,72	3,16	13,377
└ Profit margin (%)	15,51	-1,55	19,21	20,37	19,70	19,29	23,38	16,85	4,951	18,434
└ Gross margin (%)	26,93	28,47	30,34	31,33	31,85	30,87	29,98	28,52	22,071	29,31

Source: [36]

Table VI shows to us the historical performance of the company in profitability in terms of ratios. Again, the year 2013 was the first one presenting the lowest numbers. As it was explained above, it was the year in which the company presented high financial expenses which are shown in the balance sheet with the long-term debt and the other current liabilities. Deepening in the reason, it is found that in 2013 the company launched new exotic and exclusive coffees such as the new core Ethiopia offering, first-time seasonal Kati Kati Blend™, and exquisite Starbucks Reserve® Colombia Caldas. On the other hand, in the same year the company invested in a new global agronomy center in Costa Rica. These investments, were some of the causes that makes Starbucks present a net profit before tax negative (losses), translating this in a negative profit margin of -1,55% shown in the table.

However, net income of the company for that year was small but positive, which is explained in the P/L statement with a negative taxation, the company to compensate the losses, received a positive payment of taxation, that could be explained if they presented an amended tax return to offset the losses with the income of the year 2012. With this clear, it is easier to understand the lower values of ROA, ROE, and ROCE. With the ROA and ROE, besides knowing the reason of the net income, it is important to analyze the assets and equity, for the 2013, the company increased their fixed assets and their current assets from 4 billion USD to 6 billion USD and for 4,2 billion USD to 5,47 billions of USD respectively. In terms of equity, it decreased for 5,1 billion USD to 4,48 billion USD.

Another important aspect visible in the table is the increase in the ROE for the year 2018. It passed from 52,93% to 386,35%. First, the net income of that year increased from 2,89 billion USD to 4,5 billions USD mainly due to negative financial expenses (refund or adjustment for some expense that the company was accruing), being one of the causes of this high number; the other cause was the decrease of the shareholders fund from 5,45 billions to 1,17 billions, that is explained in the cash flow balances which show an increase in the repurchase of common stock from 2,04 to 7,13 billions USD and in dividends paid from 1,74 to 1,76 billions. The other 2 ratios, ROA and ROCE were not affected. The ROA because in that period also the total assets increased more than 80% and the ROCE because the EBIT did not have a big change, the financial expenses are not accounted in the EBIT.

Important to mention of course is the year 2020, by which almost all the indicators decreased; showing again that the pandemic was a difficult moment for the company. From 2019 to 2021 the company presented a negative ROE, that is explained with the shareholder's fund. From 2019, the company presented negative values of shareholders' funds, meaning that the company liabilities increased and is higher than all their assets' values. Since 2018, the company increased their noncurrent liabilities, passing from 4,7 billion USD in 2017 to 17,3 billion USD in 2018, and reaching in 2010 a debt of 29 billions USD. The main causes of this phenomenon are that they issued long term debt in which the interest payment is manageable for the company's EBIT. They have a deferred revenue due to an agreement with NESTLE as part of the Global Coffee Alliance in which Nestle can market, sell, and distribute Starbucks consumer packaged goods. Starbucks received an upfront royalty of 6,7 billion USD that will be recorder in equal amounts as other revenues for 40 years, reducing the deferred revenue liability. And finally due to operating leases for properties, stores, roasting and warehouses [37].

Analyzing the ratios with the average of the market, the performance of Starbucks is very similar to the one of the coffee industries.

### **3.2 JACOBS DOUWE EGBERTS PEET'S:**

JDE Peet's is a Dutch multinational conglomerate company owner of beverage brands of coffee, tea and chocolate. It is a company formed after many mergers and acquisitions of different industries; mainly, is formed by Mondolez international (an American multinational confectionary, food beverage and snack food company), Douwe Egberts (Dutch company of coffee, tea, and tobacco) and Peet's Coffee (American coffee roaster and retailer owned by

JAB holding company). In 2021 presented an average of 7 billion EUR in sales, serving more than 4500 cups of coffee or tea per second.

The company started in Netherlands when Egbert Douwes opened a grocery store in 1753 called de Witte Os where they sold products that “add pleasure to the daily existence” such as coffee, tea, and tobacco”; time passed and his decedents created the Douwe Egberts brand, opening headquarters in 1919 and expanding the company with different products of coffee, tea and tobacco through Netherlands and Europe. Meanwhile, in 1895 in Bremen, Germany, Johann Jacobs opened his first grocery business in which he started selling coffee and becoming very famous in the region. On the other hand, in 1966 Alfred Peet, a Dutch living in the United States, opened his first store "Peet's Coffee, Tea & Spices" in Berkley, California, selling hand-roasted coffee beans in small batches. He started his expansion with the idea of bringing better coffee to America; due to this he became famous as the “godfather of the gourmet coffee in the USA [38]. In 2012, Peet’s Coffee was acquired by JAB Holding, German conglomerate owner of Panera, Krispy Keme, Caribou Coffee and more. A year later, the company bought also Douwe Egberts by 9,8 billion USD. In 2014, Mondolez International, known as the global snack giant, reached a deal with JAB Holding to merge his coffee business creating Jacobs Douwe Egbert and being the largest company in the world. By the 2020, JAB Holding announced the plan of merging Peet’s Coffee and Jacobs Douwe Egberts into a single coffee and tea company, with plans to seek an initial public share offering and begin trading on the stock market. This strategy was done, covering 140 countries around the world with their products and having sells of around 7,8 billion USD [39][40].

The database Orbis provided by Bureau Van Djik has information of the company until 2021 but from 2017, not 2012, because old financial statements are not updated yet, so the data analyzed will be since that year. In the Table VII and the Fig. 22, the total revenues, gross profit and net income of the company from 2017 to 2021 can be visualized.

TABLE VII:

*Historical JDE PEET’S revenues*

	<b>Revenues</b>	<b>Gross profit</b>	<b>Net income</b>
2017	7.831.426	3.908.517	381.377
2018	7.630.284	4.055.592	541.585
2019	7.802.012	4.173.430	476.322
2020	8.161.437	4.343.932	377.947
2021	7.929.335	4.229.130	866.439

Source: [36]

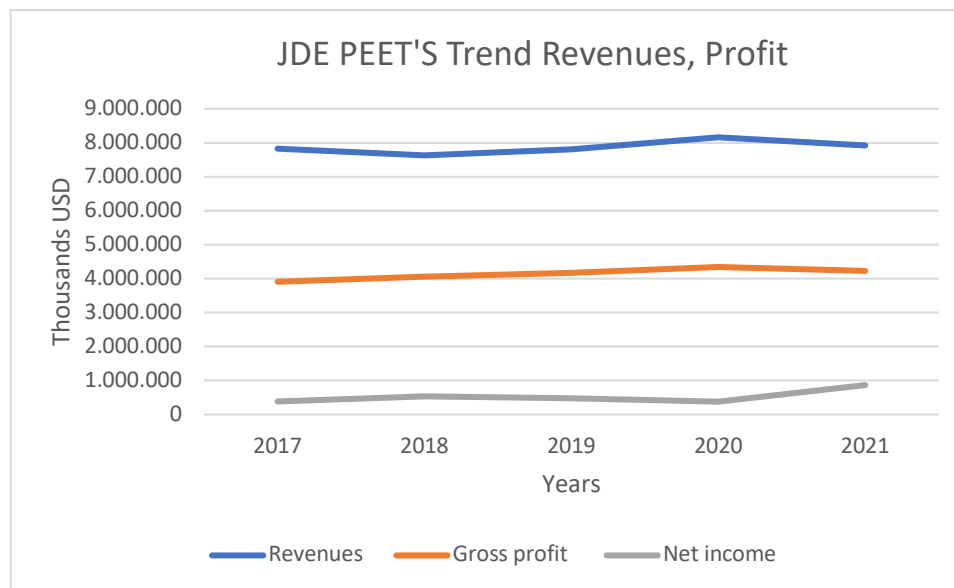


Fig. 22: Historical tendency of revenues, gross profit, and net profit in JDE PEET'S

Looking at the Table VII and Fig. 22, it could be seen that the company has a stable tendency during the last years, in which it is important to mention the year 2020; the one of the pandemic but also year of the merge of Jacobs Douwe Egberts with Peet's coffee, therefore some peculiar situations are shown in the table and in the graph. Until 2019, revenues were stable, but in 2020, they grew from 7,8 billion USD to 8,16 billion USD, an excellent performance knowing that this was the year of the pandemic; however, it is important to mention that this was also the year of the merge in order to have a big predominant company in the market. Consequently, the increase in revenues also is the consequence of unifying the results of the last two companies, something that from 2017 to 2019 were separate, so it may be that the pandemic affected both companies, but since they were presented as joint accounts in 2020, it cannot be appreciated. Gross profit also presented a stable tendency, so there was a similar performance between revenues and cost of goods sold. Finally, net income has another aspect to mention, pandemic impact for 2020 can be appreciated in this case because from 2019 to 2020 there was a decrease (476 million USD in 2019 against 377 million USD in 2020), despite of having an increase in revenues. The reason is in terms of financial revenues and expenses, their financial expenses were higher than in 2019 (397 million USD in 2020 against 390 million USD in 2019,) and the financial revenues were lower (95 million USD against 164 million USD in 2019).

In terms of the comparison with the market, the company is above the average of market revenues due to its performance as the 2<sup>nd</sup> largest company in terms of revenues.

Analyzing the financial ratios, the Table VIII gives to us a better perspective.



TABLE VIII:

*JDE Peet's historical financial ratios*

	2017	2018	2019	2020	2021
└ ROE using Net income (%)	4,91	6,67	8,93	6,65	8,80
└ ROCE using Net income (%)	4,55	5,79	6,27	5,26	6,55
└ ROA using Net income (%)	2,26	3,31	3,85	3,31	4,54
└ Profit margin (%)	7,83	10,73	12,11	10,33	14,03
└ Gross margin (%)	49,91	53,15	53,49	53,23	53,34

Source: [36]

Looking at the table it can be noticed that there is a growing tendency in the ratios, having the year 2019 as the one with the highest ones, and then decreasing in the year 2020. The ROE was about 8,93% in that year compared with 6,67% of 2018; however, it is important to mention that the ROE can grow in 3 different cases:

- Due to net profit margin increase, which it is good because company realizes profits.
- Due to Asset turnover also increase, which it is good because company is effectively using assets.
- Or due to an increase of financial leverage, this could not have properly positive consequences, because it increases the risk default, due to debt obligation.

In this case, the consequence is because the net profit before taxes increases as the company has more revenues in that year, but also the financial leverage of the company increased, reducing the shareholders fund. One of the consequences was the preparation of the merge between JDE and Peet's coffee. The ROCE also increased showing that the EBIT of the company was greater than 2018, the assets were lower and the current liabilities higher, also the long-term liabilities increased instead of the shareholders fund, proving that the leverage of that period increased. ROA increase could be analyzed with the same logic, total assets decreased and the profit before taxes increased. Looking to the margins, Net profit margin increased in this case because it is calculated with the net profit before taxes, that for 2019 was higher than 2018 (944 million USD vs 818 million USD), however if we see net profit of Table VII for 2019 is lower, and the reason is the tax payment, that was of 30% in the 2019 while in 2018 they paid 7,3%, reasons of why they paid less in 2018 are not specified but there could be a lot, in which the possible answers are offshoring revenues, tax credits, accelerated depreciation or deduction for employee stock options. Last but not less important, the high difference between the gross margin and the profit margin during all the years in the

table, meaning that the operating expenses of the company are low and the financial expenses vs the financial revenues are considerable.

Comparing the performance of the company with the coffee industry average, the ROE was below the average except in the year 2021, ROCE and ROA were always lower than the market, meaning that in average, market industries used better their assets and their capital employed for having more income. On the other hand, profit margin of the company was always above the average.

### **3.3 LUIGI LAVAZZA S.P.A.**

The story of the company started in 1895, an Italian man called Luigi Lavazza opened the first store in via San Tomasso, Torino, selling an innovative product famous for their blends of different origins and variety of coffee. He discovered it from an important trip he had to Brazil. In 1929 he founded the Luigi Lavazza S.pA company. The company was managed by Luigi, his wife and his sons Maria, Mario, and Giuseppe. In 1957, the son of Giuseppe, called Emilio, created the famous and legendary “Lavazza blend”. The same year Lavazza became Italy’s largest company in the coffee sector (position that holds today) and opened their largest roasting factory in Settimo Torinese. In 1982 the company opened the first headquarters out of Italy, in Vincennes, France. Then they opened subsidiaries in Frankfurt, Vienna, New York, and London. In 1992 they acquired the Bourbon and Suerte brands, and in 1993 the first Lavazza calendar was launched. In 2004 the company created the NPO Giuseppe e Pericle Lavazza Foundation, with the mission of improving the life conditions in the coffee-producing countries. Thanks to this, the company improved the living conditions of more than 3.000 farmers over eight countries (with economic growth, sustainable and profitable agricultural techniques). In 2012, the company created the “Lavazza Tierra” project, involving Brazil , Peru, Colombia, India, Tanzania and others [41].

France became the 2<sup>nd</sup> most important market for the Lavazza group in 2016, after buying the leader in the French coffee retail market “Carte Noire”. In 2017, Lavazza opens its first Lavazza Flagship store in Piazza San Fedele in Milan; also, the company expanded their business acquiring international companies in the coffee sector such as the Canadian Kicking Horse Coffee, the French Espresso Service Proximité and the Italian Nims company. In 2018, the new headquarters of Lavazza in Torino were inaugurated; in the same year the company acquired Australian company, Blue Pod Coffee Co., which specializes in the distribution of espresso systems through the OCS (office coffee service) channel, also they acquired the Mars’ Drinks business. Thanks to these acquisitions, the company now has an important market position in office coffee service and vending machine sector. In 2019, 70% turnover of Lavazza was generated outside Italy and revenues growth to 2,4 billion USD. In 2020 the company launched the project “Roadmap to zero carbon emissions”. Nowadays, the company has more than 4.000 collaborators, 9 manufacturing plants in 6 countries and exports to over 140 countries around the world [41].

With the database Orbis provided by Bureau Van Djik it is found information of the company from 2012 until 2021; however, the Cost of goods sold is not available in the financial

statements, so the gross profit is not shown. In the Table IX and the Fig. 23, the total revenues, and net income of the company can be visualized.

TABLE IX:

*Historical Lavazza revenues*

	Revenues	Net income
2012	1.755.767	128.120
2013	1.857.985	116.998
2014	1.654.883	153.782
2015	1.633.068	873.219
2016	2.036.427	86.605
2017	2.496.437	53.560
2018	2.144.512	100.682
2019	2.474.390	143.101
2020	2.564.074	89.429
2021	2.621.192	119.521

Source: [36]

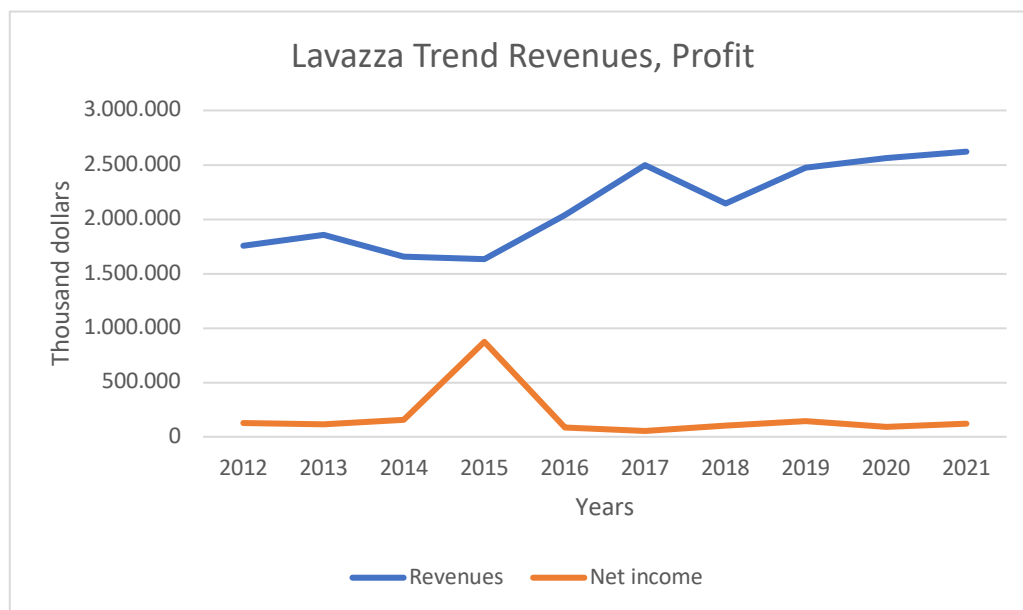


Fig. 23: Historical tendency of revenues and net profit in Lavazza

Table IX and Fig. 23 show the tendency of the revenues and the net income in the last 10 years, before analyzing it is important to mention that the cost of goods sold as well as the operating expenses were not available in the financial statements, preventing to have information about the gross profit. Having clear this, it is possible to see that the revenues presented a growing tendency in general; however, in 2014 the group presented a decrease

in revenues, from 1,86 billion USD in 2013 to 1,65 billion in 2014, mainly due to a reduce in consumption in the market, explained by a global market recession [42]. Revenues started increasing from 2015 to 2017, caused by the acquisition of Carte Noire that positioned France as the 2<sup>nd</sup> most important country in sales, and the acquisitions also of the Canadian Kicking Horse Coffee, the French Espresso Service Proximité and the Italian Nims. The same situation was repeated in 2019 with the acquisition Blue Pod Coffee Co. and the Mars Drinks business, becoming an important player in the OCS sector and vending machines. This increasing tendency was disrupted by the pandemic in 2020, revenues did not decrease but stayed stable compared with the 2019.

In terms of profit, the results have been quite stable; in 2015 there was a peak of 873 millions USD compared with 2014 profit of 153,8 million USD; mainly caused by the capital gain of the sale of a stake in the USA based company Keurig Green Mountain (shown in the section Extr and other revenues of the income statement); cash that then was invested to acquire Carte Noire [43]. In 2017 the profit had a decrease compared to 2016, mainly due to the increase in costs associated with the purchase of green coffee (rentals, transport), general and administrative costs and promotional contributions [44]. This decreasing tendency changed the next two years, having higher revenues in 2018 and 2019, in 2018 the growth was attributable to “both the integration of the companies acquired in 2017 (Nims S.p.A., Kicking Horse Coffee Co.Ltd and Espresso Service Proximité S.A.) and the strong performance of the pre-existing business scope, particularly in Italy, France, North America, Eastern Europe and the UK” [45]. On the other hand, the growth in 2019 is attributable to both the integration of Lavazza Professional and to the positive performance of the Group’s businesses, which recorded a double-digit growth in North America, North Europe, and Eastern Europe. In the same year, Lavazza grew in all channels, particularly in the Single Serve (+5.2%) and Roast & Ground (+3.8%) channels. Lavazza also entered the ready to-drink segment [46]. 2020 profits decreased due to pandemic.

Now, with the financial ratios the analysis gets deeper, the Table X gives a better perspective of the profitable performance.

TABLE X:

*Lavazza's historical financial ratios*

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
L ROE using Net income (%)	7,97	6,79	9,62	38,05	3,83	2,07	3,88	5,32	3,10	4,16
L ROCE using Net income (%)	7,78	6,63	9,36	37,06	3,30	1,91	3,02	4,23	2,91	3,64
L ROA using Net income (%)	6,12	5,25	7,45	31,61	2,62	1,38	2,26	3,20	1,93	2,50
L Profit margin (%)	8,08	11,12	12,81	5,08	3,22	2,96	6,71	7,54	4,91	6,89

Source: [36]

Looking at the ratios, the 2015 is a year in which the ROE, ROCE and ROA established a record for the company, as it was explained before, the reason is the sale of the stake of the company Keurig Green Mountain. Profit margin in that year decreased, because the financial statements of the database use the P/L before tax, and the capital gains of the stake sale are accounted after this value. Then, in 2016 there is a decrease in the first three indicators reaching values lower than in 2013 and 2014 before the selling of the stake. Reasons are attributable to the acquisitions of Carte Noire and other companies, in which for example the ROA decreased due to the increase in the assets value from 2,76 billion USD to 3,3 billion USD, same for ROCE. In terms of ROE, shareholders remain almost stable but the decreasing in net income affected it. 2017 was the year with the lower indicators, consequence of higher assets values, shareholders' funds, and long-term liabilities. 2018 and 2019 presented again an increase in the values caused by the increase in net income.

In terms of the average of the coffee industry, the ROE is always lower than the industry average (except in 2015), showing that other companies use better their shareholder funds to generate income. Same situation for ROCE, but in this case showing that the companies use better all their capital available to generate income. ROA is in the same situation than the other two indicators. Profit margin shows a performance always above the average, in which explains that Lavazza transform better their total sales into net income.

### **3.4 NESTLÉ FRANCE**

Nestlé is a multinational Swiss company of food and beverage with headquarters in Vevey, Switzerland. It has been the biggest company in the world in terms of food and beverage market for many years, and it's the owner of so famous brands such as Nescafe, Nespresso, Nestea, Nesquik, Kit Kat, Smarties, San Pellegrino, Maggi among others. Also, is one of the major shareholders of the biggest cosmetic company in the world "L'Oreal".

Their story begins in in 1866, when the US brothers Charles and George Page founded the Anglo-Swiss Condensed Milk Company, starting Europe's first facility of condensed milk. A year later, in 1867, the German pharmacist Henry Nestlé launched his "flour with milk" product in Vevey Switzerland, combining cow's milk, wheat flour and sugar; product focused on infants who couldn't be breastfed. It was the first time of the appearance of the nest as a logo. Competition between these two companies started, selling their rival's version product and expanding abroad. In 1905, these two companies merged, and started expanding their range of products with unsweetened condensed milk and sterilized milk. With the World War I the company became major supplier for soldiers with condensed milk, also the company acquired facilities in the USA and Australia to supply the demand and avoid a shortage. After the war, the milk demand decreased, and the Great Depression at the end of the 20s affected the company. In 1929, the company bought Switzerland's largest chocolate company Peter-Cailler-Kohler; in 1934 they launched the "Milo" brand in Australia, two years later was born also the famous chocolate brand "Galak". At the end of the 30s, in 1938, Nescafe was launched as a powdered extract of pure coffee, created by Max Morgenthaler, as a request of the Brazilian government to Nestlé in order to find an outlet for the coffee surplus they had in that moment. With World War II, the company focused on the Africa, Asia and Latin American market. In 1947, Nestlé merged with Swiss company called

Alimentana, owner of Maggi soups, bouillons, and seasoning. A year later, in 1948, the company launched a new product of soluble tea like Nescafe, called Nestea; months later, the company also launched the Nesquik brand, for soluble chocolate drinks. Between the 60s and the 80s, the company not only entered in new segments like frozen food and mineral water; but also diversified their business entering in the pharmaceutical and cosmetics market, becoming in 1974 a minor shareholder of L’Oreal and buying U.S pharmaceutical and ophthalmic products [47].

In 1985, the company acquired Carnation Company adding the brands of “Carnation” and “Coffee Mate”, in the same year they entered in the pet food market buying Friskies. In 1986 the Nespresso story began, the idea was enabling everyone to create a perfect cup of coffee, like a barista in a coffee bar. Two years later the company acquired U.K firm Rowntree Mackintosh, adding brands such as “Kit Kat” or “Smarties” to its portfolio. In 1991, Nestlé created joint ventures with General-Mills and The Coca-Cola Company. In the 2000s, the company launched the “Nestlé Cocoa Plan” and “Nescafe Plan” to develop sustainable supply chain and help producing families in economic and social aspects. By the 2015 the company entered in the market of the nutritional products and created the Nestlé Skin Health brand. In 2018, with an agreement with Starbucks company, Nestlé started marketing and selling Starbucks’ products outside company’s coffee shops. The firm also acquired businesses in healthcare and plant-based nutrition. By the 2020s, Nestlé focused in sustainable paths, with recyclable packaging and net zero emissions [47].

Having clear that Nestlé S.A is a food and beverage company, and the focus of the thesis is the coffee division, then its subsidiary Nestlé France, focused on the coffee market (Nescafe, Nespresso, Coffee Mate), is the one that we are going to analyze. Not all the company is analyzed because is not a company only focused on the coffee market, and the results would be enormous (Nestlé whole company profits are about 80 billions USD). Using the database Orbis provided by Bureau Van Djik it is found information of the company from 2012 until 2021. The same as Lavazza, gross profit is not available in the income statements. In the Table XI and the Fig. 24, the total revenues and net income of the company can be visualized.

TABLE XI:

*Historical Nestlé revenues*

	Revenues	Net income
2012	2.660.276	98.908
2013	2.774.360	88.045
2014	2.418.210	79.570
2015	2.195.610	-55.024
2016	2.088.031	95.116
2017	2.400.916	79.688
2018	2.272.931	47.583
2019	2.348.293	65.703
2020	2.681.529	560.573
2021	2.546.358	90.910

Source: [36]

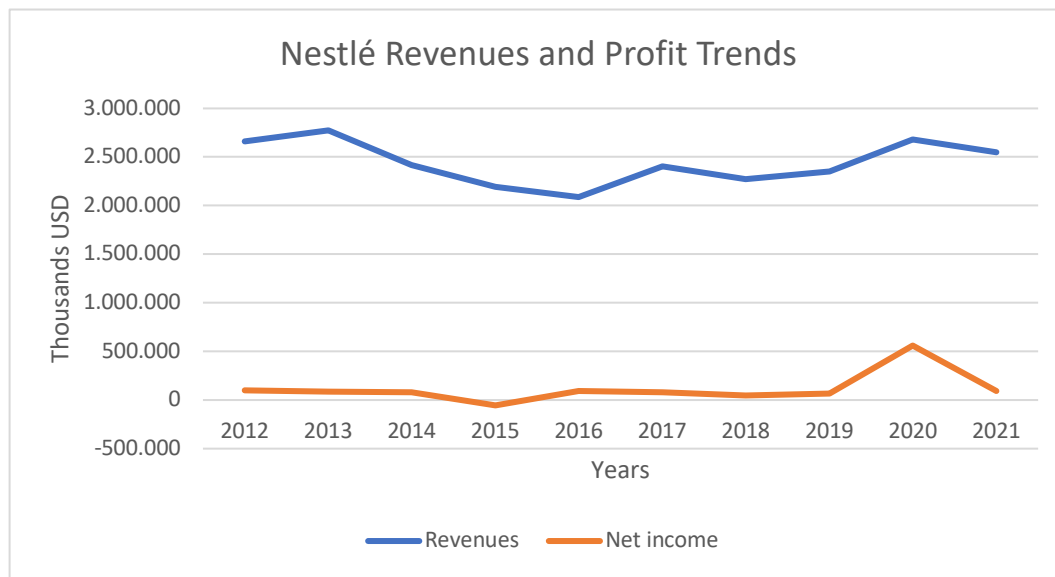


Fig. 24: Historical tendency of revenues and net profit in Nestlé

Table XI and Fig. 24 show the tendency of the revenues and the net income in the last 10 years, as it can be seen in the graphs, there is an alternating trend in terms of the revenues. The problem of analyzing the subsidiary is that there is not an annual report explaining what happened in Nestlé France, there is the report of the whole company, analyzing it could give us a clue of what happened in Nestlé France, but there is the possibility of having different performances happening in the subsidiary and in the whole company. The highest revenues (excluding 2020) were in 2012 when they got around 2,67 billion USD, same year in which the company acquired Pfizer's infant nutrition business. Then revenues started falling until 2016, with a value of 2,088 billion USD, situation as a consequence of the deflation and increased competitive activity. From 2016 to 2021 there was an increasing tendency, in which it is important to mention that in 2020 the pandemic effect was not noted, the revenues increased from 2,34 billion in 2019 to 2,68 in 2020 (highest revenues in 10 years); the reason is given by both the effort made of the company to reduce the environmental footprint, and Nestlé's ongoing digital transformation to accelerate growth and engage with consumers better [48]. So, by the end of the 2021, the company had again the same performance as in 2012.

In terms of profit, it remained stable among all the ten years, however, in 2015 the company presented a negative value of -55 millions USD, value that was explained due to the sale in 2014 of part of its stake in the cosmetic business L'Oreal [49]. In the income statement it is appreciated a large value in Extraordinary and other expenses (273 millions USD) that affected the positive profit after tax of 98 millions that the company had. After 2015, profit increased again and remained stable, having a peak in the 2020 of 560 millions USD, been the year with the highest profit. Reasons are various, as explained in the paragraph above with the digital transformation and environmental footprint, but also due to the sell in 2019 of Nestlé Skin Health, the sale of 60% of their stake in Herta and the sale of their U.S ice cream business [47].

Financial ratios are shown in the Table XII, for a deeper analysis and overview.

TABLE XII:

*Nestlé's historical financial ratios*

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
L ROE using Net income (%)	13,80	11,85	12,18	-12,18	18,80	12,41	8,13	11,01	48,95	14,00
L ROCE using Net income (%)	11,59	10,03	8,72	-7,35	12,44	8,43	5,07	6,90	39,75	10,92
L ROA using Net income (%)	6,19	5,15	5,13	-4,29	7,43	5,43	3,30	4,23	25,43	6,17
L Profit margin (%)	6,40	5,85	5,78	5,39	9,07	6,50	7,27	5,43	6,02	6,12

With the ratios above, it is important to mention that the ratios presented a stable behavior from 2012 to 2014, then in 2015 values were negative, but mainly affected by the negative net income that the company had in that year. Then, for 2016 the company has a peak, showing the highest ratios (excluding the 2020 performance), ROE changed from -12,18% to 18,80 % mainly due to the increase in profit, because the shareholders' funds also increased. ROA changed from -7,35% to 12,44%, again due to increase in net income but also a decrease in the total assets, meaning that liabilities of the company also decrease because the equity increased. ROCE had the same performance, similar explanation from the ROA. And the profit margin changed from 5,69% to 9,07%, important values because in that year revenues decreased, but profit increased, meaning that Nestlé was able to transform better the revenues into profit.

The other important year was the 2020, as it was seen first in the Fig. 24, that was the year in which the company had the highest revenues from the last 10 years, and indicators were affected by this event. ROE had a value of 48,95% passing from 11,01% in 2019, mainly due to the increase in profit, because also the shareholders' funds increased; this mean company was able to attract more shareholders to invest and their investment had a better performance transforming money into profits. ROA also changed from 4,23% in 2019 to 25,43% in 2020; total assets for the company in 2020 were higher than in 2019 (2,2 billion USD vs 1,55 billion USD), meaning company used better the assets to make profits. ROCE also has a peak of 39,75% and is explained because in that year the non-current liabilities of company decreased. Finally, profit margin was the one without a peak, its value was of 6,02%, lower than in 2016 for example, year in which revenues were transformed into profit in an optimal way.

Comparing the values of Nestlé with the average values of the market, it is seen that revenues of the company were always above the average of the industry, as well as net income (except in 2015 when Nestlé had losses). From 2012 to 2016, ROE were lower than the market



average, then in 2016 until 2017 the company managed better the shareholders' funds, being again under the average in 2018, and then in 2019 to 2021 the performance was higher. ROCE was under the average until 2019, companies in general had a better return of all the capital employed. With the ROA is better similar, until 2019 the company was under the average, except in 2016 when the value was higher (7,43% Nestlé's performance vs 6% industry average performance). Profit margin had a different behavior, in 2013 and 2014 the company was below average, then the performance was always more efficient except in 2019.

#### 4. COLOMBIA AND ITS COFFEE HISTORY

Colombia, a country located in the Nord part of South America, is well known as a coffee producer place. A large part of the history of the country revolves around the coffee. Nowadays they have their own coffee brand expanded around the world, their unique coffee region called “Eje Cafetero”, their unique theme park called “Parque del Café” and the biggest NGO of coffee growers in the world called “Federacion Nacional de Cafeteros (FNC)”. This has led to the country being recognized for its high-quality coffee, and to be nowadays the 3<sup>rd</sup> more important player in the exportation of coffee in the world. However, behind all these facts, there is always a story to tell, in this case, about how the coffee arrived in the country and all the process that they went through to become an important player in the market and be recognized as one of the best coffees in the world.

Colombia is a country that was discovered by the Spanish at the end of the XV century and was a Spanish colony until 1819, when the Colombian army led by Simon Bolivar liberated the territory. However, during the colony, the Spanish had a Christianization mission around all the territory, and it is together with this mission that the coffee arrived in the country.

Historical data reveals that the first coffee beans arrived at the country in 1730 (in that time the country was called “La nueva Granada”) thanks to the Jesuits, that were traveling from the Guianas and entered to the country through Venezuela, at the east part of the territory as it can be seen in the Figure 25. As it was explained before, the first territory in which the coffee beans arrived in America were the Guianas and Surinam [50]



Fig. 25: Political map of Colombia. Source: EOM

Then, in 1787, the Archbishop-Viceroy called Caballero y Gongora registered in a report sent to the Spanish crown the presence of coffee crops in the regions of Santander and Boyacá, that in the north and center part of the country. A famous story of the territory establishes that a Jesuit priest called Francisco Romero played an important role in the expansion of the

coffee around the country. The story tells that in a small town in the region of Cucuta called “Salazar de las Palmas”, the priest imposed to the people that wanted to be congregated the penance of planting coffee beans for each sin they confessed, and thus they would be forgiven by God. This action gave a great impetus to the spread of the bean cultivation towards the north of the country, and consequently then toward the center and the west through the regions of Cundinamarca, Antioquia and Caldas [51].

The Arabica coffee cultivation became a phenomenon in the east and north part of country and were the owners of large farms the ones in charge of the coffee. These landowners, before the arrival and spread of the coffee, were cultivating and exporting cinchona, indigo and tobacco; however, the market at the end of the XVIII and beginning XIX century was very unstable and Colombia’s participation was very fragile; the profitability was derived from high international prices rather than creating a solid and diversified system and a base of sales abroad. When the international prices goes down, the production of the sector entered in a phase of decline and ruined all the attempts of business consolidation [52]. Therefore, the landowners found themselves many times with an abundant supply of manpower, vacant land and commercial capital available that consequently were used to cultivate coffee in a market that at the moment was new and promising [53]. The first commercial harvest and export occurred in 1835, at Cucuta customs offices (border with Venezuela), and was a quantity of 2560 bags.

In the 2<sup>nd</sup> half of the XIX century, the world’s economy had a great expansion; the United States established itself as the most important consumer of coffee in the world. Germany and France became also the most interesting markets in Europe. This, together with the high prices of the coffee, led to the landowners to focus on the coffee exportation. Around the year 1870, Colombia passed from exporting 60.000 coffee bags of 60 kg to 600.000 bags of green coffee 60 kg [52].

The transition from the XIX century to the XX century brought great changes in the Colombian coffee market that served to lay the bases for the functioning of today’s market. At the beginning of the 1900s the international coffee prices fell (overproduction of the bean due to the intense competition of Brazil in the market), and Colombia entered to their biggest civil war registered until now, called “La Guerra de los Mil Dias” from 1899 to 1902. The profitability of the landowners collapsed and were unable to maintain the crops in good conditions.

Nevertheless, while the landowners were protagonists of the market, the expansion of the coffee crops around the country led to a new production model in the west part of the country. In Antioquia, Old Caldas and Valle del Cauca, the number of small coffee producers started growing and, unlike the north of the country, in this region there were not large landowners, so there were large amount of land that the peasants started using in small amounts [52]. Coffee exports produced in small plots began to have a boom, which increased when the Colombian Civil war ended because the big landowners of the north part of the country were ruined (the civil war mainly happened in the north region). The peasant coffee economy spread easily due to the ease management and the little capital investment required, and, different to the big haciendas, the maintaining costs were lower as well as there were no conflict of interest between owners and workers [53]. With these new crops under the plot

model, the processes of production, transformation and commercialization of the bean were separated; this allowed a resistance in the coffee production structure to fluctuations in international coffee prices [53].

With the positive advance of the coffee market in Colombia, a necessity appeared in the panorama. Despite the good performance of the peasants with the international coffee prices, the dynamism of Colombia in the market was not good enough respective to other big coffee producers. This, together a precarious form of life in some farming sectors and the neglect of the government, was the cause, in 1927, for the creation of the one of the largest rural NGOs in the world and that today is the main actor of the Colombian Coffee Market: the “National Federation of coffee growers of Colombia”, known as FNC (Figure 26). The main objective of the federation was and is to represent all the peasants in the coffee market through growers’ cooperatives; ensure their rights; face the challenges of logistics, marketing and selling of the coffee; and develop the regions in which the coffee peasants were and are living, not only in an economic way, but also in a cultural and social way. The main important aspect of the federation is that is a non-profit organization independent from the government [54].



*Fig. 26: Logo of the National federation of coffee growers in Colombia. Source: FNC [53].*

With this new organization, Colombia became the 2<sup>nd</sup> coffee exporter in the world, being USA, Germany, France, and the north European countries the most important targets. Coffee started to domain the exports of the country (around 50- 60%) and the coffee regions started to develop. The FNC, together with the government, created a national fund “Fondo Nacional del café” (FoNC), that is a parafiscal account fed by the coffee contribution paid for each pound of coffee exported and looks for maximizing the income of the coffee producer, promoting efficient, sustainable, and globally competitive coffee farming and helping with the social development [54]. Also, the FNC created the “National Center of coffee’s investigation” (CENICAFE) in order to “study the aspects related to the production in the farms, the harvest, the benefit, the quality of the grain, the management and use of the by-products of the coffee exploitation, and the conservation of the natural resources of the coffee zone” [55]. One of the most important achievements of the center is the creation of an Arabica Coffee variety called “Castillo”, resistant to pest such as the rust, that affected the coffee crops in Africa and Brazil.

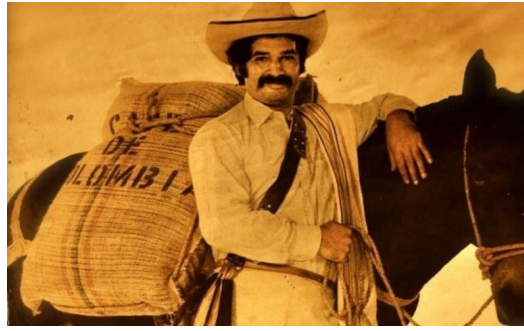
While the FNC was focusing on the green coffee exports, another company was born to take the local market. In 1933, a Colombian company called “Compañía Nacional de Chocolates” entered in the coffee market but in a way that the FNC was not focusing: in the roasting sector. The brand “Sello Rojo” was born, and the objective was the commercialization of roasted and grinded coffee. It is important to mention that, as the FNC was in that moment

gathering all the peasants through growers, “Sello Rojo” was working with the remaining ones or also buying the coffee to the growers inside the FNC. In 1958 the company created the brand “COLCAFÉ” as a driver for the commercialization of soluble coffee. In 1960, in order to have a branch dedicated to the coffee market, the company created “Industria Colombiana de café S.A -Colcafé” (see Figure 27) and became the most important player of the internal market until Nestle arrived. The company bought in 1968 “Café La Bastilla”, the first big national company of roasted coffee created in 1919. Over the years, “Compañía Nacional de Chocolates” acquired different companies from different food sectors and nowadays they changed their name, as they are called “Grupo Nutresa S.A” (Figure 27.). The corporation is “the leading company in processed foods in Colombia and one of the most relevant players in the sector in Latin America. it currently has nearly 46,000 employees and operates through eight business units: Cold Cuts, Biscuits, Chocolates, Tresmontes Lucchetti -TMLUC-, Coffees, Consumer Foods, Ice Cream and Pasta. With direct presence in 17 countries with 47 production plants. and products present in 78 countries of the five continents” [56].



*Fig. 27: Logo COLCAFÉ and Grupo Nutresa. Source: [55]*

Going back to the FNC, at the end of the 50s, the Colombian Coffee price plummeted from \$0,85 to \$0,45 per pound [57] due to an oversupply of coffee in the market. With this dramatic price, the FNC saw the necessity in strengthen the image of the product. Colombia was the 2<sup>nd</sup> largest producer of coffee in the world, and 77% of their exports were going to the USA, however, just the 4% of American consumers knew the origin of the coffee they were drinking. Therefore, the FNC realized that a solution for this was making a big marketing strategy, to differentiate Colombian coffee from the other ones. The first thing done was putting a face to the Colombian coffee, in this case, the federation together with the marketing company Doyle Dane located in New York created Juan Valdez®, a fictional character that represents all the Colombian coffee growers. The character has a hat, and a mule with coffee bags in which is written “Café de Colombia” (see Figure 28). Through televisions commercials, and newspaper announcements, the character appeared with his mule in the Colombian lands selecting by hand the ripest coffee, in order to promote that Colombian coffee was the best one, unique in flavor and smell due to the extremely care in the harvest and the climatic conditions of the fields.



*Fig. 28: Juan Valdez character. Source: [57]*

The strategy was a complete resounding success, Juan Valdez character became very famous in the USA. At the same time, the FNC created the program “100% Colombian Coffee”, the objective was convince roasters to adopt the country's coffee in their products’ offers in order to guarantee consumers abroad that their brands contained 100% Colombian beans and were of good quality [58]. Roasters in that moment, used to mix Robusta coffee with Arabica one, because it was cheaper, and consumers didn’t know it. After a series of negotiations between the FNC and the roasters, in which the FNC gave some discounts, subsidies, investments to the roasters and guaranteed them a range of fixed purchase prices, the roasters accepted to implement Colombian Coffee (gradually, first it was 33%, then 50%, then 100%). To differentiate which company were using the Colombian coffee, a logo (Figure 29) was created. Companies like Kraft General Foods and Folger’s were some of the ones implementing this strategy. The campaign was so good that the logo even appeared on the backs of the seats of the USA airline “American Airlines”, with the slogan: “Colombian Coffee is now on board on American Airlines”. According to surveys conducted by the firm Roper Starch Worldwide in 2000, the “100% Café de Colombia” logo enjoyed 85% identification, ahead of recognized brands such as Woolmark, Starbucks, Nike, among others [58].



*Fig. 29: Logo 100% Colombian coffee. Source: [57]*

On the other hand, to protect the idea of Colombia as a country producing special coffee, the FNC used the protection of Geographical indications (GIs). In September 2007, the European union system recognized “Café de Colombia” as a protected Geographical Indication, being the first product of a non-European country to achieve it. In the United States the FNC strategy is based on trademarks [57]. All this strategy was reflected in big results, the company went from exporting 646 thousand bags to north America in 1982 to 2.5 million in 2000; the coffee consumption increased 251%. This worldwide recognition caused Colombian coffee to have a premium in the market for every pound purchased. Around 1982 and 2000 was of \$0,10 [58].



Since that moment, Colombia acquired the identity as a coffee producer, and of being one of the best coffees (if not the best) in the world. Colombian coffee is famous for its softness, acidity, and sweet tastes, giving a bright and clear cup. Important roasters around the world sell Colombian coffee, whether it is coffee with the seal of the FNC, or from their own crops that they have in Colombia. Of course, to put the denomination of Colombian coffee, the crops must meet minimum standards established by the Federation of coffee growers and all the coffee for sale must be 100% Colombian. Important roasting companies such as Starbucks, Lavazza and Illy sell this type of coffee as premium coffee, as it can be seen in the Figure 30.



*Fig. 30: Example of Colombian coffee sold by big international roasters.*

During the late 80s and the 90s, in the world, a new business model of coffee appeared and started to enter in the coffee market of many countries. This model was the one created by the company STARBUCKS, and American firm that was born in 1971 in Seattle, and that started its innovative business model in 1987 and its expansion in 1990. Howard Schultz (most important president and CEO of Starbucks' history) traveled in 1983 to Italy and was captive by the Italian coffee shops and all the romantic experience inside. Therefore, he had the vision to bring that Italian coffee tradition to the United States. His idea was creating not only a shop in which they only serve coffees, but also create an environment in which there is a relationship between space and the coffee, a place to talk and feel part of a community; a third place between home and work [59]. It is with this idea that Starbucks expanded all around the world and today has more than 30.000 stores in more than 83 countries, with more than 29 thousands of millions dollars in revenues.

With this phenomenon in the market, with the idea of materializing the dream of making visible the work of the Colombian coffee growers and the quality of the Colombian coffee, and with the objective of generate value-added business for the FNC and the coffee growers; in 2002, the Juan Valdez coffee shops were created. The first one was inaugurated in "El Dorado" international airport in Bogota, and quickly began the expansion of the shops around all the country. For this new market segment, the Federation created a new private company called "Procafecol S.A" which has four lines of businesses: specialized stores, department stores, institutional channel and an e-commerce portal [60]. With this, the FNC entered also to the roasting market, the retail market (already in with the brand Buencafé) and the cafeteria's market, completing a vertical integration of all the market segments. The idea was not only selling to the customer a cup of coffee, but also giving him a completely experience of the Colombian culture, the Colombian premium coffee, and a place also to talk and relax

(see Figure 31). In 2005, the international expansion of the shops began, opening one of them in Washington DC. Today, the company has a total of 500 stores, which 349 of them are in Colombia, in the most important cities such as Bogota, Medellin, Cali, Cartagena, Barranquilla etc., and 161 are in 17 countries around the world such as USA, Mexico, Perú, Ecuador, Spain, Malaysia, Panama, Aruba and more.



*Fig. 31: Example Juan Valdez coffee shop in Colombia*



## **5. COLOMBIA'S COFFEE MARKET**

The objective of this chapter is to have an overview of how the Coffee market works specifically in Colombia. Therefore, we are going to analyze the same items of chapter 2 but focused on the South American country. These items are how is the supply chain of the industry, the coffee supply and demand situation in Colombia, the description of the coffee's exports and imports and how the coffee prices are determined inside the country.

### **5.1 GENERAL ASPECTS OF THE MARKET**

As an introduction, in the webpage of the National Federation of coffee growers of Colombia is explained that: "In Colombia, over 2.2 million people depend economically and directly on coffee farming, that is, about 25% of the rural population located in 22 of the country's 32 departments and in 600 municipalities (53% of the total). But coffee, in addition to being a driving force for regional economies, continues having an important weight in the Colombian economy, as it represents over 8% of total exports and contributes about 12% of the Gross Domestic Agricultural Product" [17].

Colombia's coffee has specific characteristics that differentiates it from the market of the rest of the world. The National Federation of Coffee Growers of Colombia FNC is one of the largest rural NGOs in the world and has as main objective "to guide, organize, promote and regulate Colombian coffee farming, seeking the well-being of the coffee grower through mechanisms of collaboration, participation and promotion of an economic, scientific, technological, industrial and commercial nature, seeking to maintain the character of strategic and social capital of the Colombian coffee growing" [54]. It is an entity independent from the government and one of the main actors of the market.

The Federation, as being the legitimate representation of all the coffee growers of the country, is in charge of the National fund of coffee (FoNC), that "is a parafiscal account, made up of monies considered public, which is fed mainly by the coffee contribution paid for each pound of coffee exported (green, roasted, soluble or in extract)" [61]. The coffee contribution is made by the coffee growers and exporters to obtain collective benefits; and is about 6 US cents for every pound of green coffee exported, 1,08 US cents for every pound of roasted coffee exported, 0,48 US cents for every pound of soluble coffee and 0,36 US cent for coffee's extracts [61]. The main objective of the fund is maximizing the revenues of the coffee growers and promote an efficient, sustainable, and competitive coffee industry. However, the most important aspects that the coffee growers have with the FoNC are the followings: purchase guarantee (meaning that the cooperatives of the FNC will always purchase their production), scientific research and technological development, technical assistance in the process and collaboration in commercialization and marketing tasks.

The federation also has some companies that help in the coffee market. CENICAFE is the center for research and development for the coffee growers, ALMACAFE is the logistics company in charge of the storage and distribution, and PROCAFECOL is the one in charge of the private coffee shops.

In terms of culture, an important aspect to mention is that Colombia is well known as one of the most important producers of coffee in the world, but this doesn't mean that also is the one with the highest consumption, in fact, the consumption in the country is lower than the average in South America, and people are used to consume a coffee with a very low quality compared to the one that is produced in Colombia and exported. More of this topic will be explained further in this chapter.

## **5.2 COFFEE SUPPLY CHAIN**

The major difference of the coffee supply chain between Colombia and the rest of the world is that the coffee supply chain in the country relies on the farmers, which are in charge of all the production process of the country. Colombian arabica coffee is differentiated due to its high quality, and for reaching this level of quality, the production process is different than from the rest of the world. As it was explained in the chapter 1 and 4, Colombian coffee is harvested by hand, each farmer must check one by one the coffee beans and depending on the level of ripeness it is selected or not. Besides of this, the coffee also has a washing process that is done only in few countries. This differentiation makes the growers been a very important part of the supply chain. To maintain this level of quality, shepherds received special trainings and investments in social and economic aspects, that are done in the majority by the National Federation of Coffee Growers of Colombia (FNC), the biggest NGO of coffee growers, and also by other important roasting companies of the world such as Starbucks.

As it is shown in Fig. 6 of the chapter 2, the structure of the coffee supply chain in Colombia is very similar than in the rest of the world. The coffee growers oversee the production of the coffee and the process to obtain the final green coffee bean. Then the beans are sold to the coffee growers cooperatives which offer a purchase guarantee to the coffee farmers of the country. The cooperatives purchase the coffee at different prices depending on the quality of the coffee; the high-quality ones are separated for exportation (majority of the coffee beans), and the rest are intended for domestic consumption. The cooperatives sell this coffee to the FNC or other independent companies; the FNC store the beans in some warehouses called "ALMACAFE", that are in the optimal conditions for storage and ready for when it is needed to be sold.

The high-quality beans are exported, in which in some cases some exporter and importer intermediaries are involved in this part and sometimes the roasting company, the growers or the Federation do this by themselves. The other beans are sold to the national roasting companies for the domestic consumption. It is important to mention also that besides Colombia is a producer country, they also import coffee from Ecuador and Peru in order to satisfy all the domestic demand that is not satisfied by the coffee produced inside the country because the majority is exported [62]. Therefore, is in this part of the supply chain that the imports appear, domestic roasting companies import some quantities of coffee to sell in the country.

The rest of the chain is very similar to the general supply chain of the world. The roasters roast the green coffee beans at the level desired by the client; domestic roasters distribute inside the country the coffee with the lower quality and at a level of roasting that is the one

of the Colombian clients. Also, these domestic roasters export this type of coffee to the world, but in lower quantities than the green Colombian coffee. On the other hand, the multinational roasters export and distribute the roasted high quality Colombian coffee to the world as it was explained in chapter 2. Then the distributors distribute the coffee to the different sectors, as retailers and HORECA having the final consumer (people) as the last part of the chain.

### 5.3 COFFEE PRODUCTION

Thanks to the marketing campaign done by the FNC in the 60's and that was explained in chapter 4, nowadays Colombia is well known as a coffee producer country, but a producer of a high-quality type of Coffee. On the other hand, due to the favorable environmental conditions, Colombia is producing coffee during the whole year. Coffee needs to be cultivated in an environment of around 18 °C and 23 °C, between 1.200 and 1.800 meters high and that offers periods of rains (2.000 ml distributed during the year) and sun; in the country this is possible to reach in the mountains. The topography of the country plays a very important role in this aspect, because 3 mountain ranges pass through the country, from the south to the north, and coffee crops can be placed there. Therefore, there are coffee zones around all the country, in which the raining and sun periods are different, making possible to have coffee harvest during all the year. While in one part of the country the peasants are harvesting coffee, in the other part they are planting it to harvest it months later.

In the country there are two harvests, a larger one called the main harvest and a small one called naughty or mitaca, which produces approximately a third of the main harvest. The two flowering periods are from May 1 to October 31 and from November 1 to April 30 [63]. Therefore, these 2 aspects (marketing and environmental situation) have made Colombia one of the most important players in the coffee market. Until the 90's, the country was the 2<sup>nd</sup> largest producer in the world, and today in the 3<sup>rd</sup> largest one. In the Fig. 32 it can be appreciated the historical production of coffee in Colombia.

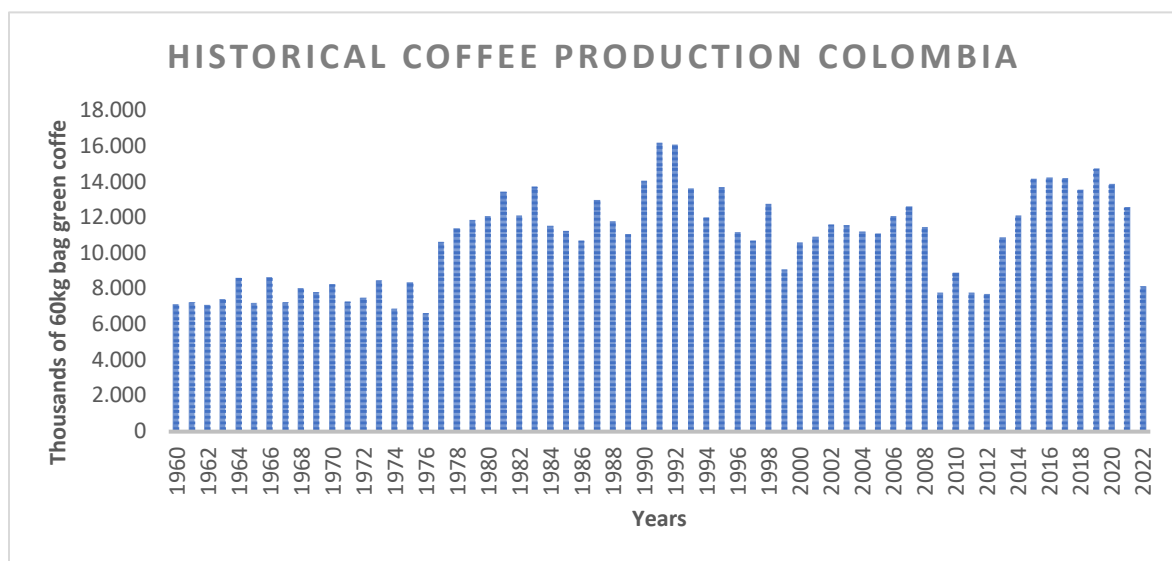


Fig. 32: Coffee production in Colombia. Source: FNC [65]

In the graph it can be analyzed the historical production of coffee in the country. The production could be divided in five different periods that explain the behavior of the data. From the 60's until 1976 the production was stable, this was due to the coffee quota agreement established during this period by the production countries in which the coffee offer was limited and decided together by the countries, to maintain a certain level of coffee in the world and maintain stable the prices. The quantities oscillated from 6 millions of coffee bags to 8,5 millions of coffee bags. Then, the next period was from 1977 to 1989 in which there was a new international coffee agreement, with higher producing quotas, that is why from 1976 to 1977 there was a very big change in the quantities of coffee produced, passing from 6,6 millions of coffee bags to 10,6 millions of bags, and maintaining the quantities up of the 9 millions. A new period was from 1980 to 2006 when the International coffee agreement was concluded, and each country was free on producing their own quantities, it was an unstable period and it was registered the record of production in the country, specifically in 1991 when Colombia produced around 16,2 millions of coffee bags. The fourth period was around 2007 to 2012 in which the coffee production decreased sharply due to "a series of exceptional factors such as rainfall levels 40% higher than the historical average, the lower application of fertilizers as a result of the increase in oil, phosphorus and potassium prices during 2008 and the increase in rust levels" [64]. The consequence of these aspects is that the production levels decreased to values around the 7 millions and 8 millions of coffee bags, while until 2008 the values where of 11,4 millions. The last period is the one from 2013 until today, in which the production levels increased again, environmental conditions have been favorable, there has been technological development and coffee prices have increased. The production has been around the 13 millions and 14 millions of coffee bags and in 2019 were produced 14,8 millions of bags. Covid 19 pandemic also affected the country, in 2021 12,5 millions of coffee bags were produced and for 2022, until September it has been produced over 8,1 millions of green coffee bags.

Knowing now how the performance of the country through the years in terms of the level of production has been, and the causes of this performance, it is appropriate also to analyze which regions of the country are the ones with the highest coffee production. But for doing this, first is important to understand how the topography of the country and the regions inside it, with their respective characteristics, is. In the chapter four, the Fig. 25 already presented a map of Colombia that is subdivided with their respective departments, in total the country has 32 departments and the capital district of Bogota, being the most populated of the country, followed by the department of Antioquia and Valle del Cauca. The country has a central government that is in Bogotá, and their departments has their own governors that depend on the laws of the central government.

However, the country also is divided in big regions, depending on the topography; based on this division is that the economies of the regions works and therefore of the departments. In the Fig. 33 is presented the topographic map of the country, and the regions that depends on this topography.

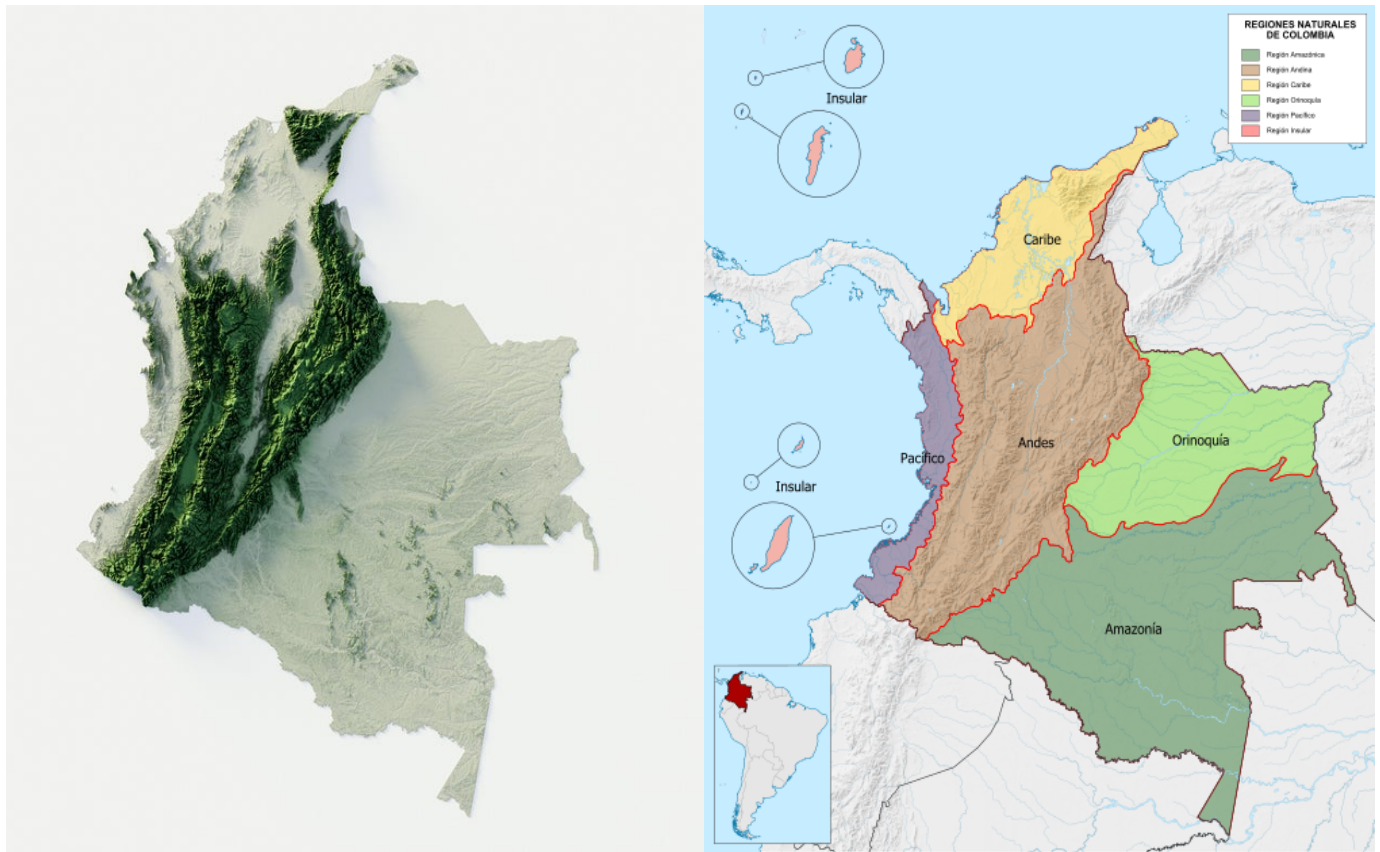


Fig. 33: Colombia's topography and regions based in this topography. Source: Wikipedia – Reddit.

Looking at the figure, it is observed that 3 mountain ranges pass through the center and the west part of the country. These mountain ranges are the “Cordillera Occidental”, “Cordillera central” and “Cordillera oriental” and is there in which the coffee crops are located and where the coffee growers live. At the right part of the figure, it is appreciated the regions, based in the topography there are 5 regions, in which the region Andes is the one in which the majority of the mountain ranges are located. Thanks to the location of Colombia in the Equator, the weather is stable in all the country and there are no extreme temperatures, this is the reason why the country is producing coffee all the year. Also, as it is appreciated in the map, the country has an appreciated location in terms of oceans, having access to the sea from the Atlantic ocean (Caribe region) and the Pacific ocean favoring exports and imports of various materials, including coffee. In the Pacific it is located the most important port in Colombia (Puerto de Buenaventura) and in the Atlantic it is located the port of Barranquilla and Santa Marta.

Knowing now how is divided the regions in Colombia and where are located the crops in the country, it is now time to analyze the performance of each department. As most of the coffee crops are in the Andina region, it is supposed that the departments of the region are the one with the highest performance. In the Fig. 34 we could see the performance of the most important departments in terms of area cultivated.

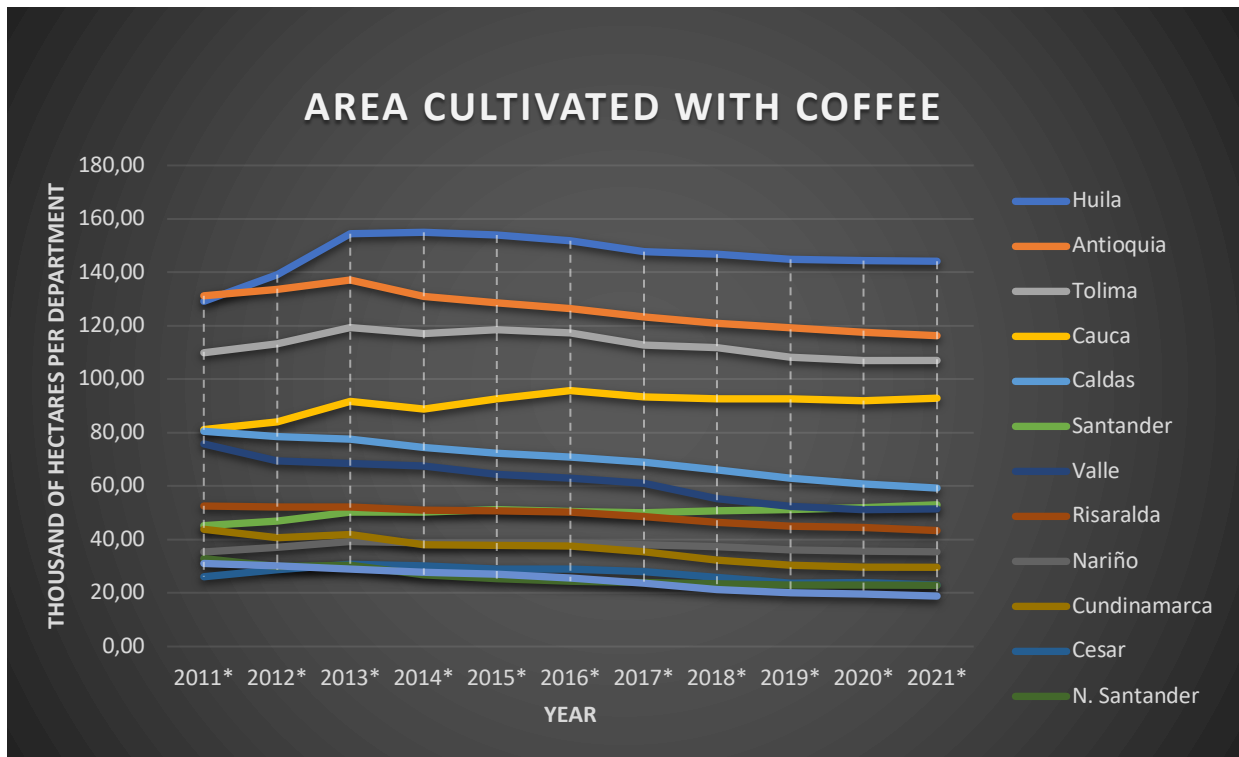


Fig. 34: Area cultivated (in thousands of hectares) by department. Source: FNC [65]

As it can be analyzed in the Fig.34, the region with the highest area cultivated of coffee in the last 10 years is the department of Huila with a value oscillating between the 155.000 hectares and 140.000 hectares, followed by Antioquia and Tolima. These three departments are part from the Andina region as it was predicted, therefore, as they are located in the center part of the country is easy for them produce and export in both ports, the one of Buenaventura (Pacific Ocean) and the one in Barranquilla (Atlantic Ocean). It is important to mention that in the last 5 years, Huila is presenting a stable performance, while Antioquia and Tolima are presenting a decreasing performance, the reason is explained by other departments. As it can be seen, the department of Cauca (Andina and Pacific region) is having a growing tendency due to the focus of important multinationals in this sector. Colombia coffee sold in Starbucks is from this department for example.

Not all the departments of Colombia are shown in the figure, only the ones representing more than the 90% of the total area of coffee crops in Colombia (in 2021, Colombia has a total of 840.110 hectares). Clearly, Andina region dominates in the coffee market, due to all the departments shown in the graph pertain to this region. Finally, but not less important, in the chapter 4 the history of the coffee in Colombia was explained, and one important fact mentioned was that coffee entered in the country through the Santander and Norte de Santander department (North and east parts of the country), however, due to the crisis of the civil war and the international coffee market, the coffee crops were spread to the center of the country (Antioquia, Valle del Cauca, Old Caldas). If we see the Fig. 34, we can infer that nothing has changed, because Antioquia and Valle del Cauca are still in the top of the area cultivated, some new departments of the center of the country also have emerged as leaders

(Huila and Tolima), while Norte de Santander and Santander are with the lowest performance in the graph.

The production of coffee as it was explained is done by coffee growers, they are located along the 3.000 km of the mountain ranges and is it estimated that there are around 540.000 coffee growing families. Almost all the families live on small farms or parcels whose coffee crops do not exceed 2 hectares [65]. To be catalogued as coffee growers, the FNC consider the owner or possessor of a property that meets the following conditions: That the area planted with coffee is equal to or greater than half a hectare (0.5 ha.) and that in the designated area there are at least 1,500 planted trees [64].

## **5.4 COFFEE EXPORTS AND IMPORTS**

### **5.4.1 Exports:**

In terms of coffee exports, Colombia is one of the leaders in the world, synonym of a very high-quality products, and is the unique region having geographical indication (GIs) in the product as it was explained in chapter 4. Coffee, with their exports, were, according to historians, responsible for the industrialization of the country; it was the door to world capitalism, a possibility of stability for a poor and violent country (domination by the Spanish, then civil war...) [62]. Nowadays, coffee is still important, in 2021 the coffee industry contributed 1% to the country's GDP and represents the 15% of the agricultural GDP; in terms of exports, it is the 3<sup>rd</sup> product more exported after crude oil and charcoal briquettes. [66].

As it was already mentioned in the history of coffee, there have been periods of time in which the crisis has appeared, and some decisions were taken to overcome these crises. One of the most important, and that was a starting point in Colombia in terms of exports and imports was the quota agreements of the 60's. In this period, the FNC, allied with producers and exporters, took the decision of exporting the best coffee produced in Colombia and leaving inside the country the "Pasilla". With this decision, today, Colombia exports nearly the 93% of the coffee produced [62].

Having these important aspects clear, the exports are going to be analyzed. In the Fig. 35 is presented the historical performance of the country in terms of exports, being the unit of measure thousands of bags of 60 kg of equivalent green coffee. This unit of measure is specified because in the values it is included not only the green coffee exports, but also other kind of products like roasted coffee, grinded coffee, or soluble coffee. However, in order to have a standard unit of measure, international agreements established the 60 kg bags of green coffee.

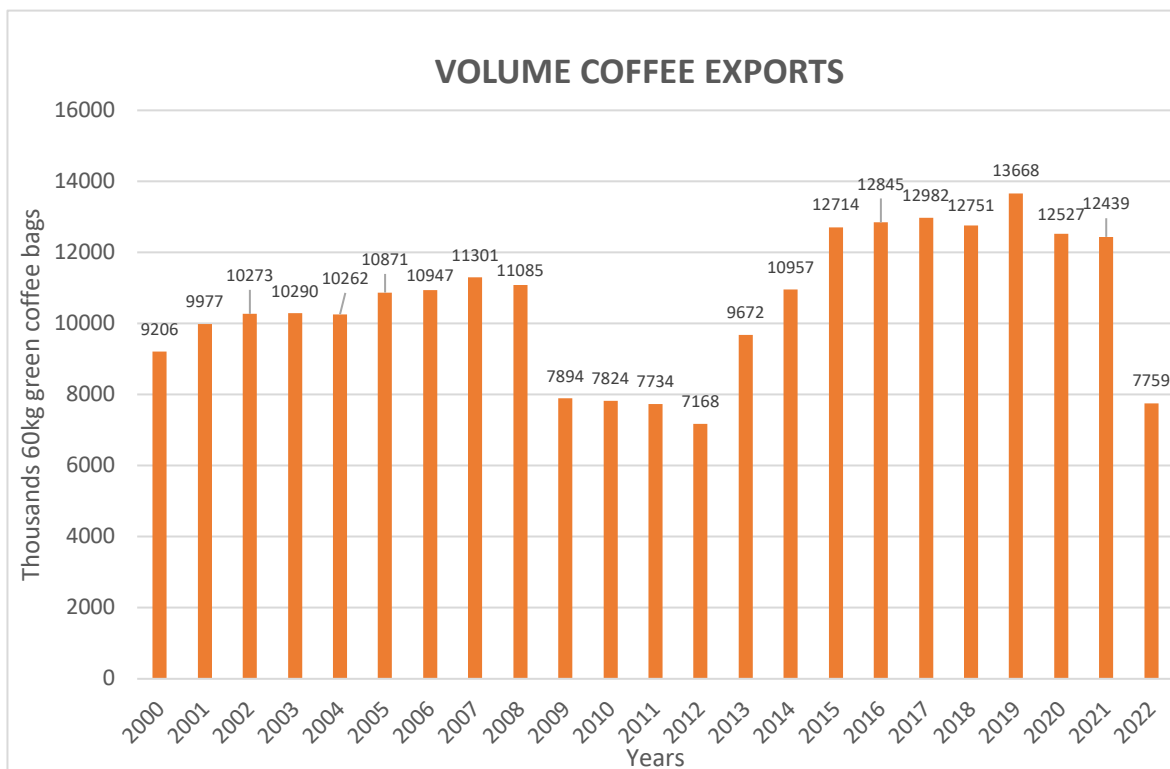


Fig. 35: Colombian coffee exports volumes. Source: FNC [64]

As it is seen in the graph, the country has had a growing tendency in terms of exports. There is a period, between 2009-2012 in which the exports decreased sharply. From 11,08 millions of coffee bags exported in the year 2008, to 7,89 millions of bags in the year 2009 meaning a decrease of about 28,7%. To understand this performance, it is necessary to go to Fig. 32 and obtain the answer. In that same period, the production of green coffee decreased, and the causes, as it was explained in that graph, was due to environmental conditions, rust levels and increase of costs of materials. In the last 20 years, the record of the year with the highest exports was in 2019 with a total of 13,67 millions of coffee bags exported, a performance that goes hand in hand with the production graph where 2019 was also the year that produced the most. The years 2020 and 2021 had lower levels than the past years, but the main factor explaining this was the COVID-19 pandemic that brought strict regulatory measures, logistical problems, and isolation. Experts have established that 2022 will be a better year, and the performance will be similar to the periods before the pandemic; however, until August of 2022, the country has exported 7,75 millions of coffee bags, a result very similar to 2020 and 2021 until that month.

In terms of percentage between coffee produced and coffee exported, it can be concluded that for the last 20 years, the decision to take for the quota agreement is still implemented. More than 86% of the coffee produced has been exported, with an average of 92,30%. However, this data should be analyzed carefully, because when the demand is higher than the production, the country uses the coffee stored in the warehouses in optimal conditions; that is why there are some years like 2009, in which the exports represent 101,05% of the production (8,82 millions of bags produced by 7,89 millions of bags exported).



With the volumes of the coffee exports already analyzed, it is important to identify the value of these exports in monetary terms. In chapter 2 was demonstrated that despite Colombia is in the 3<sup>rd</sup> position in terms of coffee exports volumes, in monetary value is 4<sup>th</sup>, behind 2 countries that are not producers and export roasted coffee that were imported before (Germany and Switzerland). Therefore, it is necessary observe and analyze the tendency of the value of the exports of Colombia. Fig. 36 display the values.

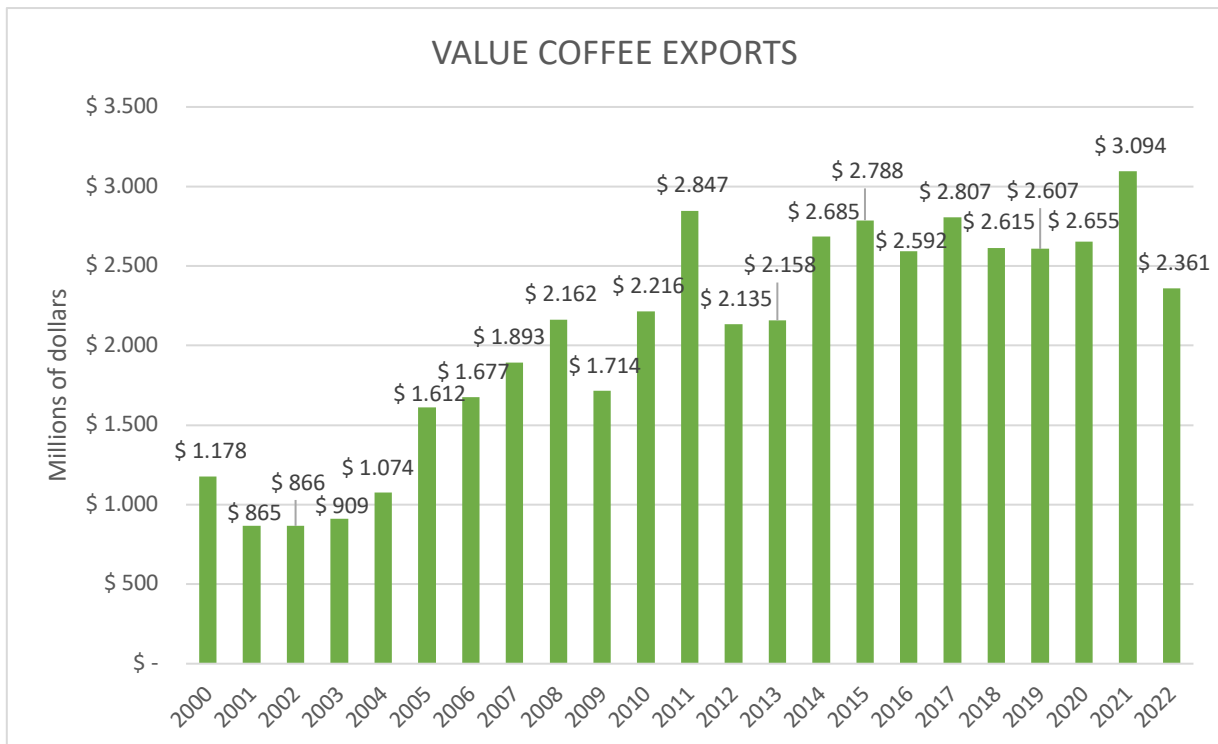


Fig. 36: Historical value Coffee exports USD. Source FNC [64]

Fig. 36 shows the value in million USD of the country's coffee exports. The highest value is in the year 2021 with a total \$3.094 millions of dollars, and the lowest value is in the 2001 when the country only exported \$865 millions of dollars. It is curious because if we see Fig. 35, the year 2021 was not the one with the highest volumes of exports, and the year 2001 was not the one with the lowest volumes of exports. The reason of this situation is the coffee price; although the volume affects the value of the coffee exports, there is also an actor independent of the quantity exported that is the price of the coffee, highest quantities exported with lower coffee prices will give situation like the year 2001 in which the value for 9,97 millions of coffee bags exported were only \$865 millions. On the other hand, lower quantities exported but with a higher price will give situations like the year 2021, in which 12,44 millions of bag were exported at a value of \$3.094 millions, higher than in 2019 in which the country exported more bags (13,67 millions) but at a lower total monetary value (\$2.607 millions)

As it was mentioned before, Colombia not only export green coffee, besides it is the most important product of the coffee market, the country also exports roasted coffee (grinded, soluble, lyophilized). Some domestic roasting companies have become very important players in the international coffee industry. Table XIII shows the quantity of coffee exported in terms of type of coffee by absolute value and by relative value, with the value of reference the total quantity of coffee exported.

TABLE XIII

*Quantity exported by type of coffee (in thousands 60 kg bags):*

Year	Green		Decaf green		Roasted bean		Roasted and Grinded		Extract and soluble		Colombian product (Green and Industrialized)		Total
2000	8.568	93,1%	6	0,1%	1	0,0%	4	0,0%	628	6,8%		0,0%	9.207
2001	9.271	92,7%	71	0,7%	1	0,0%	5	0,1%	627	6,3%		0,0%	9.975
2002	9.522	92,7%	137	1,3%	0	0,0%	5	0,0%	610	5,9%		0,0%	10.274
2003	9.589	93,2%	96	0,9%	2	0,0%	10	0,1%	593	5,8%		0,0%	10.290
2004	9.476	92,3%	124	1,2%	3	0,0%	13	0,1%	646	6,3%		0,0%	10.262
2005	10.111	93,0%	117	1,1%	2	0,0%	15	0,1%	627	5,8%		0,0%	10.872
2006	10.269	93,8%	37	0,3%	4	0,0%	12	0,1%	623	5,7%		0,0%	10.945
2007	10.665	94,4%	37	0,3%	3	0,0%	13	0,1%	583	5,2%		0,0%	11.301
2008	10.277	92,7%	77	0,7%	17	0,2%	18	0,2%	696	6,3%		0,0%	11.085
2009	7.144	90,5%	114	1,4%	38	0,5%	13	0,2%	584	7,4%		0,0%	7.893
2010	7.134	91,2%	28	0,4%	43	0,5%	15	0,2%	603	7,7%		0,0%	7.822
2011	7.108	91,9%	14	0,2%	55	0,7%	14	0,2%	543	7,0%		0,0%	7.734
2012	6.535	91,2%	22	0,3%	53	0,7%	31	0,4%	528	7,4%		0,0%	7.169
2013	9.041	93,5%	20	0,2%	48	0,5%	26	0,3%	535	5,5%		0,0%	9.671
2014	10.326	94,2%	14	0,1%	37	0,3%	48	0,4%	531	4,8%		0,0%	10.957
2015	11.970	94,2%	22	0,2%	42	0,3%	54	0,4%	602	4,7%	24	0,2%	12.714
2016	11.034	85,9%	9	0,1%	40	0,3%	52	0,4%	708	5,5%	1.001	7,8%	12.845
2017	11.385	87,7%	15	0,1%	33	0,3%	74	0,6%	756	5,8%	721	5,6%	12.983
2018	11.316	88,7%	17	0,1%	38	0,3%	59	0,5%	779	6,1%	542	4,3%	12.751
2019	11.977	87,6%	16	0,1%	41	0,3%	81	0,6%	809	5,9%	743	5,4%	13.668
2020	10.684	85,3%	13	0,1%	44	0,4%	90	0,7%	880	7,0%	817	6,5%	12.527
2021	10.664	85,7%	33	0,3%	62	0,5%	96	0,8%	787	6,3%	796	6,4%	12.439

Source: FNC [65]

In the table it is shown the quantities exported in Colombia by type of coffee, including green coffee, decaf green coffee, roasted beans, roasted grinded coffee, extract and soluble; and Colombian product that is when the coffee has a certificate of origin that indicates the region of the country (Nariño, Huila, Cauca, Santander, Tolima, and Sierra Nevada are the ones with this certification). Also, the meaning of the stamp represents the artisanal customs of the inhabitants of the geographical region. With the data of the table, it is concluded that green coffee is the type of coffee most exported, being above the 85% of the total coffee exported each year, and until 2015, when the type “Colombian product” was not in the market, the green coffee was predominating with more than 90% of the total coffee exports. This led understand that, besides Colombia exports also other types of coffee, is the green coffee the signature product of the country.

Analyzed the quantity exported in the country and the types of coffee that are exported, now is important to understand which are the countries that import coffee from Colombia, this means the best customer for the Colombian coffee market in terms of exports. In the Fig. 37 the countries to which Colombia exports the most are shown, some countries such as Switzerland, Austria, Portugal, Poland, Greece, and Sweden are excluded because each of them represents less than 1% of the total exports.

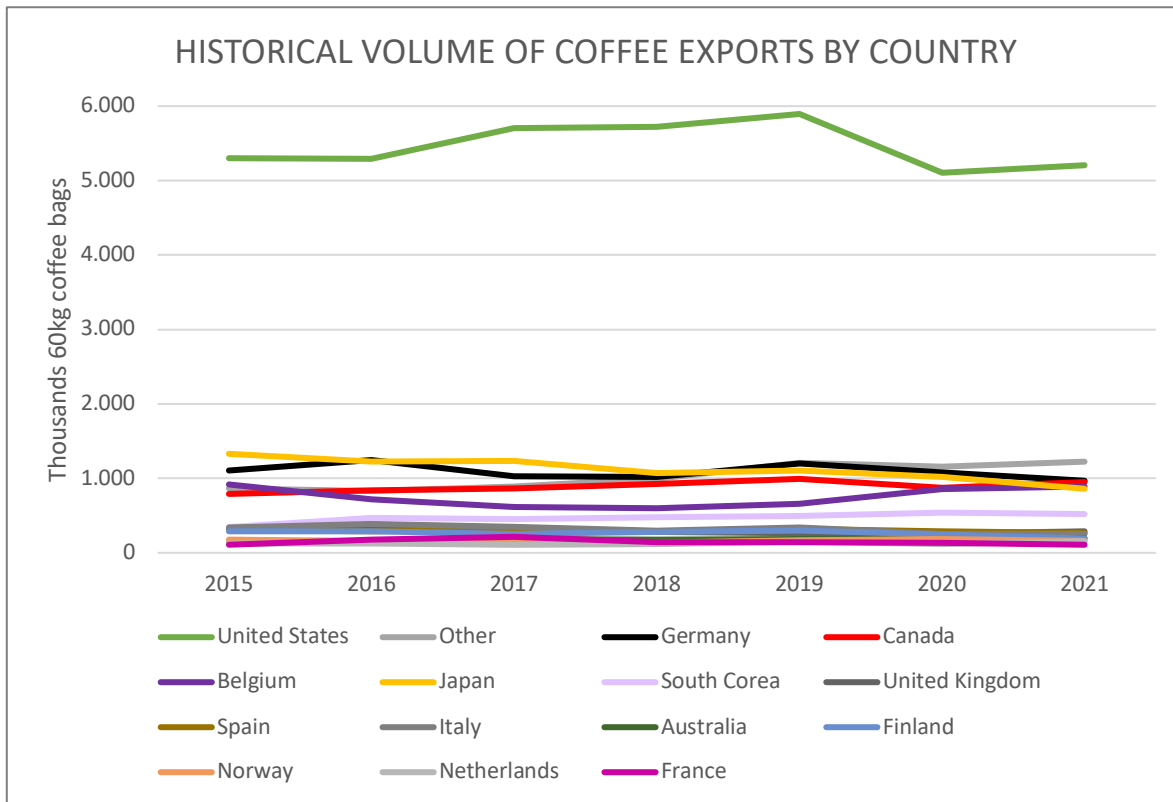


Fig. 37: Coffee exports BY country. Source: FNC [64]

In the Figure it is observed that the best customer for the Colombia coffee market exports is the United States of America, which have always been above the 5 millions of coffee bags, representing more than the 35% of the coffee exports of the country. And as it is exposed, in the last 7 years the United States have been predominating with an average of 5,46 millions of coffee bag imported. This is not strange, due to the importance that the USA have had in the development of the coffee sector in Colombia. In chapter 4 it was explained the history of coffee in Colombia, and the USA played a very important role in terms of brand and merchandising (with Juan Valdez) and has always been a consumer of Colombian coffee. Then, there is a big group of countries that import similar quantities of coffee from Colombia and are very distant from the United States. Japan and Germany are the ones leading this selected group with an average of 1,12 and 1,09 millions of coffee bags imported respectively. The conduct of the countries in the last 7 years have been very similar; in the last 3 years Japan has a decreasing tendency as well as Germany, but the covid 19 pandemic was the main cause of this situation.

### **5.4.2 Imports:**

It seems very strange to write about the coffee imports in a coffee producer country like Colombia, and more when it is the 3<sup>rd</sup> more important producer of coffee in the world. However, the reality is that Colombia also imports coffee, and it is consumed inside the country besides of the one that is produced.

As the National Federation of Coffee Growers of Colombia (FNC) establishes, we are in a world with borders open, which is interesting for the coffee exporting; however, if the countries open their markets to Colombia with items like the coffee, Colombia also must open their markets to other countries. If Colombian imports are closed, the first consequence would be that the markets of the other countries also would be close to Colombia, and then the 92% of the Colombian coffee that is produced and exported would be affected [67].

The other reason is that the Colombian coffee is sold at the best post. Neither the national industry nor the great majority of the Colombian consumers are willing to pay the cost of the high-quality Colombian coffee. On the other hand, most foreigners' buyers are willing to pay the cost of the coffee, then the Colombian coffee growers cooperatives and producers sell their coffee to the foreigners, at the value that is quoted in the international market. The great majority of Colombian consumers are not able to buy the Colombian coffee due to the higher cost, inside the country, people buy the pound of coffee at \$12.000 Colombian pesos (\$2,5 USD) while the Colombian coffee sold abroad is at \$30.000 or \$40.000 Colombian pesos (6-8 USD), then there is a big difference in prices that consumers are not able to assume, and prefer to buy the imported coffee [67].

With the clear explanation about why Colombia imports coffee, then it is important to analyze the quantities imported. Fig. 38 shows the historical imports of coffee, that clearly depend on the demand that would be analyzed in the following section.

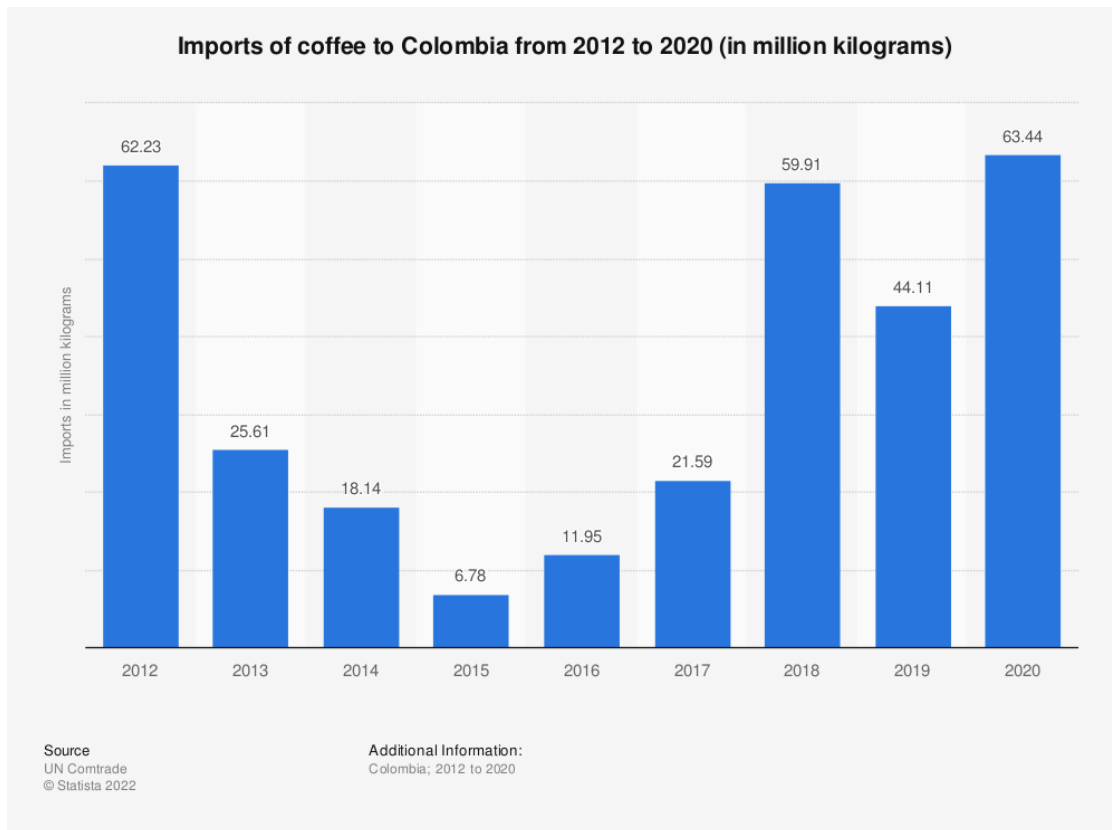


Fig. 38: Colombian historical coffee imports. Source: Statista: [27]

Fig. 38 shows the quantity of coffee imported in millions of kg (not 60kg bags). The country experienced a decreasing tendency between the years 2013 and 2015, first due to the lower supply of coffee from the exporter countries from which Colombia buys the coffee, and second due to a decrease in the demand caused by political situations (government decided to stop the subsidy for consuming coffee). Then, in 2016 the situation started to change, obtaining at the end of the 2020 a quantity of 63,44 millions of kg of coffee imported. The countries from which Colombian import the most are Peru, Brazil, Ecuador and Honduras [68].

## 5.5 COLOMBIA'S COFFEE DEMAND

Following the economic analysis done in chapter 2, the demand plays a very important role in the markets, and Colombia's coffee market is not the exception. The situation inside the country is very curious and is object of analysis. Colombia, known as one of the most important coffee producers in the world, and with their coffee in the top 3 of the best coffees in the world (if not the best), was not a coffee consuming country until a few years ago. And nowadays, the great majority of Colombian coffee consumers are not able to distinguish between a high-quality coffee and a bad one.

This dynamic started around the 60's when the coffee producers of the country signed the international coffee agreement (quota agreement) in which the coffee production was limited in order to stabilize the prices. The FNC, together with other big coffee producers of the

sector in Colombia took the decision of exporting the best coffee and leaving in Colombia the one with the worst quality (known as “Pasilla”).

In favor to promoting this path taken by the coffee producers with the consumers, the government created a subsidy for the consumption of the “Pasilla”, and with this, the Colombian population started to buy this type of coffee that was cheaper and for producers there were no problem in exporting the high-quality ones and obtain more revenues from foreigners. The subsidy favored the consumption of coffee inside the country but generated disincentives for quality differentiation, that remains until today in the majority of the population [62]. As Luis Fernando Samper (one of the responsible of the Juan Valdez brand) says, “in Colombia first was the industry and then the coffee culture”. Contrary as other producer countries like France with the wine.

In 1989, the international coffee agreement collapsed and was cancelled, and the Colombian government stopped subsidizing coffee, this led the consumption of Colombia to be below the Latin average, and the coffee that was consumed, continued to be the one with lower quality. Together with the “Pasilla”, the local consumers started also to drink old coffee that was the consequence of an excess inventory in the local market due to the cancellation of the quota’s agreement. That grain, despite being stored at controlled temperatures, lost its freshness and changed its flavor [62].

In 2009, after being several years below the average consumption of coffee in South America, Colombia created a program called “Toma Café” in order to promote the consumption of coffee inside the country; this would benefit both consumers and producers, transforming Colombia not only in a coffee producer country, but also in a coffee consumer country. This idea was promoted by the FNC, private brands and roasting companies to guide a revolution in the coffee consumption. There were 4 paths in which the program focused their efforts; the first one was the professionalization of the barista, with training courses of 440 hours during six months. The second one was with the education of the supermarkets, proposing to this sector to emulate the experience of a coffee shop. The third way is linked with doctors. After an alliance with the Center for Studies and Research in Health from a very important hospital in Bogota; the page [www.cafeyciencia.org](http://www.cafeyciencia.org) was created, which works as a center for scientific dissemination and summarizes the studies done on coffee and its effects on health. The fourth idea is associated with innovation and guidelines and the fifth and last one is the training of shopkeepers in the preparation of coffee [69].

The program ended in the year 2016 after six years of operation, the consumption of the coffee drink among Colombians was promoted, leaving an increase of 33% in the drinking of this beverage. When the program started, the annual consumption of coffee was around 1,2 millions of 60 kg green coffee bags, while at the end in 2016, the annual consumption was of 1,7 millions of 60kg coffee bags [70]. The penetration of the beverage in Colombian families was of 79% in 2009 when the program started, in 2012 was of 84% [69] and in 2021 of 96%; this led conclude that the main idea and objectives of “Toma Café” program were accomplished. Fig.39 shows the growing tendency of the coffee consumption inside the country.

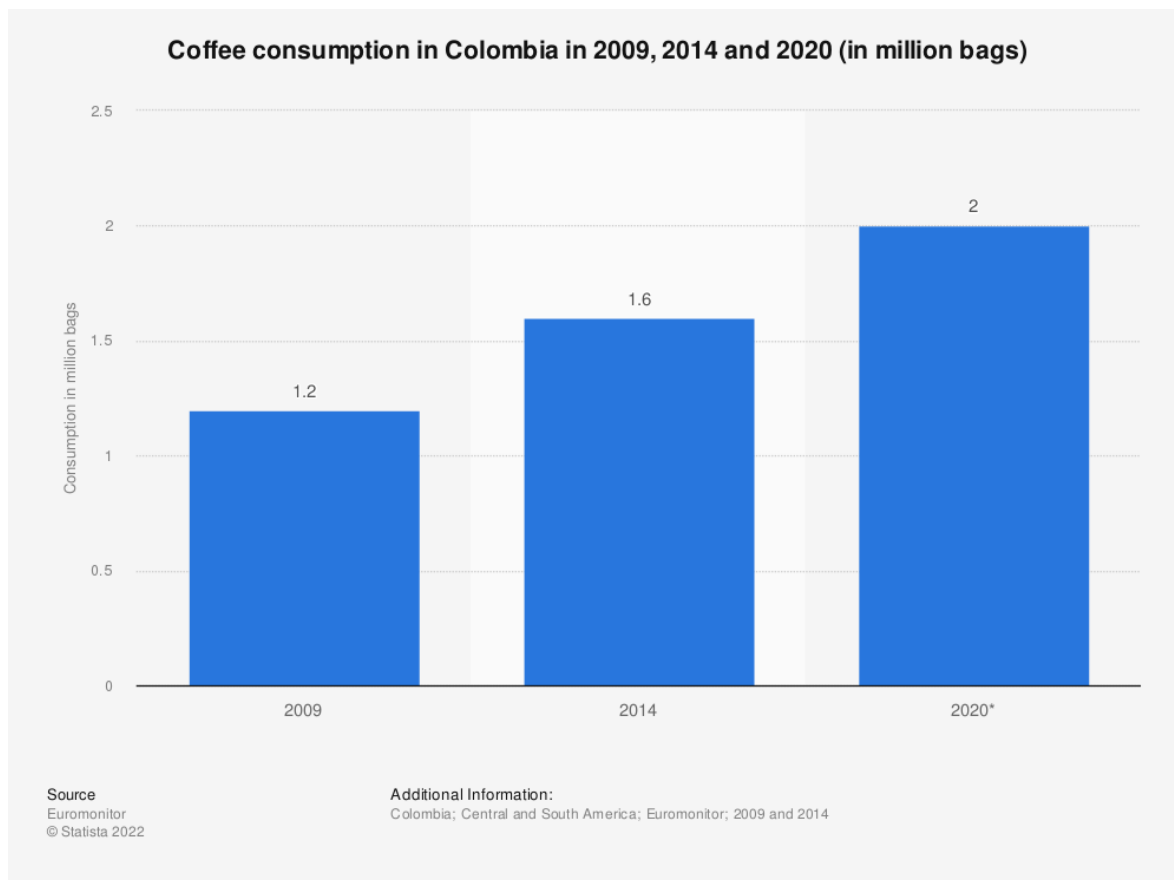
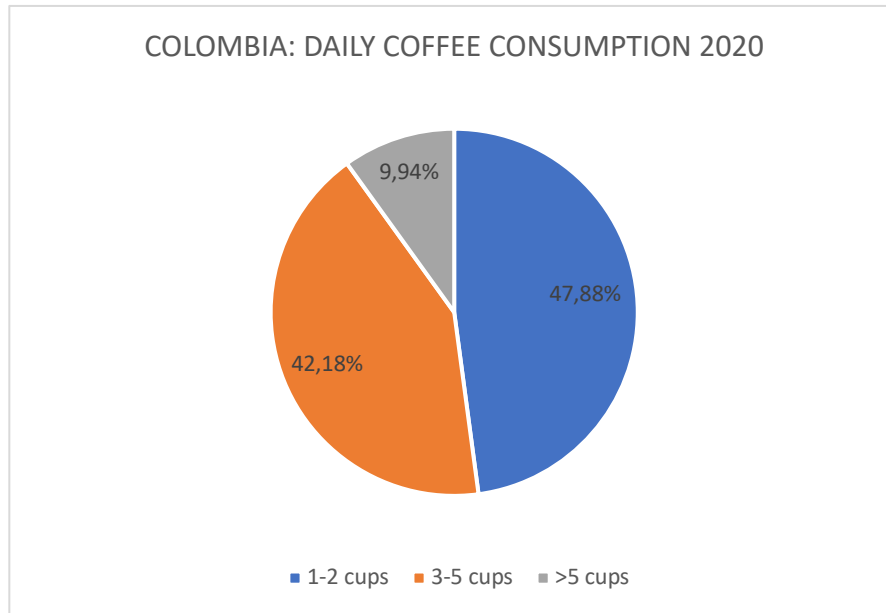


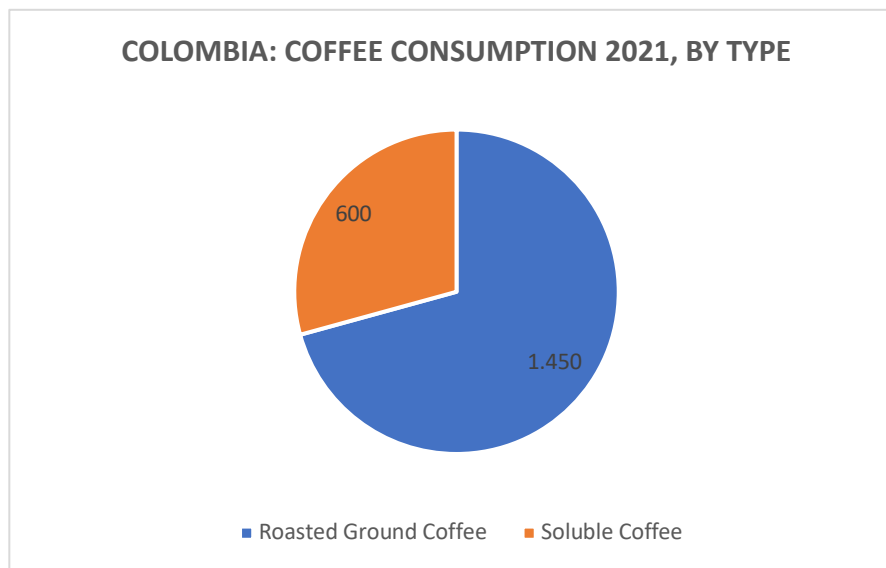
Fig. 39: Historical coffee consumption in Colombia. Source: Statista: [27]

The graph above shows the data of what was explained in the last paragraph. In 2009, when the program “Toma Café” started, the consumption was around 1,2 millions of 60 kg coffee bags, while at the end of the year 2020, this quantity increased to a value of 2 millions of 60 kg coffee bags, a growing tendency that has maintain during the last 13 years. For the year 2022, the consumption of the country is around 2,2 millions of 60kg coffee bags [68]. With this graph, also it is possible to understand the necessity of the country in having coffee imports, while in the year 2020, a total of 13,890 millions of 60kg of coffee bags were produced, 12,527 millions were exported, leaving 1,363 millions of coffee bags for the local consumption. In order to meet the demand, the country imported the remaining amount for reaching the 2 millions of coffee bags.

Knowing that the coffee consumption has penetrated on average 90% of the families in Colombia, is important to understand how often they drink coffee during the day and the type of coffee that is preferred. Fig. 40 shows the frequency of the beverage of coffee and Fig.41 the type of coffee preferred.



*Fig. 40: Daily frequency beverage of coffee. Source: Statista [27]*



*Fig. 41: Type of coffee consumed. Source: Statista [27]*

The figures above explain deeply how the consumption of coffee is nowadays in Colombia. The great majority of the people drink between 1 and 5 cups of coffee per day (more than 90%), being the group of people that drink 1-2 cups of coffee per day a 47,88% and then with a 42,18% the group of people that drink between 3-5 cups of coffee per day. Together with the Fig. 14 of chapter 2 shows that the quantity is equivalent to 1,5 kg of coffee per capita. However, the FNC states that it is estimated for the 2022 an increase in this value for a consumption of 2,8 kg per capita. Fig 41, on the contrary, shows the preferred type of coffee that the Colombians consume, being the roasted ground coffee the one predominating with more than the 70,73% equivalent to 1,45 millions (of the 2 millions of demand) of 60 kg coffee bags.



Finally, it is important to analyze the monetary performance of the Colombian market, that depends not only on the demand that was already seen and the coffee price, but also on the supply promoted by the companies of the country. In the next chapter the companies will be analyze in depth. Fig.42 shows the coffee sales in Colombia for the last 15 years and with a forecast until 2026.

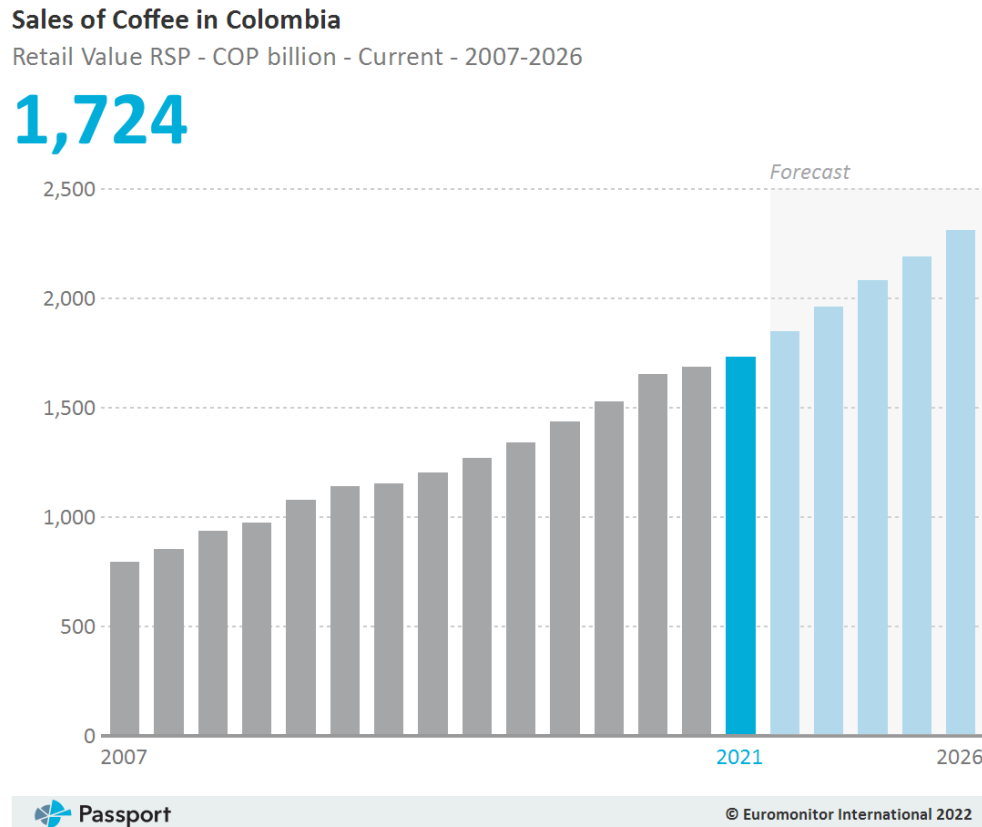


Fig. 42: Historical Colombian coffee sales. Source: Euromonitor [71]

Fig. 42 shows the performance of the sales in the las years. The values are in the local currency (Colombian Pesos COP), and the exchange range for USD dollars is 4600-5000 Colombian pesos are equivalent to 1 dollar. It is seen a growing tendency since 2007 for the sales, that is the consequence of the programs created for promoting the coffee consumption inside the country. In 2007 the sales were near \$800 billions COP equivalent to \$161.363.600,00 dollars, for the end of 2021 this value increased to \$342.897.650,00 dollars. Consequently, it is also estimated that the growing tendency will remain and in 2026 Colombia will have sales of approximately \$463.920.350,00 dollars [71].

## 5.6 COLOMBIAN COFFEE PRICE

Now it is time to analyze the internal coffee price of Colombia, the dynamic is a little bit different from the global coffee price. There are some important aspects to have into account.

### 5.6.1 Colombian global coffee price:

The Colombian coffee bean belongs to the type C contract explained in chapter 2, a future contract whose value is used as a reference to form the international price of Arabica coffees. Inside this type of contract there are 20 different countries, in which Colombian and Brazil are included. The standard contract is of 37.600 pounds and have standardized delivery series in March, May, July, September, and December. The most important aspect of this type of contract is that the coffees from different countries are valued at different prices. For example, Mexico and Perú are traded exactly at the same price as the one on the stock market, this are valued “at par”. Others, due to their lower quality, are listed “at discount” points compared to the stock market price, there could be discount of 100 points of 400 points or of 600 points, Brazil is in this last group. On the other hand, the only coffee that is listed with a “Premium” compared with the stock market price is the Colombian coffee. In total Colombia has around 400 points of premium, due to the high-quality coffee produced in the country, this led Colombia be ahead Brazil for around 1000 points. The points are defined with a certification noticed based on a bean grade test and a cup taste test [72]. Fig. 43 shows the historical Colombian coffee price in the New York stock exchange.

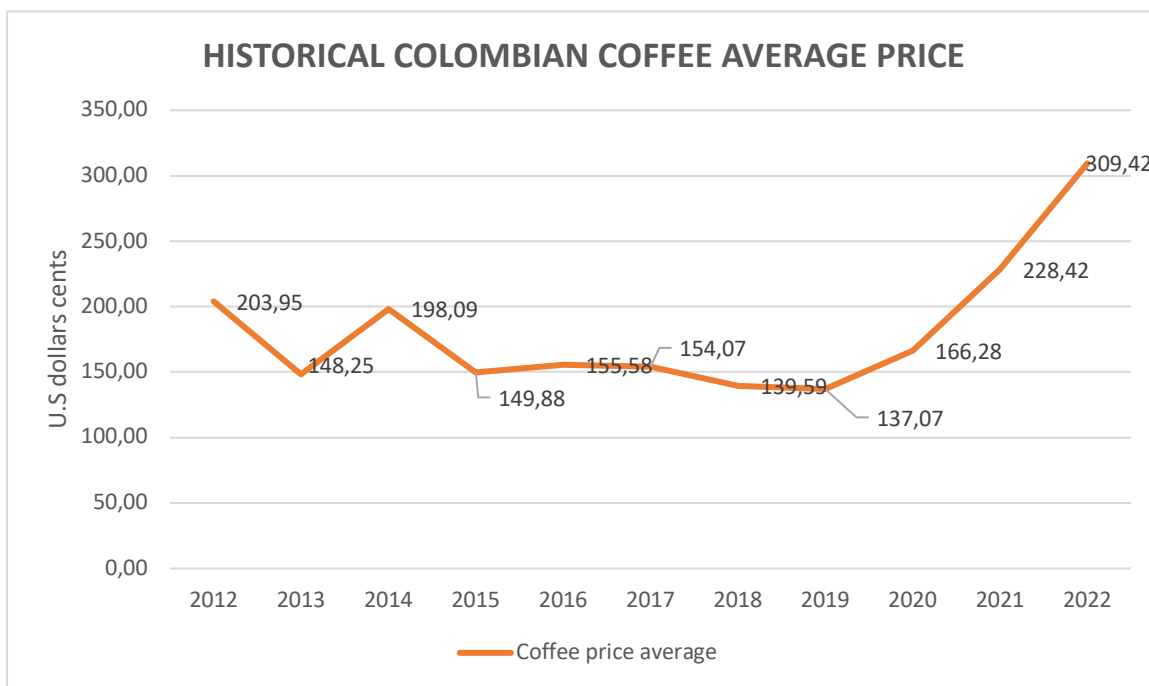


Fig. 43: Last 10 years average Colombian coffee Price. Source: FNC. [64]

In the figure above, the average of the Colombian coffee prices in the last 10 years are shown, as it was explained in the chapter 2, the coffee prices work through speculations in terms of weather conditions, geopolitical aspects, and economical aspects (such as the fuel price) that determines the feeling experimented by the market participants. Also, the prices work by the law of supply and demand. As it can be noticed, in the last three years there has been a growing tendency, reaching a price for 2022 (until September) of 3,09 dollars, a record for the Colombian coffee price. The main reason of this growing tendency in the last years is the weather conditions in Brazil; the country, in the coffee productive zone, suffered two strong

situations, first, at the end of 2020 they had a drought and in 2021 they experimented a frost situation that affected all the coffee production [73], so the low supply caused an increase in the prices.

### **5.6.2 *Colombian internal coffee price:***

After knowing how is defined the Colombian price in the New York stock market, now is time to understand the internal coffee price and all the dynamics behind it. The first important think to understand are the two funds that play an important role in the coffee price. The National fund of coffee (FoNC) and the coffee price stabilization fund (FEPC). The first one was already explained at the beginning of this chapter, in the general aspects, and the important role playing in the coffee price is that with this fund, the coffee growers have a purchase guarantee, so no matters the quantity they produced, they have the guarantee that all their production will be sold.

The second one (FEPC) is a new fund created in the year 2019, and it is a special resource account that helps Colombian coffee growers to protect the price of their harvest against the ups and downs of the international market. It is a way to stabilize the income of the growers in case of situations that affect the coffee production [74]. The fund has two mechanisms for price stabilization: the first one is the income stabilization mechanism; seeks to remunerate the coffee growers when the sale of their coffee production could be affected by climatic, natural, or sanitary events, as well as anticipated negotiations. The other mechanism is the price stabilizing mechanism; that seeks to compensate the coffee grower when the coffee price reaches a very low value. The National Federation of Colombian Coffee Growers (FNC) is the one in charge of the management of the fund.

The differences between the FoNC and the FEPC is that the first one is a parafiscal fund while the other one is a public fund built with public and private resources, this means the FoNC is an obligatory amount that the coffee producers must pay in order to obtain benefits, while the resources from the FEPC are public. The source of each fund is different, while for the FoNC the main source is the contribution made by coffee growers, for the FEPC the main source is the general budget of the nation and the price stabilization reserve; coffee growers also have to make a contribution, but it is 0,5 dollar cents while for the FoNC is in average of 5,5 dollars cents. The two funds are independent, as well as their resources.

Clarifying the role of the two funds, now it is the time for the definition of the internal coffee price. The FNC offers the purchasing guarantee through the publication of a base price; that is known as the price of the parchment coffee in Colombian pesos. This price depends on the following variables: the prices in the New York stock exchange, the premium due to the quality that the Colombian coffee has, and the exchange rate between the Colombian peso COP and the American Dollar USD.

At the moment when a coffee grower goes to a coffee cooperative to sell their coffee, the first thing done by the cooperative is the coffee thresh and impurities removal, after this, the coffee is classified as excellent coffee “excelso” or “Pasilla” that is a coffee bean with a lot of impurities or imperfections that is not able to meet the standards of quality. With this

classification, the coffee grower receives the payment for the “Excelso” and the “Pasilla”. The Formula (5) is the one applied for the “Excelso” and Formula (6) for the “Pasilla”.

$$P = (\text{New York stock exchange price} + \text{Colombian coffee premium} - \text{coffee contribution} - \text{costs and expenses})$$

$$\text{Payment for "Excelso" coffee} = P \times \text{exchange rate} \times \text{quantity "Excelso coffee"}$$

Formula (5): “Excelso” coffee payment. Source: FNC [50]

$$\text{Payment for "Pasilla"} = \text{Market price of "Pasilla"} \times \text{quantity "Pasilla"}$$

Formula (6): “Pasilla” payment. Source: FNC [50]

For the formulas above, the Formula (5) was divided in two parts, the first part was the definition of a variable “P”, in which is involved price of the Colombian coffee in the New York stock exchange, the premium that the Colombian coffee has due to the high quality, the coffee contribution that coffee growers made to the FoNC and FEPC and the financials and logistics costs and expenses of the storage of the coffee, the transportation, distribution and exportation. Then, this variable P is multiplied by the exchange rate between COP and USD, and then multiplied by the quantity of Excelso coffee, giving at the end the total payment of “Excelso” coffee. For the “Pasilla” the calculation is easier (Formula (6)), is the multiplication of the market price for “Pasilla” (defined by Colombian coffee market) and the quantity.

There is another factor in the formula that was not introduced above, but it is important to have it clear, and is the performance factor. It is a method that the coffee cooperatives use to measure the quality of the coffee crops though a bonus in the coffee price. The performance factor is the quantity of parchment coffee necessary to obtain a 70 kg coffee bag of “excelso” coffee. The reference value (when the coffee is paid “at par” with the internal coffee price) is 94, this means that it is necessary 94 kg of parchment coffee to obtain the 70 kg of “excelso” coffee. The method is applied at the moment of the coffee sale in the cooperative and must be requested by the coffee growers [75]. When the coffee has a factor lower than 94, means that the coffee is more valuable, because it is needed less than 94 kg of parchment coffee for obtaining the 70 kg of “excelso” coffee; in this case the coffee grower receives a bonus, so his coffee is more expensive than the internal base price. On the contrary, when the factor is higher than 94, the coffee is less valuable, because it is needed more than 94 kg of parchment coffee for obtaining 70 kg of “excelso” coffee. As the FNC establishes: “A good performance factor is obtained from the crop. The care and monitoring that is carried out from the collection and drying, determines the factor with which the producer receives an overprice for the grain, at the time of selling it in the Coffee Growers Cooperative” [75].

The performance factor calculated by the coffee cooperatives, is done through coffee samples of 250g, and is done through the Formula (7). The final “excelso” coffee price is calculated with the Formula (8). Formula (9) is the Final total price for the amount of coffee.

$$\text{Performance factor} = \frac{250g \text{ parchment coffee sample} \times 70 \text{ kg "excelso" coffee}}{\text{weight "excelso" coffee in the sample}}$$

Formula (7): Performance factor. Source: Coffee Media [76].

$$\text{Final "Excelso" coffee price} = \frac{94 \text{ kg}}{\text{Performance factor}} \times \text{Payment for "Excelso" coffee}$$

Formula (8): Final "excelso" coffee price. Source: Coffee Media [76].

$$\text{Total price parchment coffee} = \text{Final "Excelso" coffee price} + \text{payment for "Pasilla"}$$

Formula (9): Total price parchment coffee. Source: FNC [50]

Formula (7) represents the performance factor, as it was mentioned before; it is needed a sample of 250 g of parchment coffee, that after a threshing and sieving process, will become in "excelso" coffee, this element is the one used in the denominator of the formula. Then, Formula (8) represents the final "Excelso" coffee price, which is the multiplication of Formula (5) with the standard weight of parchment coffee for obtaining 70 kg of "excelso" coffee (94 kg) divided by the performance factor obtained in Formula (7). Here is shown that if the performance factor is lower than 94, the payment for "Excelso" coffee will be higher as it was established above. Finally, the Formula (9) named Total price parchment coffee includes everything that was done before and is the sum of Formula (8) and Formula (6) and is the price that the coffee grower gets for their coffee.

Knowing how the internal coffee price is calculated, it is important to see how it has been changing through the time. Fig. 44 shows the internal coffee price in Colombian pesos COP for the last ten years.

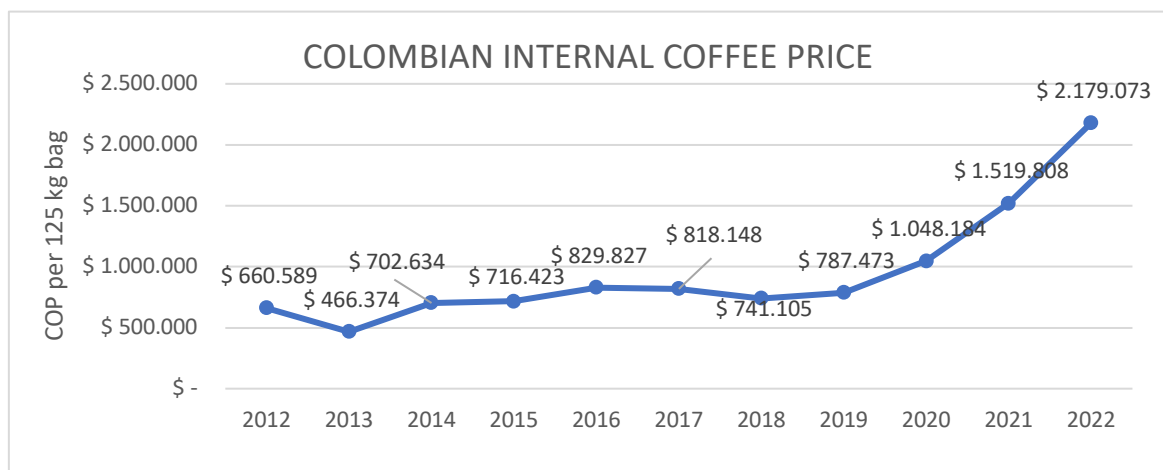


Fig. 44: Historical internal coffee Price in Colombia. Source: FNC [64]

In Fig. 44 it is evidenced that since 2019, the internal coffee price has presented a growing tendency, following the same tendency as the price of the Colombian coffee in the international market shown in Fig. 43. But, together with this, there are 2 other important aspects that are the causes of this tendency. The first one is the exchange rate, during the last years the Colombian peso has been devalued against the Dollar, and the tendency seems to continue like that. For the beginning of 2019, 1 USD dollar was equivalent to 3.191 COP, for November of 2022, 1 USD dollar is equivalent to 4.973,35 COP, presenting a devaluation of more than 55% of the currency. And as it was explained in Formula (5), the exchange rate is one of the main factors influencing the internal coffee price. The second one is the premium that the Colombian coffee has, historically this premium was about 4 or 5 dollar cents, with a maximum of 10 dollar cents; however, for the 2022, the average is in 70 dollar cents, showing that the world and the industry are willing to pay more for the Colombian product [73].

Last but not less important, the FNC through their network of coffee cooperatives, offer four different alternatives of commercialization for managing the payment of the coffee. These alternatives are: sale of coffee with future delivery, in deposit, with a floor price or immediately. The first one is about the sale of future contracts, the grower can anticipate the sale up to 24 months in advance of the delivery, there is a compromise between the buyer and seller in which they establish the price, quality, quantity, and timing of the coffee delivery. The sale in deposit method is a way to decrease the risk of quality deterioration due to the storing of the coffee in the grower's farm; with this method, the coffee grower delivers all the coffee to the cooperative and receives as a payment just a percentage of the coffee price of the day (50% for example), then the grower fix with the cooperative a period of time in which he will decide when to receive the rest of the payment; the grower in that period of time must check every day the coffee price, hoping that it will be higher than the day he delivered the coffee, if this happens, he receives the rest of the money at the new price. The third alternative is the sale with floor price, in which the coffee grower can fix a minimum price for which he will sell the coffee at a late delivery time, covering itself for the fluctuations of the coffee price; however, the grower must pay a certain amount to obtain the right of use of this alternative. If in the future the coffee price increases, the grower can contact the cooperative to use this new price as the price of his coffee. The last alternative is immediately sale, is the most common way used by the coffee growers to sell their coffee. They just go to the cooperative and sell them with the price of the moment [75].

## **6. MOST IMPORTANT COMPANIES IN THE COLOMBIAN NATIONAL MARKET**

After analyzing the most important companies of the international market, it is important also to analyze the most relevant companies in the Colombian territory, which involves their characteristics and financial performance.

As was done in chapter 3 with the international companies, again the database provided by Bureau Van Dijk called ORBIS was used. The idea was first to analyze the performance of the Colombian market as a whole, in order to compare then each company with the market average. The same filters applied in the international companies were applied here. Those were the selection of only active companies; the filter of the industry classification with the NACE Rev.2 code 1083, which corresponds to the sector “tea and coffee processing”, as a primary code; and the using of the word “coffee” as primary activity of the company. The last filter applied was the location of the companies, specifying Colombian Companies. The filter of the size of the company was not applied, because Colombian coffee industries are small compared with the largest firms of the world.

A total of 24 companies were found, for which the analysis was done. The market average performance was also calculated, together with the standard deviation and the median. The parameters used were the same profitability ratios analyzed with the international companies, as well as the time frame (from 2012 to 2021). The parameters are the following: operating revenue, net income, total assets, enterprise value, profit margin, ROA, ROCE, ROE. formulas (1), (2), (3), and (4) of chapter 3 explain the calculation of the ratios.

Table XIV shows the profitable performance of the Colombian coffee market in the last ten years.

TABLE XIV:

*Historical profitable performance of the Colombian coffee market*

		2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
<b>Operating revenue (Turnover) (th USD)</b>	Standard deviation	101.319	84.201	149.133	138.541	162.814	80.041	72.482	85.533	96.854	109.503
	Median	24.586	23.481	28.724	26.469	31.294	25.957	24.703	26.331	29.655	38.175
	Average	75.586	69.455	94.288	84.859	97.679	67.593	66.057	75.792	80.255	90.279
<b>Net income (th USD)</b>	Standard deviation	6.148	7.694	6.023	9.934	3.133	1.850	1.535	3.616	3.240	4.000
	Median	108	110	32	325	250	153	229	212	291	211
	Average	758	2.623	2.230	3.487	1.378	808	892	1.914	987	1.678
<b>Profit margin (%)</b>	Standard deviation	14,83	8,16	6,50	6,03	8,96	5,83	5,19	7,26	21,20	6,45
	Median	1,41	1,72	2,02	1,73	1,22	0,64	1,32	1,76	1,37	1,54
	Average	-0,22	3,54	4,29	4,39	5,89	3,55	3,76	3,36	6,91	4,05
<b>ROE using Net income (%)</b>	Standard deviation	10,66	12,19	6,74	13,39	8,74	14,20	14,82	9,47	23,27	65,95
	Median	4,28	5,68	2,51	7,84	5,72	5,48	4,97	6,27	3,88	4,13
	Average	4,49	4,15	4,49	11,61	7,08	7,05	2,66	7,32	2,36	15,79
<b>ROCE using Net income (%)</b>	Standard deviation	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	Median	n.a.	n.a.	56,69	17,05	10,41	8,39	11,61	9,42	-13,88	29,07
	Average	n.a.	n.a.	56,69	17,05	10,41	8,39	11,61	9,42	-13,88	29,07
<b>ROA using Net income (%)</b>	Standard deviation	3,64	8,40	6,26	3,98	4,02	7,15	4,05	5,05	12,49	5,45
	Median	1,51	1,39	0,63	2,39	1,78	1,22	1,99	2,09	1,93	2,32
	Average	1,81	1,88	2,67	3,26	2,24	1,70	3,35	3,44	4,97	3,63
<b>Total assets (th USD)</b>	Standard deviation	146.319	140.323	181.914	150.641	182.840	106.631	99.152	103.475	104.875	102.377
	Median	26.309	16.184	16.110	8.087	14.997	8.858	15.931	18.731	17.363	16.058
	Average	78.296	70.541	84.163	66.855	82.356	56.505	55.074	61.648	62.942	66.900

Source: [36]

Looking at the table, and analyzing operating revenue performance, on average there is a stable tendency from 2012 to 2017, year in which the value decreased until an average of 67 million USD, maintaining this lower value in 2018. The reason, as it was found, is the worst crisis that the Colombian coffee industries had in that decade, due to the drop in the international coffee price that affected the Colombian families. Then, from 2019 to 2021 the revenues increased, showing that in this case the COVID19 pandemic did not affected so hard the industry. The main reason is that from 2019 until the actual year, the international Colombian coffee price has increased reaching record values (as it can be seen in Fig. 43 and Fig.44).



In terms of net income, the same situation of the revenues in the year 2017 and 2018 happened again, the industry registered its biggest value of 3,49 million USD in 2015 and then it decreased. It is important to mention that pandemic consequences are evidenced here, profits decreased almost a million dollars from 2019 to 2020 passing from 1,91 million USD profit in 2019 to 987.000 USD profit in 2020. This means that despite having better revenues, these revenues were not transformed into profit due to all the expenses that the pandemic left to the companies in that year.

Profit margin shows the same behavior, and the important situation to mention is in 2012 when the market presented an average negative profit margin of -0,22, meaning that in that year the production cost was higher in average than the revenues.

ROE seems to follow same pattern of revenues and profit, the industry on average had the greatest ROE in 2015 (when they got the greatest profit) and the lowest one in 2020 (when the companies had the lowest net income in average). ROCE behavior is different, the highest value was in 2014 with an average of 56,69%, and then it started decreasing until having a negative ROCE in 2021 (-13,88%). Meaning that because of the pandemic, the companies needed more capital (shareholders investors, long term debt) and that money was not transformed into profits.

Final, ROA and total assets were analyzed. In this case, the highest value of ROA was in 2020 with 4,97% on average, which means that despite of having a lower net income compared with other years, the company's assets in that moment were efficient generating profit (having clear that the value of the assets also was lower compared with other years of the decade). It is important to mention that the ratio does not consider the form of financing of those assets.

Now, using the revenues generated by the companies, the top 4 Colombian companies of the coffee market are going to be analyzed and compared with the average. Taking 2021 as the reference year, Table XV shows the companies studied.

TABLE XV:

*Top 4 coffee companies 2021 in terms of Revenues, in Colombia*

Company	Operating Revenue (th USD)
RACAFE & CIA S C A	347.937
INDUSTRIA COLOMBIANA DE CAFE S A S	307.095
OLAM AGRO COLOMBIA S A S	277.435
COMPAÑIA CAFETERA LA MESETA S.A	205.996

Source: [36]

## 6.1 RACAFE & CIA S C A

Racafé is one of the main green coffee traders in Colombian. A company that dedicated to the purchasing of the parchment coffee, the threshing, commercialization of the green coffee and the products development. It was created by the Espinoza brothers, mainly by Rafael

Espinoza. Their adventure in the business started in 1929 when the brothers developed their first business initiative, then it was until 1940 when they had their first encounter with the world of the coffee, in the coffee farms of Colombia talking with the coffee growers. They got passionate for this world and in 1953 they founded “Racafé”, as a green coffee exporting company. During all the years later, the company started growing and becoming one of the main exporters of green coffee. In 2001, they received the BASC certification, meaning that the company has all the standards for secure commerce and international trade. In 2008 the company won the “Coffee of the year” award by the specialty coffee association, that recognizes excellence in product innovation, design, and sustainability across the industry. In 2014 the company started their sustainability path, and their first sustainable report was launched. In 2017, Racafé opened the product development and creation center, a space of research, creation and in which the experts test the different coffee samples they had, making sure they receive the best Arabica coffee of the country [77].

In 2018, the company opened the first milling plant operated with solar energy in the country, located in the Huila department of Colombia. Two years later, in 2020, the company implemented the “CRECER” standard that seeks to improve the quality of life of the coffee growers in social, economic, and environmental ways. This is the path of sustainable development adopted by the company. Today, the company has a total of 7 production plants in Colombia and they export to more than 37 countries around the world [77].

As was done in chapter 3, the financial performance of the company will be analyzed. Table XVI shows the revenues, gross profit and net profit from the last 10 years in thousands of USD. Their graphical tendency can be appreciated in Fig. 45

TABLE XVI:

*Historical Racafé's revenues, gross profit and Net income*

	Revenues	Gross profit	Net income
2012	186.905	9.408	245
2013	211.953	8.243	393
2014	254.799	8.296	2.462
2015	238.583	11.484	918
2016	278.399	16.824	1.031
2017	287.540	18.223	967
2018	245.815	18.100	1.955
2019	267.977	19.000	1.497
2020	304.129	17.834	2.400
2021	347.937	15.333	2.342

Source: [36]

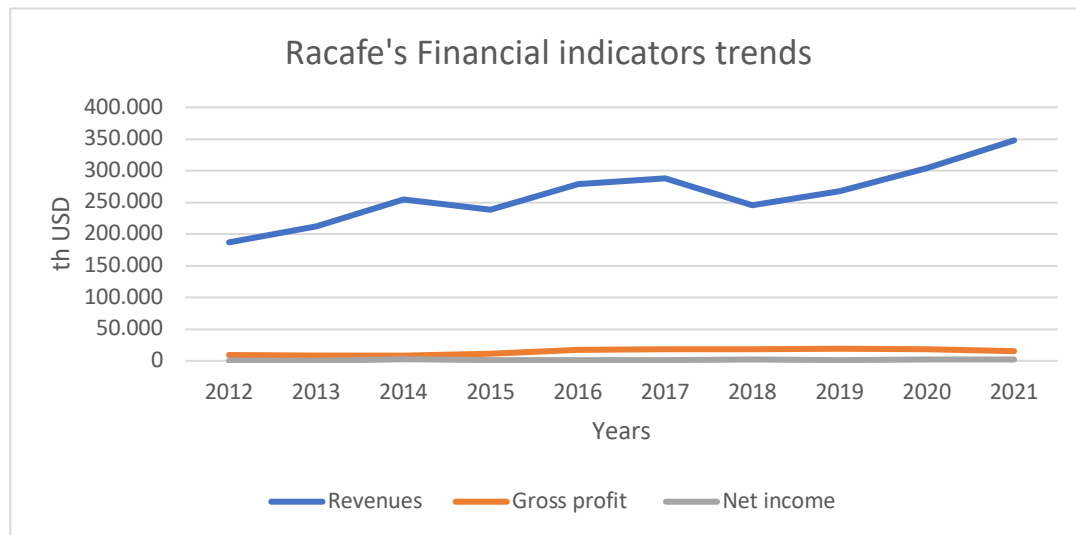


Fig. 45: Historical tendency of revenues, gross profit, and net profit in Rescafé

Looking at the Table and the figure, some analysis can be done. An important aspect to consider is that the annual reports of the company are not available, therefore the exact reason of the performance is not known. However, understanding the situation in the Colombian market it is possible to have some answers. In 2015 the company had their first decrease in revenues, obtaining 238 million USD, a year in which Colombia had an epidemic of the rust. Then, from 2016 until 2019 the tendency was always increasing, in 2018 revenues again decreased from 287,6 million USD in 2017 to 245,8 million in 2018, the reason was the drop in the international coffee prices. From 2019 to 2021, revenues of the company always increased, obtaining 348 million USD in 2021, as it was explained in some paragraphs above, the main reason is the record in coffee prices.

An important aspect to understand is the big change from revenues to gross profit, that will be seen in the gross margin, however in the graph and the Table also can be appreciated. The company went from revenues values between 180 - 340 million USD to gross profit from 9,4 to 15 million USD, meaning that the cost of goods sold of the company is high. Net income can't be appreciated in the graph, but with the values of the Table it is seen that the company in the last 10 years increased their income in more than 800%. Starting from 245.000 USD in 2012 to close the 2021 with a net income 2,34 million USD, becoming one of the most important coffee exporters in Colombia, with unique certifications.

Financial ratios presented in Table XVII can give a better overview of the performance of Racafé and the situations afforded by them, ROCE was not available in the database, so it will not be analyzed.

TABLE XVII:

*Racafé's historical financial ratios*

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
└ ROE using Net income (%)	0,61	1,04	7,35	2,95	3,05	2,73	6,20	4,467	6,931	7,221
└ ROA using Net income (%)	0,25	0,37	1,91	0,89	0,66	0,73	1,95	1,274	1,933	1,43
└ Profit margin (%)	-0,04	-0,39	0,27	1,01	0,60	0,64	1,24	0,827	1,202	1,033
└ Gross margin (%)	5,03	3,89	3,26	4,81	6,04	6,34	7,36	7,09	5,864	4,407

Source: [36]

Looking at Table XVII, we could see that in 2014, the company had their first peak in the ROE and ROA, mainly caused by the peak in income shown in Fig. 45 and Table XVI. The ROE changed by 603%, this change also is the consequence of a decrease in the shareholders' funds, from 38 million USD to 33 million USD. This, together with the increase in income, provoked a more efficient return in the money that shareholders put inside the company. In terms of ROA, the change was of 416%, company total assets also increased from 106 million USD to 129 million USD. This is a very good signal of the performance of the company, because it means that despite increasing their total assets, the return that these assets generated in terms of profit were greater, meaning an efficient use of them. Then, in 2015 the value of these two indicators decreased, mainly due to the decrease in profits, having then a stable and increasing tendency until 2019 when they decreased. Again, profits were lower than in 2018 despite shareholders' funds and total assets increased, meaning that the company was less efficient in transforming the funds of the shareholders and the assets they own in profits.

Analyzing the margins, the gross profit margin had its lowest value in 2014, same year of the peak in revenues. This is not a very good signal because despite increasing the revenues from, the last year, the company was not able to transform this revenues into gross profit, meaning that the cost of goods sold also were very high too (from 204 million USD in 2013 to 247 million USD in 2014). In the next year the company corrected this problem because the gross margin always increased, until 2020 and 2021 in which the margin again decreased but main reason could be attributable to the pandemic. As it is a coffee export company, working in pandemic include that the coffee growers and people working in plant needed special clothing and personal protection elements. Also, the disinfection process of the coffee may have increased the costs, as well as the quantity delivered by batch. The profit margin presented negative values, because as it was explained in chapter 3, Orbis calculates profit margin with the profit value before tax. That is why in 2012 and 2013 the company had a negative value; however their net profit was not negative because in the income statement the company registered revenues in the section of extraordinary and other revenues. Then, in 2014 the margin increased and until 2021, they had a stable tendency.

## 6.2 INDUSTRIA COLOMBIANA DE CAFÉ SAS

Industria Colombiana de Café SAS, well known also as Colcafé, is a Colombian company, part of the coffee business of the NUTRESA group, the most important food-processing conglomerate in Colombia. The principal activities of the group are producing, distributing and selling cold cuts, biscuits, chocolate, coffee, ice cream and pasta; with more than 70 brands and with presence in 65 different countries. The history of the company and of COLCAFÉ starts in 1919, when in Medellín, the cafeteria called “La Bastilla” was created. It was a brand that at the beginning was independent and with the passage of the time became the leader in roasted and ground coffee in Antioquia (Region to which Medellín belongs). The Nutresa group was created in 1920, with the initial name of “Compañía Nacional de Chocolates Cruz Roja” and it was until 1933 when the company launched their first coffee brand, named “Café Sello Rojo” as an income diversification strategy. With this brand, the company started selling roasted and ground coffee. In 1958, the COLCAFÉ brand was launched as a product for the marketing and selling of soluble coffee. Two years later, in 1960 the Nutresa group created the company “Industria Colombiana de Café” merging different coffee brands (Sello rojo and COLCAFÉ) and chocolate companies. In 1964, the main coffee plant of “Café Sello Rojo” was opened in Bogotá [56], [78].

In 1968 the company acquired the brand “Café La Bastilla”, that was from Medellín, created in 1919. In 1984 the company launched the brand “Bastiyá”, famous Colombian brand for instant coffee. In 1992 the company started exporting ground coffee with their “Sello Rojo” brand. In 2001 the company opened their R&D section and the preparation coffee center. Eight years later the company launched their first brand of premium coffee called “Café Matiz” with different varieties of coffee, aroma and flavor properties. In 2012 the company invested in DAN KAFFE MALASYA, becoming the major shareholder and entering to the Asiatic market with their brand. Three years later the company launched the Nutresa’s express capsules, to enter to the coffee capsules market. In 2019 the company acquired the American coffee company “Cameron’s Coffee”, positioning all their brands in the North American market and expanding their business [56], [78]. One important aspect to mention on Colcafé strategy, is that the roasted coffee they used to sell in Colombia and is used to export in some markets is not 100% Colombian coffee, or do not have the best quality. The 90% of the produced coffee in Colombia is exported in green coffee form to the bigger roasters, leaving just the 10% to the different Colombian companies whose demand levels are higher, and need to cover it importing coffee from other countries such as Ecuador, Peru, or Costa Rica.

Today, the company has six production plants, were four of these six are in Colombia, one is in the USA and the other one is in Malaysia. Their sales are in more than 40 countries around the world, focused on the exportation and direct sales to the retail market of roasted, ground and lyophilized coffee. Table XVIII shows, in thousands of dollars, the revenues, gross profit and net income of Colcafé in the last 10 years. Fig.46 give a vision of the tendency of these values.

TABLE XVIII:

*Historical revenues, gross profit and Net income of COLCAFE*

	Revenues	Gross profit	Net income
2012	373.130	74.397	15.968
2013	315.903	100.027	32.313
2014	256.970	84.079	25.878
2015	216.116	70.450	16.853
2016	237.327	74.879	13.300
2017	261.076	66.295	7.196
2018	233.639	51.759	4.627
2019	266.940	62.007	7.829
2020	294.456	63.973	8.679
2021	307.095	58.465	14.740

Source: [36]

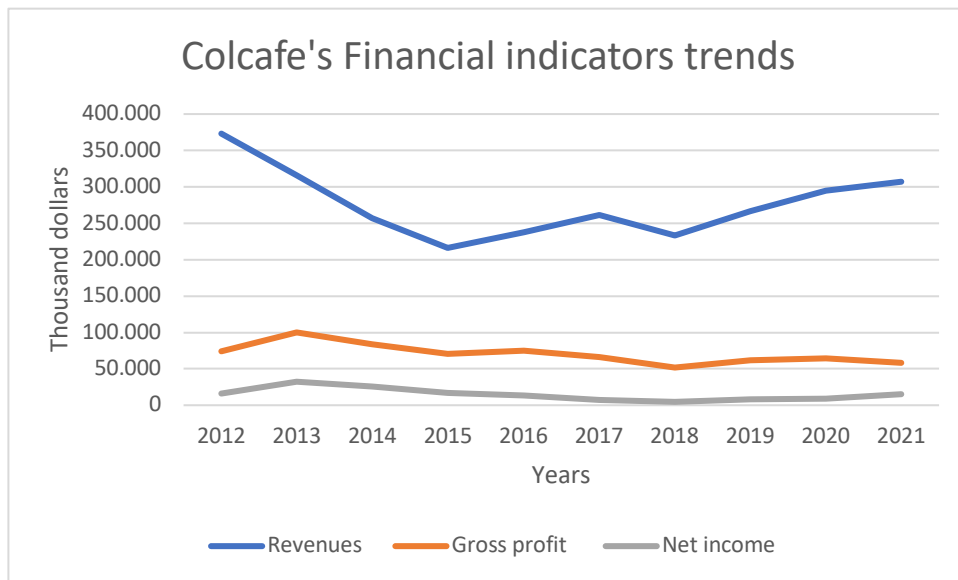


Fig. 46: Historical tendency of revenues, gross profit, and net profit in Colcafé

Looking to the table and the figure, it is seen that from the 2012 to 2015 there was a decreasing trend in terms of revenues, caused by some aspects of the Colombian coffee market. First, the demand in Colombia for coffee decreased because these were the years in which the government decided to stop the subsidy for consuming coffee. Second, during these years the Colombian international coffee price decreased as it can be appreciated in Fig. 43. Also, it was the period in which the production of coffee in Colombia was the lowest one since 1977 with level of 7 – 8 millions of coffee bags produced. Mainly caused by external factors such as rainfall levels 40% higher than the historical average, the increase in the rust levels due to the epidemic of rust in Center - America (biggest in their history) and

the lower application of fertilizers as a result of the increase in oil, phosphorus and potassium prices during 2008 [79]. Another important cause necessary to analyze are the Colombian coffee imports, between the years 2013 and 2015 the levels decreased as it can be seen in Fig. 38. First due to the lower supply of coffee from the exporter countries from which Colombia buys the coffee, and second due to a decrease in the demand. 2018 was the other year in which the revenues of the company decreased, the country had some difficulties with the production level, the areas where the grain was produced went through one of the harshest winters in more than 25 years. On the other, consumption decreased because of the economic slowdown and the coffee price decreased. Also were years in which the competitors had a very good performance with the launch of new products. However, from 2019 to 2021 the results changed, and the company presented a growing tendency.

Analyzing the behavior of the gross profit, it is seen that it was in line with the revenue's behavior, and with the gross profit margin the performance will be clearer. Important year to mention was 2013, when the company had a decrease in revenues but an increase in gross profit (highest value of the last 10 years), meaning that the cost of goods sold of the company were lower and that this relation between sales and costs was the most efficient for the last decade.

Finally, the net income trend. In 2013 the company had their highest net income of 32,3 millions USD, thanks to the lower cost of the goods sold in that year. Net income started decreasing until 2018 when the company just got 4 million USD, year in which the company had a big financial expense (12 million USD) due to the opening of the new operating plant, the promotion of the new coffee capsules products and the launch of the new products (coffee infusions). From that year, net income started increasing, reaching in 2021 a value of 14 million USD, highest value since 2015, consequence of the positioning of the company in the American and Asiatic market.

Compared with the market average, revenues from COLCAFÉ were always above the average. That is why it is the second company in 2021 in terms of revenues and is the leader in the retail sector selling coffee (excluding exports). Analyzing the net income, also the company is above the average. An important aspect is that comparing the net income with Racafé performance, give us that Colcafé also is always above, so the company of the Nutresa Group has more profits and is able to translate in a more efficient way their revenues (lower than Racafé) to net profit.

To understand better the performance and compare Colcafé conduct with the average of the market and with Racafé, in the Table XIX the financial ratios are presented.

TABLE XIX:

*Colcafé's historical financial ratios*

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
└ ROE using Net income (%)	5,48	11,26	10,60	8,24	6,44	3,80	2,65	4,40	4,62	8,33
└ ROA using Net income (%)	4,08	7,07	6,31	3,85	2,96	1,60	1,14	1,92	2,09	3,69
└ Profit margin (%)	7,97	16,11	16,62	9,45	5,72	0,53	0,01	2,29	4,56	4,05
└ Gross margin (%)	19,94	31,66	32,72	32,60	31,55	25,39	22,15	23,23	21,73	19,04

Source: [36]

With the table XIX, it is noticed that during the 2013 until 2016, the company presented a gross margin of around 31%, and were the years with the best performance in this ratio. This means that the objective of the company of reducing the cost of goods sold compared with 2012 was efficient. Then, from 2017 to 2021 the value decreased, having in the last year the same performance of the 2012 (19%). During this period revenues increased, but the cost of goods sold also increased, mainly due to the introduction of new products such as the coffee capsules and the infusions which have a different production process. Compared with Racafé's results, it gives us as a conclusion that Colcafé has a better ability to have lower cost of goods sold, Racafé's average was around 5%, meaning that most of their revenues is lost in the cost of generating them.

Profit margin behavior was not stable, from 2013 and 2014 the company obtained their biggest results, with more than 16% in margin, important situation to highlight because the revenues during this period decreased compared to 2012. First reason is due to the cost of goods sold, but also is because in 2012 the company invested in Dan Kaffee Malaysia, this decreased the net income. In 2015 and 2016 the company's ratio decreased, mainly caused by the construction of the new production plant and the launch of the coffee capsules. It was in 2017 and 2018 when the ratio was almost zero, despite revenues were not low, financial expenses were high (20 million in 2017 and 12 million in 2018). These was the years before the acquisition of Cameron' coffee. Analyzing the results with the average in the market, until 2015 Colcafé had better results, however, then the results were always below, meaning that the market was more able to transform revenues in net income. Comparing with Racafé, Colcafé's performance always is better. Once again this is a signal that despite Racafé is the leader in revenues, is not able to obtain profit from these revenues, just 1% in average are transformed in net profit, while for Colcafé is more than 6% the conversion.

ROA and ROE had the same tendency (also is closely similar to the one of profit margin), their higher values were in 2013 and 2014 when profit also was higher. For ROE, in this couple of years the shareholders' funds decreased, from 291 USD million in 2012 to 244 million USD in 2014. Despite revenues decreased, the return on shareholders' funds also



increased, the money was used efficiently. As formula (3) establishes, it is due to the increase of net profit margin that this value increases, but also because financial leverage of the company increased. In this case the liabilities were higher in 2013 and 2014 than in 2012 (170 and 166 million USD vs 101 million USD IN 2012). On the other hand, the total assets of the company also increased, so having a higher ROA in these periods is a very good signal because despite of having more assets, the profit also increased, the usage was efficient. Then, from 2015 until 2018 the values had a decreasing tendency, mainly explained by the decrease in the net profit margin. In 2021 the company ended with a ROA of 3,69%, with a total assets of 400 million USD (increases compared with 2012 that was 391 million). Further, ROE was of 8,33%, third highest value of the decade, influenced mainly by the increase in financial leverage of the company. In 2012 the company had 291 million USD of shareholders' funds and 100,3 million USD value in liabilities; while in 2021 the shareholders' funds were of 177 million USD while the liabilities were of 223 million USD. The company has released more debt in the last years, demonstrating that they are confident in covering it in the long term.

Compared with the market average, in some years the company was above the average and in others it was below. In 2015, 2016, 2017, 2019 and 2021 the ROE of the market was higher than the one of Colcafé, and in 2017, 2018, 2019 and 2020 the ROA of the company was lower than the average of the industry.

### **6.3 OLAM AGRO COLOMBIA SAS**

Olam Agro Colombia SAS is a Colombian subsidiary company focused on the exportation of coffee. The company is part of the Olam Group International, the multinational food and agri-business company that operates in more than 60 countries. It supplies food and industrial raw material to more than 29.000 customers around the world [80] .

A brief story of Olam Group International establishes that the company was created in 1989 by Indian conglomerate Kewalram Chanrai Group. The objective was the exportation of raw cashew nuts from Nigeria to India. The business started to expand, and then they exported also cotton, cocoa and sheanuts. In 1995, the company was incorporated in Singapore, establishing their headquarters there until today. With the pass of the time, the company grew becoming the world's largest suppliers of cocoa beans products, coffee, cotton and rice. The Group has 94 companies and subsidiaries around the world, having its trading business in more than 65 countries with products including grains, sugar and palm oil as well as materials for industry such as rubber, fertilizer and wood product [80] [81].

In Colombia, the company opened it subsidiary Olam Agro Colombia SAS in 2007, entering to the Colombian market as a result of the performance that the country has in coffee production and exports. Their focus was the coffee supply and export business, and they started with the purchase of a production plant in the Quindio region. Today, the company has three production plants and seven warehouses around the country and entered also in the teak wood export business. With the passage of time it has become one of the greatest players in the market, with operations centered in Cartagena. The company works with more than 1.000 farmers in the country, focused on life improvement of the coffee growers [82], [83].

The performance in terms of revenues, gross profit and net income are presented in Table XX, which helps us with an overview of how the company has performed in the last ten years. Fig. 47 offers the tendency of these values.

TABLE XX:

*Historical revenues, gross profit, and Net income of Olam Agro Colombia SAS*

	Revenues	Gross profit	Net income
2012	150.662	9.519	-1
2013	106.193	14.424	-1.205
2014	126.879	15.620	-3.284
2015	124.750	28.495	-2.865
2016	118.966	13.300	341
2017	135.164	13.709	570
2018	131.527	14.663	-483
2019	182.804	20.282	107
2020	229.007	18.284	-586
2021	277.435	19.545	-2.706

Source: [36]

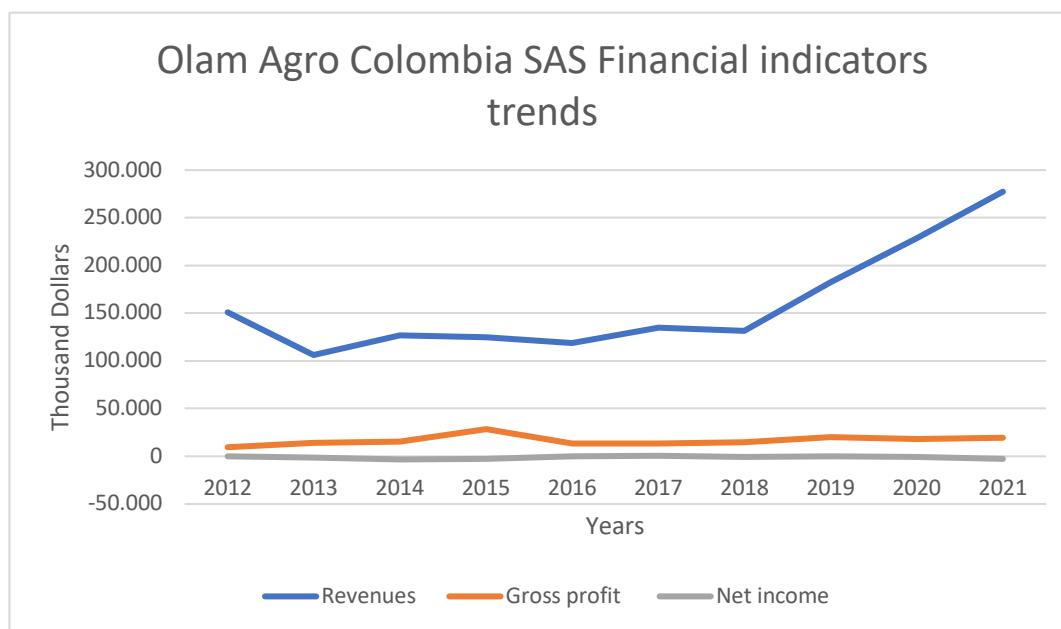


Fig. 47: Historical tendency of revenues, gross profit, and net profit in Olam Agro Colombia SAS

Financial reports of the subsidiary in Colombia are not available for analysis, and the reports of the Olam Group International company (the major company) do not specify the performance of the Colombian subsidiary. That is why the analysis is just done with the

numbers and the tendency shown in the Table and the external factors in Colombia. Revenues decreased from 2012 to 2013, the same situation as in Industria Colombiana del Café SAS. Which can be explained by the same factors mentioned above (demand reduction and decrease in coffee production). Then, from 2013 until 2021 there was a growing tendency, having a higher increasing tendency from 2018, repeating the same pattern that had Racafé and Industrial Colombiana del Café SAS. As it was analyzed with these two other companies, the main reason is the record in the international coffee price for the Colombian coffee, and the increase in the coffee production. Gross profit performance is worse than Industria Colombiana del Café SAS and at the level of Racafé, meaning that the cost of goods sold for the company are high, because there is another company (Colcafé) which has better levels of low costs. Also, it is important to notice that both Racafé and Olam Agro Colombia are 100% exporting companies, while Colcafé business is not only focused on exports, but also in the retail market (main business). So, it could be a signal that for companies focused on the exports, the cost of the goods sold are higher (exportation logistics costs such the payment to the export center, the payment of customs, export taxes, certifications, shipping company costs, cost of transportation to the port, equipment).

In terms of net income, the company has a very poor performance. In three of the ten years studied the company had positive income, the rest of the year the company generated losses. In 2014, the company had their highest loss of -3,2 million USD, despite been a year with higher revenues compared with 2013. The main reason of the loss is that the company accounted and extraordinary expense (natural calamities, worker strike, penalties legal case, losses due to discontinuation of the sale of a product...) of 12,33 million USD that affected the profit of 4,35 million USD that they had before this expense. The next year the company again presented losses, but in this case the main reason was the item classified as other operating expense (in 2014 was of 11,26 million and in 2015 was of 32,43 million). This means that for 2015 the overhead costs of the company such as rent, utilities, payroll, maintenance etc., were not properly controlled as in other years. The company then presented two years in a row with positive net income (2016 and 2017) in which the other operating expenses were controlled (average of 12,5 million in those two years) and no extraordinary expenses were reported. In 2018 the company again presented losses, mainly due to again the increase in overhead costs (15 million USD). 2021 was the year when the company again presented big losses such as in 2013 and 2014 (of -2,7 million USD). This was the year of the pandemic (losses were also in 2020) but it is curious because 2021 was the year in which the company presented the highest revenues, and these revenues were translated in one of the higher losses of the decade. The reason is that in that year the company had an expense of 21,39 million in overhead costs (Covid 19 clothes protection, and product health controls), and 1,41 millions of financial expenses (borrowing money costs).

Comparing the performance with the average of the Colombian market, revenues of the company are always above. However, in terms of net profit, the company is always below the market, meaning that is not a common tendency that companies had losses during the decade.

Ratios performance of Olam Colombia are presented in Table XXI.

TABLE XXI:

*Olam Agro Colombia historical financial ratios*

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
└ ROE using Net income (%)	-0,03	-38,91	n.s.	n.s.	24,81	29,10	-37,34	7,67	-78,51	n.s.
└ ROA using Net income (%)	0,00	-3,20	-8,19	-7,20	0,74	1,13	-0,81	0,17	-0,82	-2,57
└ Profit margin (%)	-1,02	2,02	3,44	-3,15	1,01	0,39	-0,25	0,35	-0,25	-1,17
└ Gross margin (%)	6,32	13,58	12,31	22,84	11,18	10,14	11,15	11,10	7,98	7,05

Source: [36]

Table XXI shows the performance of the profitable ratios. The ROE presents negative values in the years in which the net income of the company was negative. There are some years such as 2014, 2015 and 2021 in which this ratio was not calculated, the reason is that in those years, the company had a negative value of shareholders' funds. This is a red flag signal to stockholders and possible investors. It means that company's liabilities exceed the total assts, so the company has more debt than the one they can pay selling their assets. The main reasons of a negative shareholders' fund value are that the company accumulated large periods of losses or had large dividend payments or borrow a big quantity of money. The case of Olam is the accumulated loses and the borrow of money. Looking at the financial statements, it is seen that the company in most of the years didn't have long term liabilities. Most of their liabilities are current debt, that belongs to loans or other current liabilities (liabilities that must be grouped to have a significant value in the income statement), proving the financial costs reported in the income statements. For example, in 2014 the company moved from a debt of 35 million USD to 40 million USD, and in 2021, the company had a debt of 107 million USD. Financial leverage of the company is extreme, and their liquidity situation is compromised.

ROA experimented a situation in line with profits, when profits were negative, the ROA also was negative. An important aspect is that company's assets from the beginning of the study (2012) until the end (2021) increased, they moved from 51 million USD to 105 million USD. However, this did not help in order to obtain more profits, on the contrary, the company generated more losses. Knowing the ROE performance, it can be concluded that most of the assets were financed with debt.

Profit margin was negative when the company had negative net income. However, gross profit margin helps to understand that the reason of the losses are the financial expenses and the overhead costs. The company always had a positive gross profit margin, so the cost of goods sold were not higher than the revenues.

Olam performance compared with the market is worse because the losses affected all the indicators.

## 6.4 COMPAÑIA CAFETERA LA MESETA S.A

It is a Colombian familiar company created in 1983. Its founder, Pedro Muñoz, was a farmer from Chinchina, a small village from the region of Cundinamarca, Colombia. He started the business with a coffee silo to dry the coffee, travelling from village to village, buying the coffee from the peasants and then selling it as dried coffee in his town. Time passed, and he bought some land near his town in order to start cultivating coffee. His family entered to the business and was one of his sons that created the company in the 80s. In 1988 they started buying the coffee from other coffee producers, expanding their business in the region and in other Colombian regions. In 2003 the company entered to the exportation business, knowing that they had to compete with very big firms in Colombia such as the National Federation of Coffee Growers, Racafé, Carcafé and more. However, their strategy and quality of coffee was very efficient, causing to the company to break through in the market and position itself as one of the leaders [84], [85].

Today, the company has more than 792 hectares for coffee production and buys coffee beans in different regions such as Antioquia, Nariño, Caldas, Tolima and Huila. Their major customer in terms of exports is the USA, Germany, and Japan. Since 2019, the company has been the 2<sup>nd</sup> largest coffee exporter in Colombia. They are just behind the National Federation of Coffee Growers and are covering near the 10% of the total coffee exports in the country. The company produces in average 90.000 bags of 70kg coffee bags and sell them to more than 46 countries.

With Table XXII and Fig. 48, the revenues, gross profit, and net income of the company can be appreciated from 2012 until 2021.

TABLE XXII:

*Historical revenues, gross profit, and Net income of La Meseta S.A*

	Revenues	Gross profit	Net income
2012	79.631	4.753	136
2013	77.940	6.089	-22
2014	107.896	8.110	359
2015	112.021	9.197	198
2016	170.890	11.112	451
2017	198.564	14.258	578
2018	208.690	17.869	2.031
2019	232.870	18.825	836
2020	246.317	17.220	906
2021	205.996	6.132	-6.640

Source: [36]

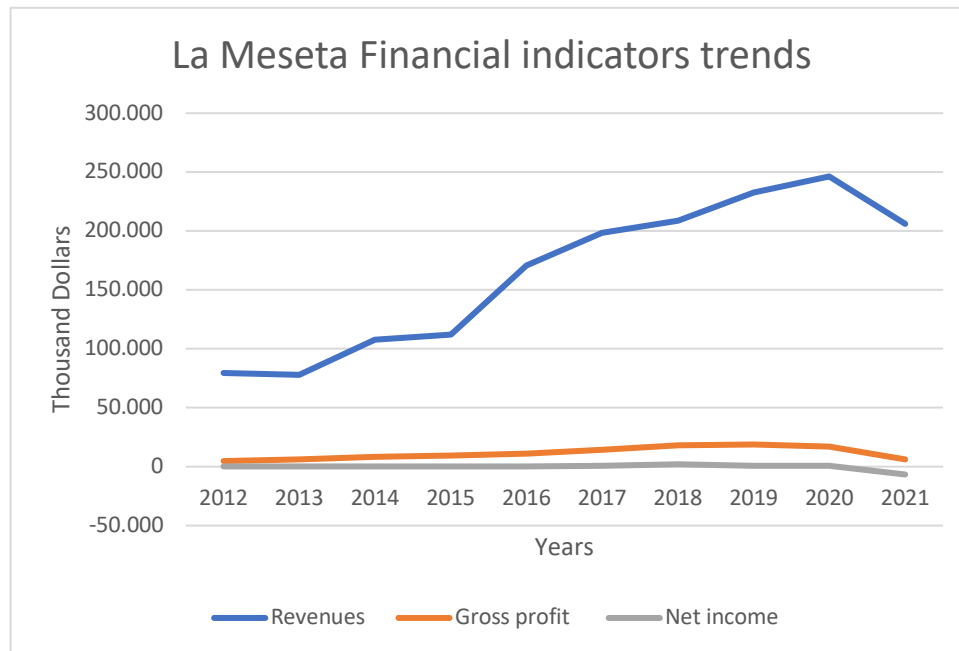


Fig. 48: Historical tendency of revenues, gross profit, and net profit in La Meseta

In the Table XXII and Fig. 48 the performance of the company can be appreciated. As it can be seen, the company presented a very similar behavior, in terms of revenues, of the other two exporting companies already studied. The difference is that in this case, the revenues of the companies have always been growing, showing a better performance. First, they have an increasing trend that was interrupted in 2015 (like Olam Colombia and Racafé), year of the rust epidemic. However, the revenues did not decrease, they continue increasing in that year but in a lower rate. Then, the company had a stable tendency until 2018 when sales again lowered their growing rate (same situation from the other companies already analyzed) due to the drop in the coffee price and some weather conditions. From 2019 to 2020, again a growing performance, ending the 2020 with revenues of 246,3 million USD, the highest in the history of the company. Then in 2021 the revenues decreased a little bit, ending with 206 million USD (reason will be explained together with the analysis of the net income). Company ended 2012 with revenues of 79,6 million, and in 2021 they had an increase of 158%, being the unique company, of those studied so far, with an increase of more than 100% in sales.

Gross profit performance is like the one of the revenues. The important aspect to mention is the big difference between the revenues and the gross profit, that let us understand that the cost of the goods sold for the firm are high. Net income is the other factor necessary to analyze; like Olam Colombia, La Meseta SA also presented some years in which they have losses, in total, 2 of the 10 years studied were with negative values. The 2013 and 2021 were years in which both companies presented losses, and this is a signal that something happened in the market for exporters. Making some research it is found that one of the main causes of the losses for exporters in Colombia is the international coffee price and the non-compliance of the coffee growers. The reason is due to the future contracts. A farmer makes an agreement with the exporter to sell a quantity of coffee at a determined price. However, if the coffee price starts increasing, it is better for the growers to sell the coffee at this new price

that is higher than the one already agreed, so they breach the agreement [86]. In 2013 the main factor is the demand reduction and the high coffee price. Looking in the income statement is proved with a lower quantity of revenues and a higher quantity of other operating expenses. Also, the company presented in that year higher extraordinary expenses that affected the results and led them to the losses. Then, 2021 is again a curious year, because is the one that presented some of the highest revenues but also the highest losses (-6,6 million USD), same situation as Olam Colombia. The reason is the one highlighted some lines before. In 2021 Colombia faced widespread non-compliance from coffee growers to exporters; the reason was the international coffee price, that from 2019 had been growing and reached record values in 2021. Colombian growers preferred to breach the agreements that have a lower price (that usually favored them due to the downward trend of the coffee price), storage their coffee beans and sell them with the new prices that are record. La Meseta S.A was one of the companies affected for this situation. The company had supply agreements with international roasters that were impossible to reach due to the coffee shortage created by the coffee growers. In the income statement it is appreciated in the financial expenses, that for the company were of 8,1 million USD. 2018, on the contrary, was a year in which the company had their highest net income, of 2 million USD. It was very different from the other three companies that in that year presented a decreasing tendency. La Meseta S.A manage in that year the cost of goods sold and the overhead costs.

Table XXIII will allow to understand better the financial ratios of the company.

TABLE XXIII:

*Compañía Cafetera La Meseta SA historical financial ratios*

	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
└ ROE using Net income (%)	4,38	-0,76	11,72	6,58	8,31	7,29	22,01	8,33	6,95	-119,76
└ ROA using Net income (%)	1,01	-0,19	2,69	1,18	2,17	1,79	5,62	1,88	1,66	-13,05
└ Profit margin (%)	1,48	1,61	2,74	0,55	0,56	0,62	1,46	0,65	0,80	-4,84
└ Gross margin (%)	5,97	7,81	7,52	8,21	6,50	7,18	8,56	8,08	6,99	2,98

Source: [36]

Looking at the Table XXIII, there are some important aspects to mention. The first one is the gross profit margin, the values a very similar to the ones of the 100% exporting companies already analyzed (Racafé and Olam). The performance is not higher than 10%, different from Colcafé whose margins are always from 20% and above. Proving one more time that for exporting companies, the gross margin is lower, because the costs of goods sold compared with revenues are higher. The highest ratio was in 2018, when the company had the higher

profits, and the lower one was in 2021. Profit margin performance also is very similar to Racafé and Olam, not higher than 3%. The year with the higher margin was 2014, year in which the company didn't have financial expenses and obtained a higher profit despite having lower revenues than in 2015. Compare with the market average, the company is always above the performance of the other companies.

Analyzing the values of the ROE, it is found that the highest value was when the company obtained the highest net income (in 2018). Shareholders' funds increased, so it is a good signal because the new funds were transformed into profit in a more efficient way. Also, in that year the debt-equity ratio decreased, so leverage of the company was not the reason of the high ROE value. However, from that year until the 2021, the ratio decreased. The reasons were in the income statement and balance sheet, where the net income decreased more than 58% and shareholders' funds increased, causing that bad performance in the ratio. The company has a negative ROE in the years when the net income was negative, but also in those years the funds of the stockholders decreased. 2021 is important to mention because the funds decreased from 13 million USD in 2020 to 5 million USD in 2021; while the liabilities increased, company emitted debt in order to cover the shortage of 2021. Compared with the average of the market, the company usually was above it, except from the years in which the net income was negative. Also, the company was below in 2015, when the industry had an average of 11,71% and the company got 6,58%.

Finally, ROA performance. Values were similar from the other exporting companies, and it was not higher than 3% along the period studied. The highest value was also when the net income was the highest, in 2018. Further, the total assets of the company increased in that year, meaning that were used efficiently, and were covered with funds rather than debt as the ROE explained. Lowest values were when the net income was negative. Compared with the market performance, the results varied through the years. In 2012, 2014, 2017 and 2018 the company had better results than the market, while in the other years the market performed higher.



## **7. SPECIAL CASE: NATIONAL FEDERATION OF COFFEE GROWERS OF COLOMBIA**

Now that the Colombian coffee market was already analyzed, including the most important companies of the segment, it is time to write about the most important player of the coffee sector in the country: The National Federation of Coffee Growers of Colombia (FNC). The entity that was the forerunner of the coffee industry. The one that is in charge of all the coffee peasants, of the methodology of the coffee cultivation, the best practices, the social and economic development of the rural zones of the country, and the management of a parafiscal fund and a public fund created by the government. The one owner and in charge of the company dedicated of the R&D of the coffee sector in the country. Owner of the company dedicated to the storage and exportation of the coffee. Holder not only of a company that is a market player in the country and in the world of the lyophilized coffee sector, but also of the company that is ahead Starbucks in the cafeterias sector in Colombia. For these, and more reasons that are going to be shown in the chapter, it is necessary to write about the FNC, and analyze its composition, its nature, objectives, businesses, and strategy. The company was not analyzed in chapter 6, but the reason is because it was necessary to dedicate a whole chapter to it and analyze if the revenues are all from the FNC or belong to the businesses that the federation has created.

### **7.1 WHAT IS THE FNC? HISTORY, STRUCTURE, OBJECTIVES**

21st of June 1927, Medellin, Colombia. A group of the most important coffee growers were gathered in order to talk about the coffee situation of the country, define the procedures for promote and protect this important sector of the economy, forgotten by the government and that was in a precarious way of life. In the same meeting, a national representative of the government was also present. Coffee was the cause of the development of the economy of the country, in terms of exports, internal trades, and development of the cities, and represented more of the 50% of the total exports, and 5% of the GDP. The decision was the creation of an entity that represents the coffee growers through all the country, and for this, the idea of a federation was decided, in which each region has their own autonomy and representation, but that must follow some common rules and guidelines from the federal administration. The entity would be private, for trade and with a non-profit focus. The objectives would be the coffee defense and warehouses; the financing of coffee, agricultural and pledge; the marketing; the organization of the coffee unions and cooperative societies; coffee statistics; coffee crops, diseases; transportation, immigration and labor [87]. The funds for its correct functioning were decided to be from an amount of the budget of the public entities, federated quotas, and donations of private entities. The 2<sup>nd</sup> day of September in 1927, the government recognized officially the FNC, and created a lien to the export of coffee. One year later, the government and the federation signed a contract by which the government transferred all the income generated by the taxes of the coffee exports and gave the authority to the FNC to manage and use the revenues of them for their own purpose.

With the passing of time, the federation created some regional committees, that oversaw the management of the coffee industry of the region and the representation of the coffee growers. But was at the end of the 30's that one of the most important situations of the Colombian

coffee industry occurred. The world was facing the World War II, and the situation of primary goods such as coffee was critical. The USA, in order to ensure the supply of coffee, and also guarantee the support of the south American and center American countries for the usage of their ports for the war, created the first quotas agreement of coffee, in which the USA was the main customer for the producer countries. The Colombian government, with this situation, saw an opportunity of giving an institutional framework to that agreement, that established minimum and maximum quantities for exports as well as purchase prices. The interventionism of the government gained legitimacy. Therefore, in 1940, the government created the National coffee fund (FoNC), that narrowed the public-private relationships, and strengthen the union between the government and the coffee growers. The idea of the fund was to have the capacity to purchase all the beans from the coffee growers and create an efficient inventory policy to face the excess of supply in the coffee market [87]. The money was collected from a coffee contribution paid for each pound of coffee exported (parafiscal amount). Today, along with the contribution, also the money is collected through commercial management and royalties for use of the brand “Café de Colombia”.

The government authorized and allowed the FNC to administrate the FONC, because they were the legitimate representative of the coffee growers, and due to its structure and effectiveness in the management of the resources. The federation is the unique group in charge of the administration, the collection, and the investment of the money from the fund. Today, the federation is still the representative of the FoNC, that has as main objective maximizing the income of the coffee growers. It is the main source of the purchase guarantee for coffee, scientific research and technological development, technical assistance for the growers in their farms, and the commercialization and marketing efforts to position the Colombian coffee as the best coffee in the world [61]. The idea and the performance of this fund was so beneficial to the coffee peasants, that it continued after the end of the first quota agreement and plays an important role in the coffee economy.

The fund was also the main cause of the creation of a new structure of the FNC and of the appearance of one of the ambiguities that continues in the country until today for a sector of economists, financiers, and historians. The ambiguity is about the type of organization that the federation is, idea that will be discussed further in this section. The reason why the FoNC is the main cause of this uncertainty is because with the guarantee of the purchase of coffee, the fund began to store and export it, also becoming a business group. The FNC, that was and is the administrator of the fund, became the head of that business group [87].

With the committees, and the fund, appeared a third phenomenon that remains until today and is the axis of all the coffee production industry; the coffee cooperatives. At the end of the 50's, the regional committees of the FNC decided that it was necessary a strong association of the coffee growers. The main reason was because in Colombia the majority of them are farmers with a small portion of land (1,36 hectares in average), that with the quantity produced can't cover the big costs of selling the coffee in the national market or exporting it. So, the benefits generated by the coffee that the farmer cultivated, usually didn't arrive to him and remained in another part of the supply chain. Therefore, in 1959 the first coffee growers cooperative was founded in Pereira, sponsored by the FNC, with the mission not only of getting the benefit of the coffee sold to the small producer, but also other kind of benefits. These benefits were the accessibility to credits, bank loans and suppliers, the local

financing of the products, its classification and transport to the warehouses; the elimination of many expensive intermediary expenses and the placement and sale of coffee in the most convenient conditions, with the collaboration of the organizations that the federation has already established. Also, the improvement of the life conditions of the growers are a duty for which the cooperatives were put in charge, these live conditions were and are in terms of infrastructure and education.

Following this idea, more coffee cooperatives were created in the country, coffee growers saw how not only their life conditions improved, but also all the facilities they had to sell their coffee and develop their business. The FNC saw the cooperatives as their agents for the coffee purchase policy, so the federation, through the cooperatives, helped with the idea that the growers should take all their products from their farms to the nearest point where a cooperative is.

Today, the coffee cooperatives play a role regulating the interval price of the coffee, in each coffee-growing municipality in the country, the minimum purchase price is established by the cooperative. This strategy is also applied for inputs and fertilizers used by producers. Thanks to them, it is generated economies of scale that allow cooperative members to have the infrastructure to ensure the commercialization of their coffee [88]. There are in total 33 cooperatives around the country that belongs to the federation, that are affiliated and receives all the benefits that the federation gives. These cooperatives are distributed in 536 points around the country to serve the more than 555.000 coffee families, so the peasant, can arrive to one of these points, and he will be sure that his coffee will always be bought at the fair price that is in the market.

Important to mention are the events that occurred from 1960 to 1989. In the 60s, knowing that the first quota agreement was a success, the coffee industry of the world signed a new agreement to regulate the exports in 1962, followed by other agreements signed in 1968, 1976 and 1983. The coffee production, exports and consequently coffee prices were regulated, with values that were beneficial for both coffee producers and coffee consumers (it was established a minimum price for the coffee). The political situation of the world was also one of the main causes of these agreements, in which the USA was in a Cold War with Russia. In Colombia, the dynamic of the market was that the coffee cooperatives bought the grain to the growers, and then they sold it to the federation, that was in charge of the coffee exports or for the use in the internal market. When the end of the 80's arrived, the "Cold War" ended, and the capitalism was the winner of the contest; the idea of a market regulated by the state and agreements was changed for the neoliberalism thinking, and a free economy in which just is regulated by the market itself [87]. The quota's agreement ended, and the coffee market in Colombia presented big changes. For that moment, the federation had a total of 50 cooperatives, that later was reduced for the 33 that remains until these days. The main reason, the decrease in the coffee price due to the overproduction of coffee that the producer countries had, caused by the end of the quota's agreement. Since that day, the FNC started using the resources of the FoNC to regulate the price of the grain, but in 2001 this activity was cancelled, because the resources were running out, the quantity collected was unable to cover the outflow of money [89]. Therefore, the cooperatives entered in a dynamic of a free market in which they can sell the coffee they buy to the highest bidder, including the Federation itself or the large global importers.

The initial control that the federation had with the cooperatives in terms of being the entity that buys the coffee from them, was the cause of the appearance of some independent cooperatives, that are not affiliate to the FNC. The events of 1989 strengthened their performance and some of them are in the top of coffee exporters in Colombia. Therefore, in the current period, the cooperatives are free to choose between selling the coffee to the federation (it doesn't matter if they are affiliated or belongs to the federation) or to another independent importer.

Another important aspect to mention happened in 2019. After many years asking for help, the coffee growers finally obtained a measure from the government to protect them from the ups and downs of the coffee market price. The coffee price stabilization fund (FEPC) was created as a way for helping the coffee peasants in stabilizing their revenues when some eventualities affect the production or the coffee price decreases. The fund started with capital invested by the government from resources of the national budget, as well as from resources of the FoNC. The explanation of this fund is in the section 5.6.2; the important thing is, that same as with the FoNC, the FNC is the administrator of the fund as being the legitime representative of the coffee growers. Then, it is another public account that is administrated by the federation [74].

Knowing now a part of the history of the National Federation of Coffee Growers and the main players or factors in the market, it is important to define the structure of this complex organization. Since its inception, the Federation have been catalogued as the entity that represents the coffee growers of Colombia, however, after the creation of the FoNC, the federation also began to be a financial group, in charge of the exports and of green coffee. That later with the passage of the time, began also to be the head in other businesses that will be explained later in this chapter. Therefore, the entity has two types of structure, one of union order (guild structure) and the another of organizational functional order [87].

As a guild, the federation is composed first by the federated coffee growers; this group is recognized with an identification card issued by the federation. The requirements that a person needs for obtain the ID are the following [90]:

- Be registered in the coffee identification system of Colombia.
- Have a property with an area planted of coffee equal or greater than 0,5 hectares and with 1,500 coffee trees planted.
- Demonstrate any of the following titles for the land: owner, possessor, tenant, de facto societies, indigenous reservations of communities.

With this ID, the federated grower can receive the payment of the sales he does to the coffee grower cooperatives, as well as some incentives that the cooperatives or the government could give. The ID is associated with a Colombian bank called “Banco de Bogotá”, and the growers can not only withdraw money in all the ATMs of this bank around the country; but also open a bank account with them and purchase in different shops and restaurants around the country [90]. In total, there are more than 360.000 coffee growers federated.

After the federated coffee growers, there is the Municipal Committee of Coffee Growers. The main function is the role of spokespeople of the coffee farmers from their municipality. They are in charge of the campaigns, actions and programs done in their municipality in benefit for the peasants. The committee is composed by 6 main members, and 6 substitutes, that are chosen every 4 years by direct vote in the coffee elections. The coffee growers that are federated and have the ID are the ones who can participate in the elections. In total, there are 387 municipal committees distributed in 20 departments in Colombia [91].

The Departmental Committees of Coffee Growers are the next authority in the guild. They are the main representative of the growers at the departmental level, and their main function is the organization and promotion of the union of coffee growers in each department, ensure the services of the FNC to each coffee grower of the region and manage programs and actions. They are chosen also in the coffee elections every 4 years, at the same time of the election for the municipal committee. In total there are 15 committees in the country, each one of 6 members [91].

The next one is the steering committee; it is composed by one representative of each departmental committee, and the main duty is the creation of politics and measures necessities for the development of the coffee industry in Colombia, it is the one that takes the decisions of the FNC. Together with this group, there is the National Committee of Coffee Growers, and it is the connection between the federation as a private group and the government. It is composed by the steering committee, the Minister of finance, the Minister of agriculture, Minister of commerce and the director of national planning. As the federation is the entity that manage the FoNC, that is composed by public resources of the coffee growers, this National Committee is necessary for the coordination of the coffee policy between the government and the coffee union [91]

Finally, the coffee congress. It is the highest body for deliberation and decisions at the trade union level, it is composed by the six members of each departmental committee. In normal circumstances they meet once a year and they are the voice of all the coffee growers in the country.

The committee of coffee growers in Antioquia created a visual representation of how the coffee union is divided in the country. In it, it is shown that the main center of everything is the coffee congress, the one who decides in favor of the coffee growers [92]. Fig.49 is an adaptation of this representation done by the committee:



*Fig. 49: Guild structure of the FNC [92]*

On the other hand, there is the part of the federation that works as a private entity and has an organizational structure. This is the part in charge of the projects and strategies in line with the sustainable development of the coffee growers and of the selling of the coffee. There is a top-down structure, in which at the top part there is the CEO, face of the federation and of the coffee growers in the national and international perspective. He is followed by the administrative and financial management sector, that oversees the planning, decision making and control of the different resources of the federation such as technology, human resources, financial resources, and physical resource. The main objective is the efficient management of the assets of the FNC and the resources of the FoNC in benefit of the coffee industry. Also oversees the creation and control of the income statements and the compliance of the fiscal terms [91].

At the same level there is the Technical management sector, in charge of the scientific and technological knowledge of the coffee, the transmission of this information to the coffee growers and the adaptation of each knowledge to the different regions of the country, with their corresponding environmental situations. Finally, there is the Commercial management sector, in charge of developing the business opportunities for the green and industrialized coffee with brands and new products, with the objective of making the coffee business profitable for the growers. It is in charge of the politics for the commercialization of the coffee [91].

Having clear now a part of the history of the Federation, and his dual structure, it is time for the question that analyst used to do when they are researching the Colombian coffee market, and is: What is the FNC?

Searching information in different sources, it is found diverse answers. There is the line that establishes the federation as an NGO (non-governmental organization), and being an NGO means that the fundamental purpose is the social wellness, in this case the wellness of the coffee growers. In part this is true, because that was the initial purpose of the federation when it was created (an entity that represents the coffee growers and was looking for the wellness of their lives). However, with the passing of the time, the FNC also started to be a business group and entered in the coffee market as an active participant, looking also for revenues and competing with other exporting and importing companies. Therefore, the definition as a 100% NGO does not fit today for the Federation.

Then, there is the definition of the official webpage of the company, that establishes the federation as a private federative entity, and that is the reason of their dual structure, one administrative and one as a union of coffee growers. Nonetheless, the understanding of the Federation as a pure private organism is the questionable topic for the researchers in Colombia and for the author of this thesis, due to the approach and the tiny division that the company has managing public money from the taxes. The main reason of this debate are presented in the book 90 years of the FNC [87], describing four main points that are the causes of the discussion. The first one is that the federation receives money from the government (is the main source of the capital); the second one is the administration of the FoNC and the FEPC, that are composed by public resources; the third case is the OFFICIAL linkage of public sector in their management structures such as the National Committee of Coffee Growers. And the last one are the functions that the FNC usually do and that are of public nature (such as the sustainable development of the municipalities, and coffee families), functions that are delegated by the national government. For example, the CEO of the FNC represents the national government in the international coffee meetings [87]. Due to these items, the idea of the federation as a pure private company is not adopted in this text.

The other approach, that is the one endorsed in this thesis, is the view of the federation as mix entity, with public-private characteristics and approaches. They have a private interest with a strong alliance with the state and the public sector, assuming responsibilities of public companies but at the core they are a private entity. Hence, it is assumed as a kind of parastatal entity (that is independent from the public administration but collaborates with the state and their focus are about the public concern), with private interest. This term may sound as a contradiction, but the complexity of the composition of the FNC and the activities they usually do, cause them to be enclosed in this term.

Finally, but not least important, the objectives that has this “private parastatal” entity are the following ones [87]:

- Commercial operations, including the purchase, storage and selling of coffee in the national and international market, as well as supplies.
- Macroeconomic influence deciding in the coffee politics of the country.
- Regulatory operations that include the certifications of Colombian coffee.
- Financial operations with loans to coffee growers, bonds, subsidies, insurances.
- R&D for the benefit of coffee growers
- Road infrastructure for the municipalities and the countryside

- Development of public services for the coffee growers (sewage, aqueduct)
- Social welfare, education, supporting the peasants and their families.
- Education and technical assistant to coffee growers in terms of coffee cultivation.
- Information service, in which the federation oversees the collection of data, census and reports.
- Development of the culture (symposiums, concerts, coffee cultural landscape)

## 7.2 COMPANIES PART OF THE FEDERATION, SUBSIDIARIES?

Through the years, the National Federation of Coffee Growers in Colombia has created different companies with the objectives of providing the best help to the coffee growers and compete in most of the stages of the chain of the coffee market. From research centers to cafeterias and retail market, the federation has invested in different entities and companies that will be explained in this section.

### 7.2.1 *National Center of Coffee Research CENICAFÉ*

Since the beginning of the federation, the idea of an investment in a scientific sector was in the mind of the founders. Some capital of the initial budget was destined to experimental farms that had the mission of studying the coffee bean and all its processes. In 1934, the CEO of the federation promoted an organism in the federation that was in charge of clarifying all the scientific and technical unknowns, and it was created the Central Station of Research. Then, in 1938, with the necessity of studying the coffee plantations, their genotype and process, the National Center of Coffee Research (CENICAFÉ) was created, in the municipality of Chinchiná, Caldas, Fig. 50. Today, the center has eight branches across the country, each branch in a different region in order to work with all the weather and soil conditions of the country. CENICAFÉ is the biggest research center for coffee in the world and the oldest one [92].



Fig. 50: Cenicafé Logo. Source: [92]



The objective of this research center is the study of all the aspects related to the coffee production in the farms, such as the harvest, bean quality, the usage of the supplies and subproducts, the study of the soil, and the conservation of the natural resources in the Colombian coffee zone. The consequence is the supporting of the coffee growers with new technologies for the coffee production, based in economic, social and environmental sustainability [93].

Their results are many and in various areas. The center has worked in the soil conservation, the study of the weather variabilities, technification of the cultivation process, management of pests and diseases and treatment and reduction of the wastewater. It has created tools focused on the landscape of the country, to facilitate the work of the growers. However, their most valuable results are in the genetic field. In 1968 the center started to focus on programs of genetic improvements for the coffee beans, creating varieties with resistance to diseases and with similar agronomic attributes as the classic ones. In 1982, CENICAFE launched a new coffee variety called “Colombia”, this type of coffee was resistant to the rust, a disease that affects the leaves of the coffee plants, appearing orange and yellow spots, and alters the photosynthesis process of the leaves. It causes the plant to be unable of producing the normal quantity of beans, or in the worst case, not producing any bean. This disease started affecting the crops at the beginning of the XX century, around all the world, and many research centers were working to bring a type of coffee resistant to it. In 2005 CENICAFÉ created new variety called “Castillo”, as well as the variety “Colombia”, this one was also resistant to the rust, but the beans were of higher quality and more resistant to other diseases. The coffee plant has also more productivity and the small size was better for the coffee growers. This variety was created with the combination of the “Caturra” and “Timor”, and the aroma and taste is soft, with citric acidity, as the best arabicas. The research center created 6 types of “Castillo” variety; hence it is resistant also to possible mutations of the rust.

In 2016, CENICAFÉ created the 3<sup>rd</sup> Colombian variety, this one was called “Cenicafé 1”, and as well as its predecessors, the variety was resistant to the rust. In addition, this new type of coffee was resistant to the coffee berry disease, a fungus that lives in the barks of the trees and attacks the coffee beans with its spores. Africa was facing that problem in 2016, so the CENICAFÉ created the variety as a prevention of the problem. The level of production is the same of the “Castillo” variety and has a higher performance in the ranking of the quality of the coffee [94].

Today, CENICAFÉ is still the best coffee research center in the world and the leader in Colombia.

### **7.2.2 Almacenes Generales de Deposito de Café S.A (ALMACAFÉ)**

General Coffee Deposit Warehouses S.A (name in English) is a logistics company, created by the FNC in charge of the purchase, reception, storage, import and export of coffee, as well as threshing, roasting, grinding, packaging and transportation of the product. It also works as a customs agency. It is the logistic arm of the Federation, but is not part of it, on the contrary, it is an independent company from which the federation has the 94% of ownership and is the creator. In Fig.59 the Logo of the company can be appreciated.



*Fig. 51: ALMACAFÉ's Logo [95].*

Since the creation of the National Federation of Coffee Growers, in 1927, the institution was always concerned about the logistic process of the market. In 1929, the federation opened the coffee deposit warehouses in Girardot, Manizales and Medellín. With the creation of the FoNC in 1940, the quantity of the warehouses increased exponentially, due to the policy of the purchase guarantee for coffee growers. The quantity of coffee that was necessary to store and export was everyday bigger than the other, and in 1965 the country had in total more than 70 warehouse deposits around it. In that year, the FNC needed capital in order to increase the warehouses. The initial idea was to obtain money through the emission of pledge bonds or merchandise deposit certificates with the coffee; however, the Colombian government did not approve it because it was not possible to do these operations because the federation was the owner of the warehouses and also of the goods stored in the warehouses. For this reason, in 1965, the company ALMACAFÉ was created, with the objective of being in charge and the owner of the warehouses, and of all the logistics operations in the coffee market. The Federation became the major owner with 94,44% of the shares, and the capital was obtained with this movement [95].

Today, ALMACAFÉ is the logistic operator of the National Federation of Coffee Growers. They are in charge not only of the purchasing and the transfer of the resources to the suppliers (that in the supply chain system managed in Colombia by the Federation are the coffee cooperatives), but also of the storage, preservation, qualification of the coffee acquired (the company also do quality control and is the one who decides which coffee meets the standards for export it as Colombian coffee and which ones not). Also, they are in charge of the threshing and the roasting (the company has roasting plant, is the unique of this kind in the world). Therefore, all the logistics for the transportation and distribution of the coffee is covered by ALMACAFÉ. They have 30 warehouses distributed around the country (the Federation is owner of some of them), in all the coffee regions. They store not only the green coffee beans, but also all the products of the PROCAFECOL company (Juan Valdez cafeterias brand that includes coffee and merchandising products) [95].

The company has tried to be replicated by other countries, and exists general deposit warehouses, but not with coffee, which is why ALMACAFÉ is unique. The company is catalogued a 4PL logistics company, that means that provides logistics consultancy, planning, management, integration of new technologies and oversees and control all the supply chain of the industry. The company also oversees the accounting and the records of all the coffee of the FNC.

This logistics provider also is able to act as an auxiliary credit organization, emitting pledge bonds or merchandise deposit certificates with the coffee. On the other hand, the company is certificated and works also as a customs agency, focused mainly on coffee, and has around 130 customers different from the FNC. In the recent years the company, being independent of the Federation, has entered into other market sectors, and has been hired as logistic operator for different companies. Now, in their warehouses there is not only coffee, there is also fertilizers, sugar, glass, animal feed products, different types of grains and also cars [95].

In the last years, the company has been presenting revenues of around 16 million USD to 32 millions USD, and from those revenues, more than 30% are from external customers, that mean companies that are not part of the federation.

### 7.2.3 BUENCAFÉ

Buencafé is the industrial division of the National Federation of Coffee Growers of Colombia, it is the company that covers the market of the soluble coffee, in this case with lyophilized coffee, process that was explained in the chapter 1. The company attend the coffee market exporting its products, that are lyophilized coffee, coffee extract used as raw material for beverage and foodstuff, and coffee oil for cosmetic usage. Additionally, the company is in the retail market, with specific products thar are sold in wholesalers and retailers. Their brand “BUENDÍA” is its most recognized product, which is sold in China, Colombia, and Ecuador, being in the ladder the leader in the soluble coffee market. Fig. 52 shows the Logo of the company and its most iconic brand [96].



Fig. 52: Buencafé Logo and Buendía Product sample [96]

The company was created in 1973, opening the lyophilized coffee factory in the Municipality of Chinchiná, the region of Caldas, Colombia. The idea of the Federation was to enter in the

market of soluble coffee, led in Colombia by Colcafé and Nestlé, and that in the world was leaving big quantities in revenues and income with the creation of the lyophilized method in 1960. Method that delivers a coffee with a better aroma and flavor than the classic soluble one. The strategy of the Federation was not only the simple idea of launching a brand, but their strategy was also creating a new company that would cover the soluble coffee market, making a name and reaching an important role in it, with different products and brands. The idea was not only to start exporting the lyophilized coffee, but also enter to the wholesale and retail sector and compete with the other coffee brands.

In 1982, the company won the highest prize in the Leipzig fair, the most prestigious coffee fair in Germany, and for that time the company was exporting more than 150.000 pounds of lyophilized coffee by year. In 1996 the company started exporting to Asia and Europe. In the 2000s, the company arrived to England with its brand Coffee “Buencafé”, being sold in more than 200 supermarkets of the country. A year later the company entered in the USA and Mexican market and launched the brand “Buendía” in Colombia (Colombian coffee market, as it was seen in chapter 4 and 5, used to consume the coffee with the lowest quality, that is why the coffee was not sold at the beginning in the country). The company received more awards in Colombia and Bolivia due to the high-quality coffee [96].

Today, the company has had three expansions of its production plant, with a capacity of 13.500 tons/year. They are covering the 4,5% of the global market of lyophilized coffee, with top presence in France, Netherlands, UK, Japan, USA. They have around 90 brands in 60 different countries; “Buendía” brand represents 10% of the total revenues of the company, and 50% of the revenues made in Colombia [97]. The company exports 82% of their products and the 18% remains in Colombia.

In 2021, Buencafé got a total of 167,4 million USD in revenues, increasing 3% the value compared to 2020 and reaching a record with the highest revenues in the history of the company. North America is the highest customer with 33% of the sales, followed by Europe with 28% and then Colombia with 18%. Also, in the same year the company arrived in Argentina and Philippines and covered 6% of the global demand of lyophilized coffee.

#### **7.2.4 EXPOCAFÉ**

The coffee exporting society of the coffee growers’ cooperatives, EXPOCAFÉ, is an exporter company, that belongs to all the coffee cooperatives of the country. In charge of the quality-control of the Colombian coffee, and in giving certifications, they export around 800.000 coffee bags of 70 kg per year. The company, different to the other 3 already analyzed, is totally independent of the FNC, the owner are the cooperatives, which means that are the coffee growers themselves who own and control the company.

The reason of why this company is analyzed here dates to 1985. In that time thousands of coffee growers affiliated to the cooperatives had the desire of having their own channel for exporting the product of their harvest. The Federation, with their experience in ALMACAFÉ, helped them constructing the company, promoting the free competence in the country, and knowing that it would be beneficial for the coffee growers (that is the initial and final objective of the FNC). Expocafé is certified by the ISO 9001 and with BASC, promoting and

assuring quality in all their products. The company buys the coffee from the coffee cooperatives, and promotes the sustainable development of the families of the coffee growers and of the environment [98]. Fig 53 shows the logo of the company. In 2021, the company exported more than 830.000 coffee bags of 70kg and was the fifth company in the country with the highest export quantities.



*Fig. 53: Expocafé Logo [98]*

### **7.2.5 AGROCAFÉ**

Agroinsumos del Café, AGROCAFÉ, is a Colombian company in charge of all the supplies necessary for the coffee cultivation. Their mission is to be the company in charge of supplying, in the national market, all the fertilizers, inputs and different supplies that the coffee grower's needs.

The company was created 1999, by the National Federation of Coffee Growers and the coffee growers' cooperatives. The objective was advice, indicate and teach producers in the usage of the most appropriate fertilizers for the coffee production and the management of good agricultural practices. Also, the objective was to having presence in the supplies sector of the coffee industry. The company has dedicated more than two decades in providing to its clients all the support, accompaniment, technical advisory services, and financing support for achieve an efficient agricultural project with profitable and good quality results. All the research done by CENICAFÉ in terms of fertilizers and management of the land are put in practice with the products and services offered by AGROCAFÉ. Fig. 54 shows the logo of the company [99].



*Fig. 54: Agrocafé Logo [99]*

### ***7.2.6 Promotora de Café de Colombia S.A PROCAFECOL***

Procafecol, or Colombian coffee promoter (name in English), is a private company, created to lead the added-value activities of the Federation. It oversees the Juan Valdez stores business concept and all the coffee and merchandising products. The idea of the FNC was to capture greater value in the coffee supply chain, entering in the last phase of the chain in which the Federation did not have a presence. With this company, the income of the coffee growers would improve because the idea was that for each coffee cup sold in the company, the coffee growers would receive more money through the payment of royalties [100].

For understanding the creation of this private company, it is necessary to consider the situation of the coffee market, both in the international perspective and in the national one. At the international level, as it was explained in chapter 3 and 4, the Starbucks phenomenon appeared in the 80s, exploring a new market segment of retail coffee and snack stores industry. Soon, the company became the leader of this sector, promoting its innovative idea of a cafeteria in which the customer not only buys coffee, but also establishes interpersonal relationships. Also, it was a place where they can work, or can rest; like a second home. At the end of the 90's, the company had a total of 2.500 stores and started their expansion beyond North America. The cafeteria sector became the strongest one in the coffee supply chain, with the highest revenues. On the other hand, at the national level, the situation was different. With the end of the quotas' agreement in 1989, the coffee price decreased as it was explained in chapter 5. In the same chapter, it is analyzed the demand of coffee in Colombia, and it was explained that people in Colombia were not used to consume coffee, and the coffee that was consumed was the low-quality one (because the high-quality coffee was exported) or imported. That is why the government created a subsidy to promote the coffee consumption in the country, however, with the end of the quotas' agreement, this subsidy was cancelled.

With this situation, the Federation saw an opportunity. For decades, the Colombian coffee growers were asking for the creation of a country brand that represents them and their product. Also, the FNC had already created at the end of the 50's the Juan Valdez character and the campaign and certification of the 100% Colombian coffee seal. Everything in that moment was a resounding success, the country was recognized around the world by its high-quality coffee and Juan Valdez was a character with an identification by customers of more than 80% with the same levels as Nike or Starbucks (as explained in chapter 4). The Starbucks phenomenon was already known, and it represented in that moment a threat, because they were expanding and sooner or later, they would arrive in Colombia. For that reason, it would be a shame if after all the history of the Federation, it was a foreign company the one that would have taken over the market of retail coffee with cafeterias in Colombia. The FNC was already almost in all the stages of the coffee supply chain (see companies described above), so this was the opportunity to enter in a new stage and be present in all the chain. But, knowing that the Federation is an organization that represents the coffee growers and seeks their benefit, they thought in taking advantage of this opportunity so that the growers could obtain the highest possible profit on their coffee beans sold. Additionally, also there was the opportunity of promoting again the coffee consumption in Colombia, but in a different way, selling the same coffee quality of the one that was exported, and taking advantage of the lower coffee prices in that moment for selling it in cafeterias. Due to all these reasons, in 2002 was born the company called PROCAFECOL S.A. (Fig.55). The FNC

created this private company in charge of the administration of the Juan Valdez cafeterias and merchandise because the Federation itself is catalogued as a non-profit entity with collaboration of the government. For the use of the Juan Valdez ® brand the Federation sold the rights to PROCAFECOL S.A. This movement was criticized by the government, because the FoNC (parafiscal fund of public resources) invested more than 600 million USD in the development of the brand since its creation, and the goods created with the resources of the fund should be of public patrimony. For this reason, the company has a special regulation and must deliver royalties to the FoNC (that is managed by the FNC) [101].



*Fig. 55: PROCAFECOL LOGO*

In the same year (2002), the company opened its first cafeteria in El Dorado international airport, Bogotá. With this, they started materializing the dream of the coffee growers in making visible the work of them and the quality of the Colombian coffee. In 2005, they started their international expansion, opening the first store in the USA, in Washington DC, followed by the opening in New York. Also, they started exporting their own packed coffee to the American country. In the same years, the company expanded in Colombia with stores in different cities such as Medellín and Cali. The company decided that its stores would provide the same experience as Starbucks, a place not only to drink coffee, but also to work, meet with friends or rest, like a 2<sup>nd</sup> home; strategy that was a resounded success in the market due to its innovation. In 2007 the company arrived in Europe, opening their first store in Madrid. One year later, in 2008, the company started exporting their coffee (roasted coffee in beans, grinded or lyophilized) in Europe and Asia. Additionally, they created a partnership with LAN airlines and the Marriot hotels for selling the Juan Valdez coffee in their establishments. In the same year the company opened stores in Chile and Ecuador (country that already knew the Federation because was the leader country consuming coffee “Buendía”). For 2009, the company had a total of 147 stores with also international presence in more than 2.340 supermarkets and wholesalers with their packed coffee. In 2011, the model of expansion increased, with the franchise methodology, and to be a franchisee of the company it is needed to be a coffee grower or from a coffee family. In that time, the company had new stores in Aruba, Panamá, Bolivia, Costa Rica, El Salvador, Mexico and Paraguay [60].

In 2013, the company opened their first experiential store in Bogotá, as an innovative business strategy (similar to the Starbucks Reserve strategy). In this store they show the different moments that the coffee experienced has until the final consumption, highlighting the preparation method and the experience of a perfect cup of coffee. A year later, the company opened their store number 200 in Colombia, and entered in the Asiatic market opening their first store in Malaysia. In 2017 they opened their new e-commerce, focused also



on the merchandising products such as t-shirts, coffee cups, caps, and thermos. In 2018, the company changed their strategic structure and focus of the business, mainly due to the appearance of the Starbucks chain in Colombia in 2014 as well as the arrival of new national competitors such as Tostao and Oma [60]. Fig. 56 show examples of a Juan Valdez stores.



*Fig. 56: Juan Valdez Store examples [102].*

Today, the company has a total of 539 stores, from which 359 of them are located in Colombia, and 180 in 17 different countries around the world. These countries are USA, Aruba, Bolivia, Chile, Costa Rica, Ecuador, El Salvador, Curaçao, Spain, Malaysia, Panamá, Paraguay, Kuwait, Perú, Argentina, Qatar y Turkey. Their mass consumption line has presence also in 33 countries, some of them include Brazil, Canada, New Zealand, Netherlands, UK, Japan, Poland, and others [102]. The company currently has 6 commercial channels that are the stores, the mass consumption (sales in supermarket, wholesalers, and department stores), traditional channels (neighborhood stores), Institutional channels (HORECA), E-commerce and home delivery ready products.

In 2021, the company presented a total of 98 million USD in revenues, from which the 57% were from the stores, and the rest from the other 5 commercial channels, increasing in more than 62% the revenues the got in 2020. From those revenues, more than 4 millions of USD were given as royalties to the coffee growers and the FoNC. Today, the company is owned in 84% by the FNC, and a group of 12.000 coffee growers owns 4% of the company.



### 7.2.7 *Manuel Mejia Foundation*

The Manuel Mejia foundation is the academic branch of the National Federation of Coffee Growers of Colombia. Their mission is to improve the agricultural culture of the country, promoting the well-being of coffee growers, their families and community. It is in charge of teach the technical activities and the different advances in R&D in the coffee market. Their focus are the face-to-face and virtual training programs. They work with urban and rural communities promoting their social development, sustainability, and competition.

The institution was created by the FNC in 1961. The idea was creating an institute of agricultural practitioners specialized in coffee and a stewardship school for coffee purposes. The name of Manuel Mejía was in honor of a famous CEO of the FNC, known as “Mr. Coffee” due to all the contributions he did when he was CEO for two decades. He helped creating the Coffee Bank, the Agricultural insurance company, the National Navigation company, among others. The institution was created also with the idea of open technical-educational establishments in the country, that would help prepare the personnel of the coffee industry for the management and administration of the coffee farms. And more important, it was created with the idea of expanding the knowledge to other agricultural sectors. In 1965 it was opened the educational headquarters of the foundation. At the end of the 80’s the foundation promoted the women participation in the educational businesses. In 2003, the foundation started the online courses as an extra option to the face-to-face courses, with the correct usage of the ICTs. The institution has their own virtual classroom for coffee growers and extension agents, for business management programs, for HR management among others. From 2012 to 2015 the foundation helped more than 145.000 people and made alliances with the Ministry of Agriculture, of Education and the Colombian Institute of Family Well-Being (ICBF) [103]. Fig. 57 shows the logo of the foundation.



*Fig. 57: Manuel Mejia Foundation Logo [103].*

Today, the institution is the most important foundation for agricultural causes in the country. It has a large quantity of courses for the peasants, not only in the coffee sector but also in other agricultural ones. The extension program of the FNC, in which an expert goes to each farm of a coffee grower to teach him new abilities, technological discoveries, and resolution of doubts, is taught by the foundation. The experts are trained with the courses given in the institution.

### 7.3 FINANCIAL ANALYSIS OF THE FNC

Now that it was analyzed all the institutions and companies in which the FNC is involved either as an owner, founder, administrator, or partner; it is easy to understand why the federation is the highest player of the Colombian market. It is present almost in all the stages of the coffee supply chain, either as a competitor, as a supplier or as a guide, as the entity that wants to help the other coffee companies. But, on the other hand, they are almost part of the government and have public task. They represent the country in the international coffee economy, they manage two funds of public resources, they are in charge of the education and the social development of the coffee growers, their families and region. Additionally, they were the ones that created the certifications of the Colombian coffee and gave the guidelines to the certifying companies for how to certify the coffee and what minimum quality controls it must pass.

If we analyzed in terms of money, there is an aspect to highlight. The Federation is declared as a non-profit organization, that is why there is not information about the revenues that the FNC got in a given day and is also the reason of why the institution was not analyzed in the chapter 6, when the top 4 Colombian companies of the coffee sector were discussed. In their annual reports, they present the results of each of their companies separately. They show, for example, the revenues of Almacafé and explaining their performance in one section, then the same is done with Buencafé and Procafecol.

However, as it was explained in the Almacafé's section, there are the records of the coffee quantities and its monetary value exported in Colombia, by year, by customer, by country and most important, by exporter; in which the FNC is one of them. These reports are done by Almacafé, and in Fig. 58 it can be appreciated the results of the last 10 years of the value of the exportations by exporter.

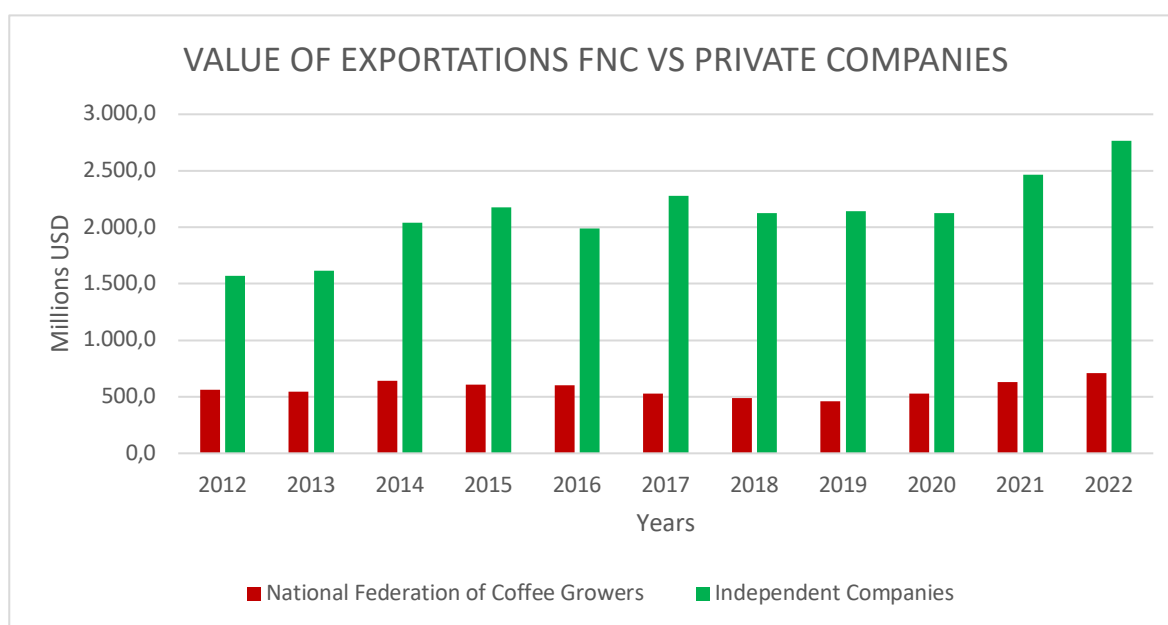


Fig. 58: Monetary value of exportations in Colombia, FNC VS Private exporter companies. Source: FNC [64]

Looking at Fig. 58, it is seen that the value of the exports done by the federation in the last ten years are always above the 500 millions USD (Except in 2018 and 2019). And if we look at the revenues of the top 4 companies explained in the chapter 6, then the value of the exports done by the Federation will always be higher than any of the companies analyzed. This position the FNC, just with the exports and without counting the revenues of Almacafé, Buencafé and Procafecol, as the most important player of the market in monetary terms. However here is where the nonprofit organization statement enters. The money collected of the coffee exports goes directly to the FoNC, because was with the resources of the fund that the coffee was bought from the cooperatives or by the cooperatives (in the case in which the cooperatives do not use their own resources to buy coffee, so the Federation transfers resources in advance to the federated cooperatives so that they can buy coffee). And the Federation just receives a percentage of that money for managing the FoNC. In this case “the Government authorized that with resources from the FoNC, the Federation receives as consideration an annual amount that does not exceed the equivalent of 3 cents per pound of the total exports” [61]. However, the Federation just decided to charge 2,5 cents per pound and assumed the full impact of the exchange rate and inflation. So, at the end the FNC doesn’t obtain all the revenues of the quantity exported, and that is why is not at the top 4 of the market.

Another important item to highlight is the percentage of the exports done by the FNC and by the particulars in the last 10 years. At the beginning of the period analyzed, the quantity exported by the federation was between the 23% - 25% of the total coffee exported in the country. But then, from 2017 this percentage decreased, having values around 17% and 18% and obtaining in the 2022 a performance of 20,45%. The reason is the appearances of more private exporters, and their deals with important international roasters. Also, the FNC has been giving more freedom to its federated cooperatives to sell coffee to other exporting companies, or to export them themselves with EXPOCAF, promoting free competition and market freedom. That is why companies such as RACAFÉ or Compañía Cafetera La Meseta S.A have been increasing their revenues and their market share in the coffee exports. Today La Meseta is exporting the second highest quantity of coffee, just behind the FNC. Just for making an emphasis in this situation, at the beginning of the 2000’s, the federation had between 35% and 40% of total coffee exports of the country, and if we go further back in time, it is found that the federation had more than the 50% of the total quantity of coffee exported.

Now, analyzing the financial results of Almacafé, Procafecol and Buencafé there is also information to highlight. In Fig. 59 there is a comparison of revenues from the three companies that the federation owns.

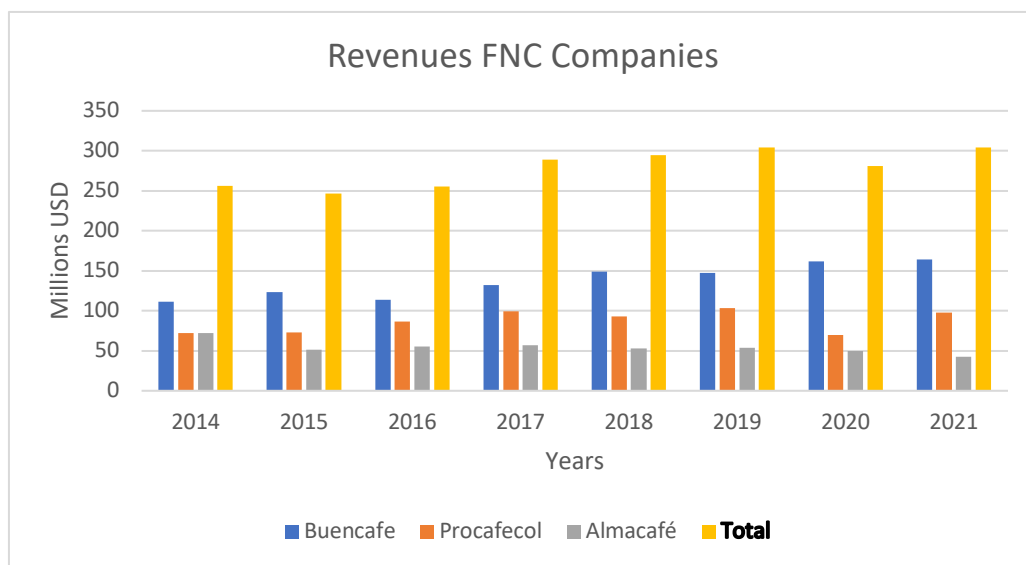


Fig. 59: Historical revenues Buencafé, Procafecol and Almacafé. Source: [36], [104]

From all the lines, Buencafé is the one with the highest revenues with an amount of 167,4 millions of USD in 2021. A record for the company, highest value in their history. Their revenues have been increasing, having in 2014 a quantity of 111 millions USD and being above the 160 millions of USD both in 2020 and 2021 [104]. Comparing with the other 2 companies, they are always above, and the main cause of this situation is their experience in the market (is older than Procafecol), but also the segment in which they are selling (the retail and wholesale market left more revenues compared to the logistics and export market, this one has a lot of cost and more competition). So that is why they have higher values than Almacafé.

Procafecol experienced an increasing tendency, starting the year 2014 with 72,3 millions USD in revenues and ending the 2021 with 98 millions USD in revenues. The main reason is their strategy adopted in 2013, opening stores that are a complete coffee experience for the client, expanding all their merchandise, opening cafeterias around the world and doing marketing campaign for the Colombian coffee. On the other hand, Almacafé presented an opposite result, they had very similar revenues with Procafecol in 2014 (72,4 millions) and they ended 2021 with 42 millions. The main reason is the behavior of the coffee growers and cooperatives, now they are selling their coffee to other private exporting companies, so Almacafé entered in other market segments such as grains, sugar and fertilizers. The pandemic affected also these 2 companies, with the results shown for the year 2020, having a decrease in revenues of 33% for Procafecol and 7,5% for Almacafé. The reasons are the closing of the Juan Valdez stores due to the pandemic confinement, and the logistics problems that Almacafé had for transporting and exporting coffee due to the quarantine established by the government, the restrictions and health policies. On the other, Buencafé, presented better results, the pandemic promoted the coffee consumption in people's homes.

The total results from these three private companies give that the FNC in 2014 obtained revenues of 255 millions USD and presented an increasing tendency (just interrupted by the pandemic). They ended the 2021 with revenues of 304 millions USD, same value obtained 2 years before in 2019. Therefore, comparing with the companies of chapter 6, the Federation

would be above La Meseta and Olam Agro Colombia, in the 3<sup>rd</sup> position. This shows the importance that the Federation has in the market, just being behind Racafé and COLCAFÉ, but with 3 diverse businesses, focused on export, warehousing, retailing and restaurants-cafeterias. Comparing with the average revenue of the market shown in table XIV, we obtain that the FNC is also always above the average, in all the 10 years studied, showing again the excellent performance of the Federation not only compared with the top 4, but also compared with the whole market. Additionally, analyzing the market average revenues with the revenues of each company of the FNC separately, we find that only Almacafé is below the average (competing in a market sector with high competition and high costs). Buencafé, together with Procafecol, have better performances, being always above the performances of the average market in all the 10 years.

Finally, there is an analysis that must be done carefully and taking serious approaches. As it was explained in chapter 5 and in some paragraph above in this section, the Federation has the right to receive 3 cents per pound of coffee exported in the country. And it was explained that they just charge 2,5 cents per pound and are assuming the inflation rate and the exchange rate. Having clear this, it can be calculated a very approximate value of the compensation received by the Federation in the last ten years (the real value is not disclosed for public consultancy). The calculation must be done with the total exports in Colombia available in Fig. 35. The units of the values in the figure are in thousands of 60 kg coffee bags, so the values must be multiplied first by 1.000 to obtain the value of the coffee bags and then by 60 to obtain the value in kg. Then by 2,205 (exchange rate kg to lb.) to obtain the value in Pounds and finally by 0,25 cents/lb., obtaining the compensation received by the FNC. Table XXIV shows the results of the calculation.

TABLE XXIV:

*Compensation Received by the FNC for each pound of coffee exported from Colombia.*

YEAR	60 KG COFFEE BAGS	KG COFFEE	LB COFFEE	Compensation FNC (USD cents)	Compensation FNC (USD DOLLARS)
2012	7.168.998	430.139.880	948.458.435	23.711.461	237.115
2013	9.671.975	580.318.500	1.279.602.293	31.990.057	319.901
2014	10.956.824	657.409.440	1.449.587.815	36.239.695	362.397
2015	12.713.643	762.818.580	1.682.014.969	42.050.374	420.504
2016	12.844.833	770.689.980	1.699.371.406	42.484.285	424.843
2017	12.983.114	778.986.840	1.717.665.982	42.941.650	429.416
2018	12.751.340	765.080.400	1.687.002.282	42.175.057	421.751
2019	13.667.632	820.057.920	1.808.227.714	45.205.693	452.057
2020	12.527.436	751.646.160	1.657.379.783	41.434.495	414.345
2021	12.438.789	746.327.340	1.645.651.785	41.141.295	411.413

Source: [64]

The values shown in the tables gives us an overview of the quantity that the FNC received from the coffee exported in Colombia. As it can be noticed, the values do not reach half a million dollars, and it is very likely that they were receiving a lower value, because they assumed the changes of the inflation rate and in the exchange rate between COP and USD dollars.

## **7.4 VERTICAL INTEGRATION AS A BUSINESS STRATEGY**

The final analysis of this document is about a business strategy that the National Federation of Coffee Growers in Colombia has been implementing, through the passing of the years with the creation of new companies in all the supply chain of the coffee market. This strategy is the vertical integration.

### ***7.4.1 What is Vertical Integration?***

Vertical integration is a business strategy that companies can use, in order to control and own different stages of the supply chain of their production process. With this strategy the need of external entities, contractors, suppliers, or retailers are reduced or eliminated. Usually, vertical integration is implemented when the companies acquire or create their own subsidiaries in some stages like raw material creation, suppliers, manufacturing, distribution and retailing stores; or in all of them. The main objectives of adopting this business strategy is the reduction of costs and the control of the quality of the final product [105].

Instead of remaining in a single point of the production process, companies decide to expand their business and become self-reliant in other aspects of the production process. They invest a big quantity of money for facilities, talent acquisition and management that lead to a bigger and complex operative system. A company can vertically integrate on one side by opening e-commerce websites or physical stores to sell their products. Or can integrate in the other side opening their own supply operations or investing in warehouses and transportations systems to control the distribution [105]. On the other hand, it is possible also to buy other companies that are in these stages of the supply chain. For this reason, there are different types of vertical integration.

The most common type is the backward vertical integration, that is when a company moves their ownership of products to a point earlier of the supply chain of its production process. If a company is just in the retail sector, means they are moving to the distribution sector or the production one, while if the company is producing, means they are moving to the suppliers' stage and raw material acquisition. Other type of vertical integration is the forward integration, that is when a company moves their control to the distribution process or the sale of their products to the final consumer. The last type of vertical integration is the balanced integration, that is when the company is in the middle of the supply chain and wants to extend their control to the suppliers side and the distributors side [105].

It is very important to mention that the forward integration is less common because it is a more difficult process. The further along a company is in the chain, the more cash flow, purchasing power and profits are available. So, a company that wants to buy a large retailer needs more money than if the situation was the contrary.

As everything in the business market, this strategy has its advantages and disadvantages, if not, all the businesses would adapt this path [105]. The advantages are:

- A company has the control of the supply chain, and this led them to reduce their costs (transportation cost, acquisition cost, inventory turnaround).
- A company can be benefited with economies of scale, increasing their production rate while controlling the supplies, manpower and reducing intermediaries.
- The company can avoid supply disruption and avoid the suppliers' market power that increment costs and reduce production.
- The quality of the products increase due to the company has better control of the raw materials.
- Company acquires information of the retailers about the competition and price strategies.

The disadvantages are:

- It is a strategy that requires time, but most important, requires a lot of capital investment and expenditures for acquiring companies or creating new ones.
- Reduces the flexibilities of the companies, because they must destinate a big quantity of capital for this strategy and reduce the capital invested in other ones. Also, they must follow trends of the new markets stages they are entering.
- Companies could lose their focus trying to do a lot of things.

Companies decide to adapt this strategy when they have the capital to do it and a clear focus of their business, at the beginning the incurring cost and capital invested is high, but this then is compensated with high-quality products and more profitable ones.

#### ***7.4.2 Examples of Vertical Integration***

As the vertical integration is a business strategy that brings cost reduction, higher quality products and more efficient production, many important companies have adapted this strategy obtaining a successful result.

As a backward strategy example there is Amazon, they started selling in their website books that they purchased from established publishers; in this case they were the retailers selling to the final clients. Today, the company also is a publisher, and has their own brand to sell their books (of their publisher section) directly to customer. Netflix is another example of this situation, they started as a DVD rental business, then they move to the streaming market with films that sold them their rights to reproduce them on their service. And now they are producing their own films and TV series, that are available for the final customer in their platform along the other movies [105].

In the luxury and automobile sector there are also examples. Hermés bought their own crocodile farm in order to have their own standardized source of croc leather, as well as they opened their own chemical labs to promote and create new fragrances. Moreover, Tesla has

their long-term agreement with Vale, one of the largest nickel producers in the globe, securing their supply in this product. Volkswagen implemented a similar strategy [106].

Finally, in the coffee sector this strategy also has been applied. Starbucks is owner of some coffee lands and works together 300.000 coffee growers worldwide in order to promote some minimum standards of quality. In terms of forward integration, they have agreements with large retailers like Walmart for the selling of bottled Starbucks coffee, sachets, and capsules [106]. A strategy that the FNC implemented first and is explained in the next subsection.

#### ***7.4.3 FNC Vertical Integration business strategy***

Now that it is clear what is the vertical integration strategy, it is time to analyze an example of this path applied in the coffee market that is the case of the National Federation of Coffee Growers of Colombia. In the section 7.2, all the companies in which the Federation has been involved (either as creator, owner, promoter, or helper) were explained and analyzed, demonstrating that the FNC was in almost all the stages of the coffee supply chain. Well, in this subsection this aspect will be analyzed, because it is a clear example of a vertical integration business strategy adapted. Strategy that has taken years of development and application. Consequently, as was explained during all this thesis, it has been an effective and correct strategy, because the Federation became and is the main actor of the coffee market in Colombia, not only economically, but also socially, culturally, and even politically. Fig. 60 represents the vertical integration of the FNC and the stages of the supply chain in which they are present.



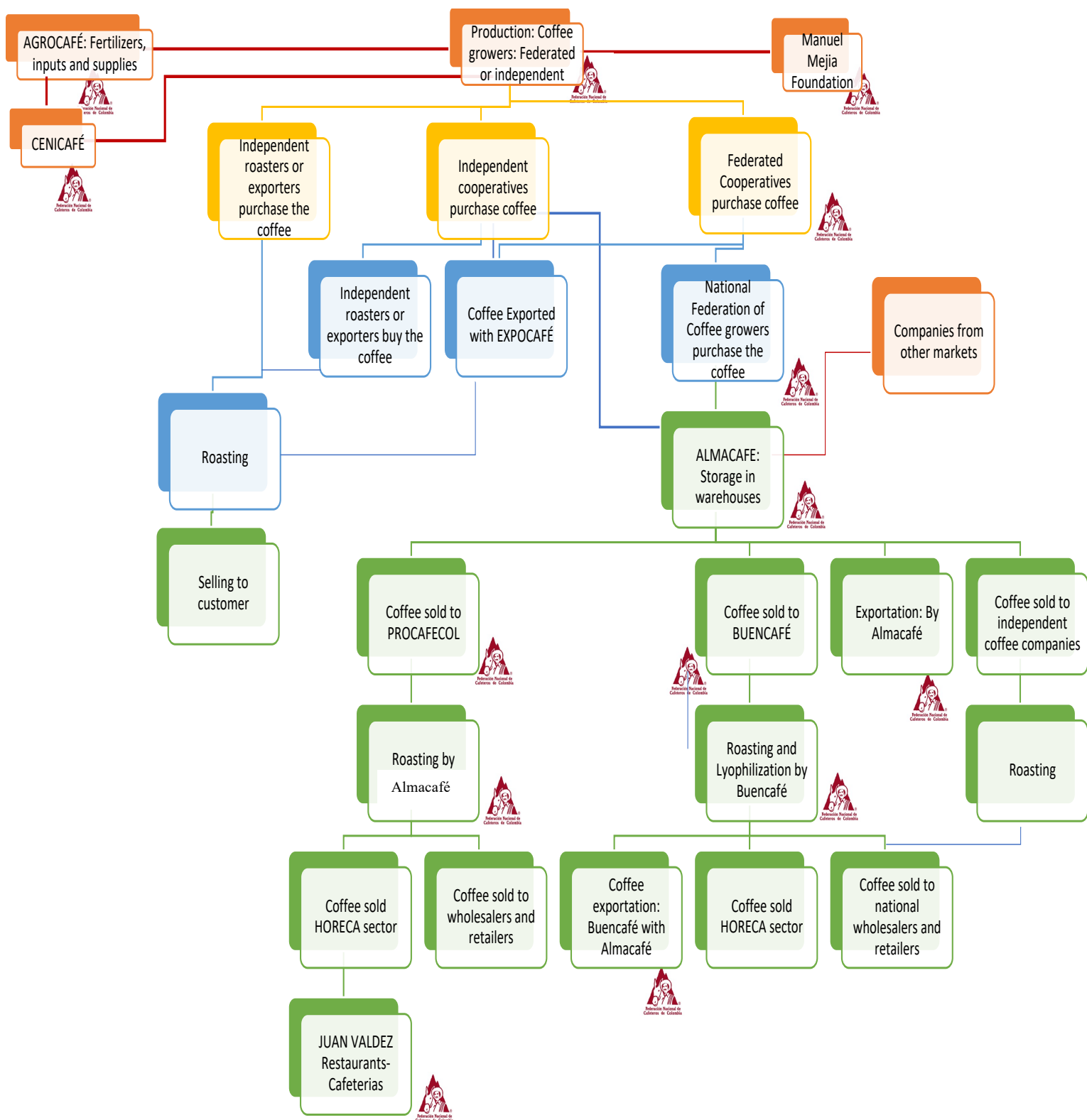


Fig. 60: Vertical Integration of the National Federation of Coffee Growers of Colombia

The figure above is another representation and a complement of the coffee supply chain figure shown in chapter 2 (Fig. 6) but focused on the Colombian coffee market. The items that have the logo of the FNC between or above them are the ones in which the Federation is participating, either with their companies or helping in the sector. The graph is divided in 3 phases, at the top is the coffee production part (suppliers of the roasting companies), at the middle the industrial production (roasting) and storage, and above is the retail part. The figure starts with the acquisition of the raw material (supplies) for the cultivation process of the coffee. This is the earlier stage of the coffee supply chain; the one needed by the farmer to cultivate the coffee tree and harvest the coffee bean (it could be seen as suppliers of the suppliers). In this section, among all the companies that can sell the fertilizers, there is Agrocafé, company saw in subsection 7.2.5 created in 1999 by the FNC and the Coffee growers. Therefore, the Federation is present at the beginning of the coffee chain. Then there is the cultivation process done by the coffee growers, in which they use the fertilizers sold by Agrocafé. In this stage the National Federation of Coffee Growers is also there because there are more than 360.000 coffee growers federated, with their ID and that are part of the Federation. Here in this stage, it is also important to mention the role of CENICAFÉ and the Manuel Mejia foundation, other 2 institutions of the FNC that are involved in the activities of this phase. CENICAFÉ is the research center, and their results are implemented either by Agrocafé with fertilizers, by the Manuel Mejia foundation with its educational and training programs and by the coffee growers using the new technologies and methods developed by the research institution. Manuel Mejia foundation is involved also here because is the institution in which the coffee growers are educated, in technical, social, and cultural aspects. Also, the extension plan of the Federation (people that goes to the farms to help growers with their doubts and the process) is done by the institution.

Then, the coffee growers have the option to sell their coffee to the cooperatives (either the ones federated or the independent) or to a third party that could be an exporter, or a national/international roasting company. This dynamic is possible after the end of the quota agreement in 1989 in which the free trade became the best alternative for coffee growers. The Federation is involved in this phase with the federated cooperatives, the one that receives the money from the FoNC to purchase the coffee. After this there are five different paths, the first one is the one taken by the independent roaster and exporters, in which the exporters just export the coffee to other countries. The second one is the one took by the national roasting company that roasts the coffee and then sell it to their customer (final consumer, international roasting company, wholesaler, retailer etc.), and the international company that exports the coffee to their roasting factories and then sell the coffee. These items are not deeply explained because in Fig.6 of chapter 2 there were already shown. The third one is the one took by the cooperatives, when they decide to export their coffee themselves with their own exporting company (Expocafé). And the fourth and fifth one is when the FNC, through their company Almacafé, receives the coffee from the federated cooperatives or independent cooperatives (they sell the coffee to the Federation), and the beans are stored in the warehouses. From this point, Almacafé is in charge of all the logistic process of the coffee (transportation, material flow, export etc.). At the same time, Almacafé has an input flow from companies of other markets that hired them as their logistic arm.

At this point of the supply chain, there are again four different paths. One of them is when Almacafé sells the coffee to other independent roasting companies, either national or

international. The other path is when Almacafé exports the coffee (they are a customs agency) representing the FNC, this coffee sold could be green coffee or roasted coffee because Almacafé also is a roasting company. The third part is when Almacafé sells the coffee to another company of the FNC that is Buencafé, in charge of the lyophilized coffee market sector. From here, Buencafé oversees the lyophilization and roasting process, and then or exports their coffee, or enters to the retail market selling to the HORECA category or to wholesalers and retailers (in Colombia, Ecuador and China with their Buendía brand). The final path is when Almacafé sells the coffee to Procafecol S.A, the newest company of the Federation in charge of the Juan Valdez coffee stores. Here, the company receives the roasted coffee, and then the coffee is sold or to the wholesalers and retailer, or to the HORECA sector, in which they have their major business with their Juan Valdez shops.

In summary, as it can be seen the National Federation of Coffee growers is in all the stages of the coffee supply chain. It is in the suppliers' part with the raw material acquisition and coffee plantation with Agrocafé and the federated coffee growers. In the production, storage, and logistic activities with Almacafé; in the exports also with Almacafé. It is in the lyophilization with Buencafé, as distributors in the coffee supply chain with Procafecol and again with Buencafé, and in the retail sector with their own Juan Valdez shops. Apart of this, they are involved in supporting activities with the Cenicafe research center and the Manuel Mejia foundation. This is a clear example of a complete vertical integration, from the beginning of the coffee supply chain to the end of it, being part of a selected group of companies in the world with the same characteristic. The FNC has applied this strategy since the creation of the FoNC when they started exporting coffee and storing it in their warehouses. As the theory explains, it has been a very long process, that started with the creation of the company Almacafé in 1965 and ended in 2002 with the creation of Procafecol S.A and the opening of the Juan Valdez coffee shops. In this case, the strategy was applied opening new companies (subsidiaries) to compete in the market, and not acquiring or merging with the competence. This was done in order to promote the free trade in the country and avoid problems with the fair trade and competition laws. With this description, it can be concluded that it is an example of balanced vertical integration. It started with a forward strategy because the Federation at the beginning was in the sector of the coffee growers and cooperatives, and then, year by year, they entered in the other market sectors. This represented a gain, because the more forward is the position in the chain, the better margins and added value are gained (as it was seen in chapter 6). However, with the opening of Agrocafé, the company also did a backward vertical integration, and expanded in all the supply chain.

It has been a process in which the company spent a big quantity of money, and that was necessary a very strong financial base for accomplish it (the FoNC). They did it, knowing that there would be many expenses and loses. Procafecol S.A was an example, this company, from 2003 to 2012 had losses, and was until 2013 when they started having positive results. However, today, the Federation is the one that sells the best coffee in Colombia and exports the best quality of Colombian coffee to the world. With their vertical integration strategies they have control of everything related to their coffee beans. From its fertilizers, through its cultivation, export, and roasting process, to its direct sales channel to the public and its Juan Valdez stores. Financially, the results have been excellent, shown in the section 7.3. In terms of marketing and quality, results have been bigger, positioning Colombian coffee and Juan

Valdez character as the best in the world and one of the most recognized brands around the globe.

#### 7.4.4 FNC business strategy vs Market competitors

After analyzing the strategy adopted by the National Federation of Coffee Growers of Colombia, it is time to understand if the results of the strategy compared with other market competitors, either at the national level and international level. Financial analysis of section 7.3 showed to us that in terms of money, revenues and utility, the vertical integration strategy has been successful. It has generated values above the market average and has positioned the three private companies of the Federation together in the top 3 of the coffee companies in Colombia, above Olam Agro Colombia and La Meseta SA. And if the exports done by the Federation were accounted as 100% revenues for them, the FNC would be by far the top 1 company in the coffee market in terms of revenues and utilities.

In terms of the exports market, the Federation is the leader of the sector, exporting the highest quantity of coffee during the years. In the Fig. 61 it is appreciated this description (results for the year 2020) [107]. Following the FNC it is “Compañía Cafetera La Meseta SA”, company already analyzed in the chapter 6 and that is the 4<sup>th</sup> company of the coffee market in terms of revenues. Then there is “RACAFÉ” and “Olam Agro Colombia” that also were analyzed and that were part of the top 4 companies with the highest revenues, being Racafé in the first position for the 2021. This figure represents how efficient has been the Federation in this market sector, in which their results are above the Colombian coffee leader analyzed in chapter 6. And it is an argument that despite applying a forwarding vertical integration strategy, the FNC is still one of the leaders in its original sector of the supply chain and has not neglected its position.



Fig. 61: Leading exporting companies in Colombia 2020. Source: [107]

Then, analyzing the distributors and retail market in Colombia, the results are different than from the exportation. Focusing wholesalers and retailers it appears a situation in which the FNC has had a growing tendency in terms of market share, but still needs to grow even more to be the leaders. Fig. 62 illustrates this situation.

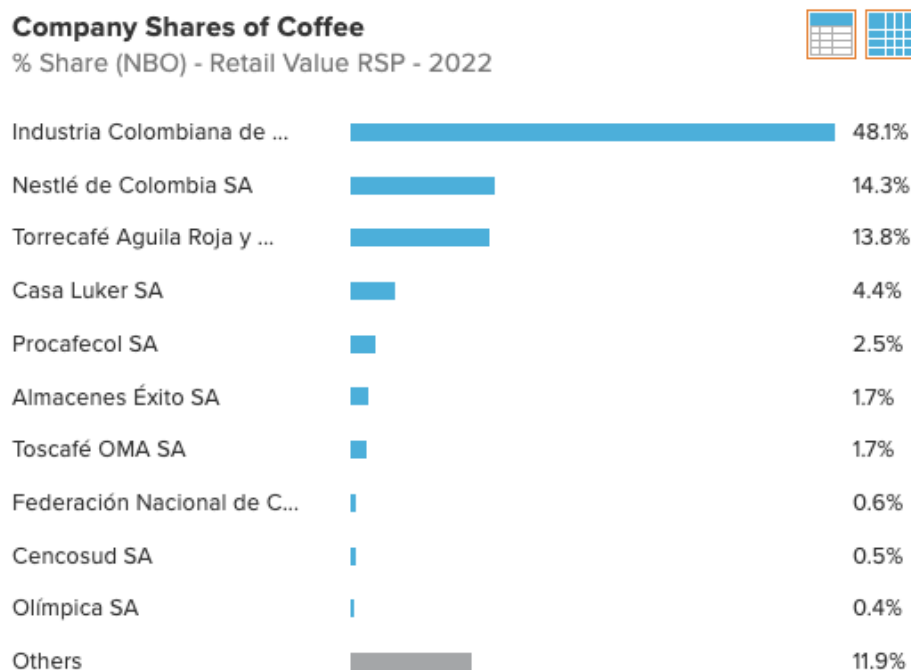


Fig. 62: Colombian Market share coffee retail sector. Source: EUROMONITOR [71]

The results of Fig. 62 show that the leader with 48,1% of market share in this sector of the Coffee supply chain in Colombia is the “Industria Colombiana de Café S.A” (Colcafé) that is owned by “Grupo Nutresa”, company explained in chapter 4 and 6. Colcafé is a company that since its creation in 1933, has been focused in the retail market, selling their different coffee brands (COLCAFÉ, Sello Rojo, La Bastilla”) to the biggest wholesalers and retailers of the country. Due to their variety of coffee brands, their marketing campaigns, their longevity in the market and the support of one of the biggest conglomerate of America (Grupo Nutresa), the company has been the leader of this section of the coffee supply chain. The got revenues above the 300 millions USD and profit margins above 5%. However, a big difference with the FNC is that the company did not use a vertical integration strategy. Its strategy has been focused on staying in its market sector and become the leader of it. In fact, they had applied a horizontal integration strategy, buying their competitors (like Café La Bastilla), trying to dominate all the sector. Colcafé is followed by Nestlé Colombia, the big Swiss multinational that dominates the market in the world and have a 14,3%.

The National Federation of Coffee Growers has a 3,1% of market share in this section of the coffee supply chain. From which 2,5% is from Procafecol and its brand Juan Valdez, and the 0,6% is from Buencafé and its brand Buendía. This result locates the Federation in the top 5 of the coffee market in Colombia, behind bigger players like Colcafé, Nestle, Casa Luker,

but still with a participation in the market. It will be seen that is in this sector in which the Federation has the lowest values in terms of market share and importance. But this still shows that with their vertical integration strategy, the company is participating and has an active performance on the sector. As it was explained in the subsection 7.2.3, Buencafé has focused on the international market, and was just in the year 2001 when they began to participate in the Colombian sector. Procafecol also started participating in Colombia in the 2000s, because was created in the year 2002. So, it has been difficult for them to take a bigger quantity of the Colombian market, when companies already consolidated have more than the 70% of the market and have been competing for more than 50 years.

Looking now to the HORECA sector, and mostly focusing on the cafeterias and restaurant sector, it is evidenced why the vertical integration strategy of the FNC has been a resounded success. The final movement of the vertical integration strategy of the Federation was the opening of the Juan Valdez cafeterias in 2002. The objective was to take advantage of the market situation in Colombia and the new tendency that was appearing with the Starbucks cafeterias in North America. With the creation of the Procafecol company, the Federation entered to the sector that has the highest revenues and utilities, selling the same coffee quality that they used to export (best coffee quality of the country) to the average coffee consumer of the country. People that were used to drink a coffee with a lower quality. Also, they entered promoting the same idea that they explained abroad, that was that their coffee represents the work of the local coffee growers and that with the selling of their coffee cups, the growers receive a bigger percentage of this selling that no other company offers to them. Because Procafecol is a company from the coffee growers. With all these ideas, the company quickly took the lead in the cafeterias sector. The main reason was because at that time there were no companies that promoted something similar: selling coffee from the same crops and process that they controlled, and offering a convenience cafeteria service as Juan Valdez did. For this reason, when the American company Starbucks arrived in 2014 to the country, they found a very difficult path to conquer. Because there was already a Colombian brand that promoted the Colombian coffee and the regionalism of the growers. Nowadays, the company is still the leader in the cafeterias sector as is shown in Fig. 63.

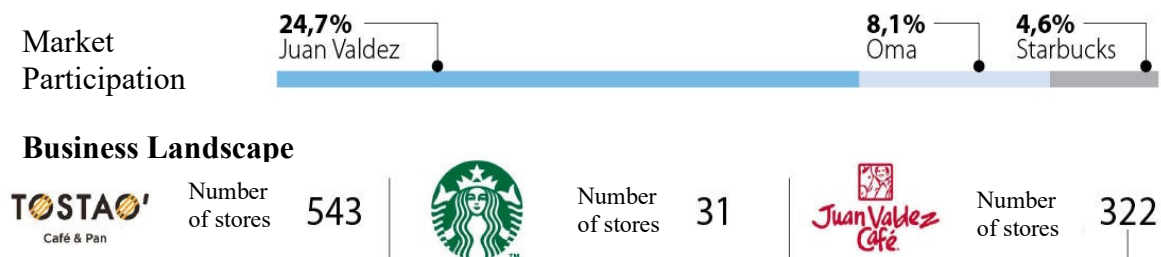


Fig. 63: Market Participation most important coffee restaurants in Colombia. Source: [108]

As it can be seen from Fig. 63 adapted from a 2020 report of “La Republica” newspaper [108], Juan Valdez is the leader of this market sector in Colombia, taking the 24,7% of the market shares of the coffee cafeterias. The second one is Oma Café, a Colombian company born in Bogotá, with 8,1% of the market, and then it appears Starbucks with 4,6%, six years after their arrival in Colombia. The FNC managers said that the arrival of the American

company did not affect their performance, on the contrary, it helped them to improve what they were doing wrong and copy some efficient processes that the company of the mermaid brought. This situation makes Colombia one of the few countries in the world in which the American chain is not a leader in the sale of coffee in cafeterias. Then in the graph it is shown the number of stores in the country, again Starbucks after 6 years of arrival has a total of 31 stores, while Juan Valdez in that moment has 322 stores. This again showed the difficulties for the mermaid company to position their brand in Colombia. Another player appears here, and is “TOSTAO Café y Pan”, a Colombian cafeteria owned by the Panamanian company Bakery Business International S.A.S (BBI) that opened the stores in 2015. Their focus was the market consumers using a strategy of cheap prices. After a market research they found that a big quantity of Colombians love coffee, but they did not have the monetary power to buy one cup of coffee in the famous brands such as Juan Valdez, Oma or Starbucks. The business was a resounding success, and their plan was to open the largest number of sales points throughout the country to make its stores available to all Colombians. That is why in 2020 they were the cafeteria company with the highest number of stores (543) across the country. However, their plan was not aligned by their financial results, and despite they got good results, these were not enough to open all that number of stores in such a short time. They were financially sustained, but any crisis could affect them fully. And that was what happened in 2020 with the covid 19 pandemic. The quarantine and the restrictions in mobility hit the company, that were not able to cover their debts, rent and pay to their employees. So, at the middle of the 2020 they entered in an emergency program of The Superintendency of Companies in Colombia to renegotiated their debts and make an agreement of the terms of this debt payment and reorganize the company. Now they changed their strategy, their prices increased and have 420 stores.

In terms of the beverage cafeterias market (that includes pubs, juice stores among others) the FNC is also the leader. In Fig. 64 it is appreciated that in 2022 they have 5,8% of the market share, followed by Tostato Café y Pan with 4,9% and showing that Starbucks has a 1,6% of the market. Also, it is important to mention the performance of multinational companies that in other countries are leaders, such as Dunkin Donuts and McCafé, but that in Colombia are part of the average of the industry (with 2,6% and 0,1% respectively). They are well below the performance of the leaders Juan Valdez and Tostao. The main reason is the already power that the national brands established in the market and the economic power of the Colombians, so much lower than people from the countries in which McCafé and Dunkin Donuts are leaders.

### Brand Shares of Cafés/Bars

% Share (LBN) - Foodservice Value RSP - 2022



Juan Valdez	5.8%
Tostao' Pan & Café	4.9%
Dunkin'	2.6%
Bogotá Beer Co	1.8%
Starbucks	1.6%
Cosechas Express	1.6%
Bogotá Beer Co - La Bode...	1.2%
Oma	1.1%
Beer Station	0.6%
Nativos	0.4%
Irish Pub	0.4%
Café Quindío	0.2%
Beer Pub	0.2%
El gualilo	0.1%
McCafé	0.1%

Fig. 64: Colombian Market share Coffee, Pubs and Juice restaurants Sector. Source: EUROMONITOR [71]

At the international level the situation is a little bit different. As it was explained in the Buencafé's subsection, the company has the 6% of the lyophilized market share, with presence in more than 60 countries around the globe, in the five continents. The Federation competes with other giant industries like Nestlé, JDE & Peets, Lavazza, Illy, and despite this, has a quantity of market share. Mainly due to the quality of its 100% Arabica coffee and the experience in the market, from the beginning of the 80's.

On the other hand, there is the Juan Valdez Café stores, with 180 stores located around the globe, and also with their products form the retail market with presence in the five continents, in more than 33 countries. This market is very competitive, due to their highest profits, and is where the big "monsters" of the industries are focusing, with Starbucks being the leader as it was shown in chapter 3 with revenues near the 30 billion USD. Comparing the values of the top 4 leader companies in the world presented in chapter 3 with the ones of Procafecol and Buendía together; it gives us that the revenues of the Colombian company is just about 1-3% of the revenues of the international company. The Federation still have a long way to cover. The reasons are because their Juan Valdez coffee stores just opened at the beginning of the 2000's, but mainly, because all these companies presented in chapter 3 (Starbucks, JDE, Lavazza, Nestlé) are from countries with a historical very big financial strength. Countries that are known as develop or first world countries, with access to different sources of resources and easy ways of agreements between the international market and banks.



However, something unique from the Federation is their balanced vertical integration strategy applied, that comparing it with Lavazza, Starbucks, JDE, and Nestlé, there will not be something similar. The main reason is the initial strategy adopted by these companies and by almost all the international coffee leaders' companies in the world. Their strategy was entering in the last stage of the supply chain, the one from the roasting to the selling to the customer (either final user, wholesaler, retail store etc.), because was the one that leave more profits to the participants, with high margins and a demand to satisfy. For them, it is not attractive in economic terms to do a backward vertical integration, because the further back, the market is more competitive and leaves less profit. Mainly due to the high costs (logistics, export) and the high purchasing power that customers have (which is the role they have in the chain). However, some of them have applied a partial vertical integration, with a social focus, and for controlling the quality of their cup of coffee. This is the case of Starbucks, with their program C.A.F.E launched in 2004 in which they help coffee growers with their economic, social and environmental aspects. They promote the sustainable practices and the well-being of their families and communities. Lavazza and Nestlé are applying the same strategy, and in the case of Nestlé they are helping more than 900.000 farmers.

Finally, but not less important is the tendency of entering to the coffee cafeteria sector. Many companies such as Lavazza or Nestlé historically were selling their products in the retail market or with wholesalers. However, the excellent performance of coffee cafeterias such as Starbucks or Illy, caused these companies to also enter in another market sector such as cafeterias and direct sales to customers. That is why now Lavazza is opening their own coffee shops, reaching another sector of the coffee supply chain. In 2021, they started opening stores outside Italy, with the idea of blend the international Italian coffee culture to the one of the country where the store will be opened. They started opening shops in the UK and in 2023 in Colombia they will also open one store, for start competing with the other big players of the Colombian sector.

## **7.5 OTHER MARKET STRATEGIES FROM THE FNC**

Despite of applying the vertical integration as the business strategy of the National Federation of Coffee Growers in Colombia, the entity has done and promoted other marketing strategies. Principally, based in their character Juan Valdez (biggest marketing strategy of the Federation, done in the 60s explained in chapter 4), in the coffee culture of the country and in the coffee region. From these, they have created a thematic coffee park, they have been involved in sports, education and other international initiatives that will be exhibited in this section.

### **7.5.1 *Paisaje cultural cafetero PCC***

The coffee cultural landscape (name in English) is a famous Colombian region in which the coffee farming was developed since the beginning of the last century. It is a region of hillsides, mountains, and rivers, from which the people living there adapted the environmental conditions for the coffee cultivation. As it is written in their official webpage: "It is a cultural landscape in which natural, economic, and cultural elements are combined with a high degree of homogeneity in the region, and which constitutes an exceptional case in the world. In this landscape, the humans, families and generational efforts of coffee

growers are combined with the permanent accompaniment of their institutions” [109]. Due to the complexity of the landscape, the strategy adapted during the last century and that continues today is the one of coffee farming based on small property. The FNC has been the main promoter of this type of coffee cultivation and the one helping the people of the region not only in developing and selling their products, but also in obtaining a better percentage of the earnings of the final cup of coffee sold to the customer.

Over time, the coffee cultural landscape has become one of the most touristic regions of Colombia. In 2022 became the third tourist destination in the country, just behind the Atlantic coast of the country (Cartagena, Barranquilla, Santa Marta) and Bogotá. There, the tourists can find different activities to do, such as mountains with snow inside “Los Nevados” national park, different theme parks in the region of Quindío, bird watching or agrotourism in coffee farms. Also, they can visit famous and colorful towns such as Salento, Quimbaya or Finlandia; incredible landscapes in Valle del Cocora, hot springs in Santa Rosa town, and cultural and sport activities. Due to these variety of activities, some famous hotel chains have invested in the region, and that is why Pereira (known as the capital of the coffee landscape region) has now some hotels like Hilton, Movich, Sonesta among others. While in other regions like Quindío, or small towns, the idea of ecohotels and bio hotels is in its furors, as well as the glamping hotels.

The region is composed by 47 municipalities and 411 rural areas in the department of Caldas, Quindío, Risaralda and Valle del Cauca. It is located in the central and western mountain range of the country. The declaration of the region as cultural landscape was thanks to the resources of the FoNC managed by the FNC. In 2021, the Federation and the Ministry of culture of Colombia began the process to request the inscription of the Coffee Cultural Landscape on the UNESCO World Heritage list. For this process, it was necessary to demonstrate exceptional and universal values. In this case were the strong relations between the production economy, identity of construction and progress, and the creation of social capital and preservation of cultural values. Both of them gathered around the coffee activities of the 4 mentioned departments [87]. The UNESCO criteria accomplished were the V and the VI. The criteria V states: “Being an outstanding example of traditional forms of human settlement or use of land or sea, representative of a culture (or several cultures), or of interaction between man and the environment, especially when it has become vulnerable due to impact of irreversible changes”. And the number VI: “Being directly or materially associated with events or living traditions, ideas, beliefs or artistic and literary works that have outstanding universal importance”. In 2011 the PCC was included in the list, and since that moment, as a world heritage region, the Colombian state, the national, international, and local communities are committed to the preservation of the landscape, as well as to the promotion of it. Fig. 65 shows the map of the PCC, and some landscapes of the region.

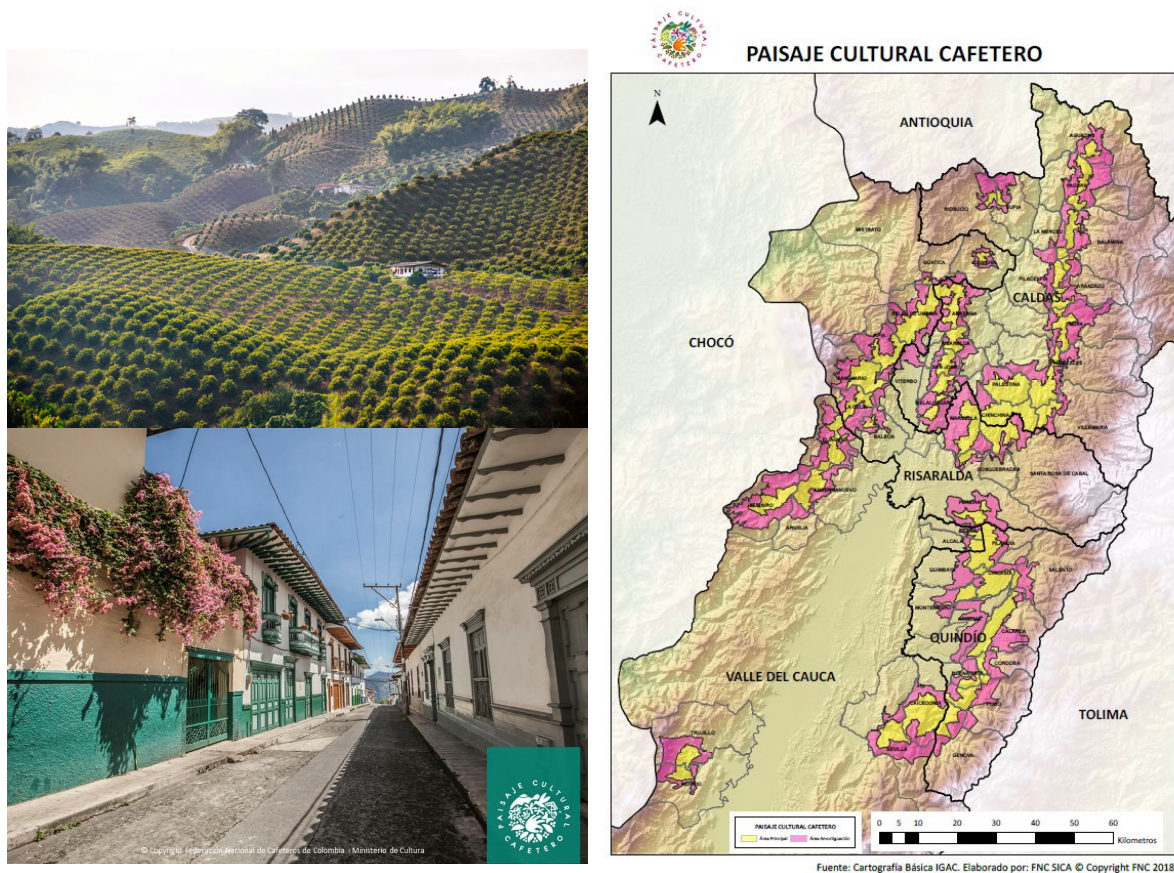


Fig. 65: Coffee cultural landscape (PCC) map and landscapes' examples. Source: [108]

### 7.5.2 Parque Nacional del Café

The national coffee park is a thematic and cultural place located in the municipality of Montenegro, in the department of Quindío. The park provides to their visitors fun, entertainment attractions and shows based in the coffee culture, showing to their customer the importance of the coffee and the coffee guild in the development of the economy of Colombia. The park promotes their activities in a natural environment, and is full of natural trails, cultural spectacles of the coffee, mechanical and aquatic attractions, and different stores and restaurants. It is part of the coffee cultural landscape explained in the subsection above, and it is a leader in South America. Mainly due to their unique activities and experiential experiences, that spreads the coffee cultural landscape through the world and contributes to the economic development of the department of Quindío. It positions the department as a destination for national and international tourists [110].

The park was opened in 1995, by the National Federation of Coffee Growers of Colombia, with their Departmental Committee of Coffee Growers of Quindío. The initial idea in 1982 was to open a national museum of the coffee, with interactive activities. When the park was opened that was its main focus. Then, with the passing of time, the park began to gain fame and more and more tourists came to visit it; so, the idea to make it a thematic park was adopted. The park is controlled by the foundation “Parque de la cultura cafetera”, and their



revenues are invested in the coffee sector and the Federation. Today, the park has 96 hectares, 56 of them built and the rest as natural environment. It has more than 40 mechanical and cultural attractions, and 4.000 species of plants and trees. More than a million of tourist visit it during the year. Fig. 66 has some pictures of the park.



*Fig. 66: Coffee national park sample pictures. Source: [110].*

### ***7.5.3 National Federation of Coffee Growers and the sports***

One of the most common marketing and exposure strategies that use companies in order to promote their brand is the support of athletes, teams and sports' events. The National Federation of Coffee Growers in Colombia has been part also of this group of entities, promoting the national coffee abroad. Their sponsorship of Colombian sports started in the 80s, and since that year the Federation has been involved in sports like football, swimming, motoring, horse riding or cycling.

The most famous and remembered sponsorship of the FNC, was the one done in the 80s, with the “Café de Colombia” cyclist team. They gathered the most important Colombian cyclist

of the moment, and they won “La Vuelta España”, one of the top 3 most important cycling tournaments of the world. The strategy stopped in the 2000s, but in 2009 they entered again in the cycling sponsorship with the team “Colombia es Pasión”. Another important campaign was the appearance of the Federation as sponsor of international events. Some of them were Café de Colombia Water Ski Tour (water skiing), Café de Colombia Alpine FIS World Cup (alpine skiing) and tennis tournaments such as the United States Open and the Roland Garros. The main idea with these campaigns is promoting the Colombian coffee as a healthy drink, ideal for young and energetic people; in short, a lifestyle [87]. Recently, Juan Valdez Café was also an official sponsor of the football World Cup Qatar 2022. Some examples are shown in Fig. 67



Fig. 67: FNC Sponsorship in sports. Source: [87].

#### 7.5.4 Other strategies and marketing campaigns

Apart for the strategies mentioned above, the Federation has launched new programs in the last years. Recently, in 2021, they created the program “Real Academia del Café”, a five



modules course that certifies Colombians that want to know the most important information about the coffee of the country. The objective of the FNC with this program is to promote the knowledge of the coffee bean. Also, that Colombian people can learn to identify the quality of the coffee and to consume it. Historically, in Colombia the people were used to consume the coffee with the lower quality, the commonly known as “Pasilla”; with this program the idea was to change this paradigm.

The courses are free and virtual, divided in five modules that offer the study of coffee varieties and characteristics, the preparation of the drink, the quality identification, and a practical part to learn how to taste it, like the wine [111].

In 2022, another historical situation occurred for the National Federation of Coffee Growers of Colombia. In order to commemorate the international coffee day, the company launched a Juan Valdez coffee bag to the space, as a legacy of Colombia to the rest of the world. The Colombian company made the launch from the coffee-growing mountains of the municipality of Palestina, in the region of Caldas. The process was through a hot air balloon, that had integrated a camera and a Satellite GPS. The departure route and the return of the coffee to Earth was documented with this dispositive. The coffee bag weighted 1.800 grams and reached a height of 26.000 meters [112]. The objective was to put Colombian and its coffee growers in the spotlight of the world with this event. Fig. 68 shows the coffee bag in the space.



*Fig. 68: Juan Valdez coffee in the space. Source: [112]*

## **8. FUTURE MARKET TRENDS AND CONCLUSIONS**

### **8.1 FUTURE MARKET TRENDS**

Before ending the analysis of the thesis, it is necessary to contemplate the future of the coffee market, and understand what are the new opportunities, threats and tendencies that could affect the players and future entering industries.

#### ***8.1.1 International trend***

At the international level, coffee stills being the 2<sup>nd</sup> most consume beverage in the world, with an average of 2,5 – 3 billion of cups of coffee served during the year. As it was seen in section 2.4, the coffee demand has a growing tendency, as well as the revenues of the hot drink market that is dominated by coffee. Historically, European countries and the United States have been the leaders in coffee consumption and purchasing. Form these countries are the most important companies of the coffee sector. However, the market tendency states a diverse result.

The average coffee consumption in the last years has been of 169 coffee bags of 60kg, and it is estimated to register a CAGR of 4.65% during the forecast period (2022-2027) [113]. However, the main actors are not going to be the same ones that historically have been predominating the coffee market, mainly due to the maturity of them. The USA, Japan, Canada, and European countries have presented a decreased tendency in the coffee consumption. While on the other side, producing countries are promoting the consumption of their own coffee (Colombia as a clear example), or there are appearing new emerging countries such China, Korea, Saudi Arabia etc.

Therefore, the reason of why it is estimated that for the next years the annual compound growing rate will be of 4,65% is due to 3 important factors according to the Italian Coffee expert Maurizio Giulli [114]. The first one is the demographic growth; the world has presented an increasing tendency in their population. Today we are in around 9 billion, and for 2050 it is estimated to be around 9,7 billion, so the increase in people means increase of possible customers that can buy coffee. However, this is not the unique factor explaining the forecasted growing of the coffee market, because the growth between population and coffee market have not been linear related. That is why there is a second factor, in this case the income. The increase of per-capita income means that there is more liquidity to buy goods including coffee and it has been demonstrated that there is a correlation between the GDP per capita and the coffee consumption. However, real world examples have shown cases in which per capita income has growth in a society, but the coffee consumption remained stable. The main reason is the limit of caffeine that a person can consume, and that when people have more income, tend to expend it in more items and not just food. That is why a third factor is mentioned which is the cultural transformation. Historically, there has been some “tea-drinking” countries such as UK, Ireland, Russia, or Turkey in which the coffee consumption was very low. However, from the 90’s this tendency has changed. First due to the spread of diverse coffee drinks different from the classic strong Americano or espresso,

for example the cappuccino, mochaccino, Frappuccino among others. Second, due to the modern dynamic of coffee shops implemented by Starbucks and that some other brands like Juan Valdez have adopted, attracting new customers and opening the coffee market [114].

Another tendency that the world is experiencing in this moment is the “premiumization” of the coffee. Nowadays, the brands are launching premium coffee, a product that makes an emphasis on how it was created, with some minimum quality standards, that provide to the customer a unique and special flavor. Along with this trend, there is also the selling of coffee with specific origin. Customers are more interested in knowing where their coffee comes from, because there has been a marketing strategy that highlights some specific countries as the ones that produce the best coffee.

In terms of the coffee export market, it is forecasted an increasing tendency too. Looking at Fig.10 of chapter 2, it is evidenced an increasing tendency, mainly caused by the disruption of the business model of modern coffee shops, and the coffee capsules market. The roasted coffee has been the one with the highest increase in exports, followed by soluble coffee and green coffee, Mainly caused by the appearance again of the capsules and modern coffee shops [114].

However, some challenging environmental and economic factors are visible in the horizon. The climate change is a reality, and heavy rains and droughts are already affecting the producing countries. Extreme weather is expected to increase in the future, affecting mainly the Arabica coffee cultivation. That is why many research centers (like CENICAFÉ) are working for creating new arabica varieties resistant to extreme weather. This, consequently, will affect the economy of the small coffee farmers, that depends on 100% in the coffee production.

### **8.1.2 Colombia national trend**

At the national level, the tendency is the sustainable production and the certified coffee. With the passing of the days, more and more clients are asking for coffee with certifications seals such as the fair-trade certification. This certification assures the responsible business conscious consumerism and sustainable development for farmers, workers, their families, and communities. Another seal is the rainforest alliance that promotes the fighting of deforestation, climate change and the construction of economic opportunities and better working conditions for rural people. Therefore, clients either buying green coffee or roasted coffee are every day more concerned about the process that the coffee had, the working conditions of the people involved in it and the environmental consequences of that work. Colombia has a good value on his topic, showing to the world that with their coffee growing they capture 800 tons of CO<sub>2</sub> every year.

Focusing on the coffee exporting market, the tendency is together with the global one, and the premium coffee (with specific origins) trend also arrived in the coffee farms. The last CEO of the FNC invited to all the coffee farmers to focus on the quality of the coffee they are producing and selling. He explained in their own words that “the present and the future of the Colombian coffee growing is in the quality of the bean”. He established that the profitability of the producers often depends on factors that cannot be controlled, such as the



international price of the grain or the COP-dollar exchange rate, which is why the highest quality coffees are called to trade outside the stock market. He established the following aim for the coffee growers: "More agronomy, more productivity, more quality, better profitability" [115].

On the other hand, also the Federation is promoting the coffee industry in the young people, focusing on the young coffee growers. At the beginning of the 2000s, the FNC started to see a tendency in which their coffee growers were getting old. The cause was because their sons and daughters were moving from the countryside to the city, or they simply did not have interest in the idea of continuing in the coffee industry. That would be a problem in a near future because there would be less labor, less productivity. And as the market was expected to grow, it would be impossible to satisfy the demand. Due to this, the Federation created the Colombian coffee growers' youth congresses. A strategy that supports and encourages young entrepreneurs to participate in activities of the coffee agro-industry. Their mission is to find a way of selling a sustainable coffee that will leave more earnings to their families. It has been a success, and more than 400 young people have gathered since 2021 around the coffee market.

Together with the young coffee growers and their parents, the Federation is also concern in the climate change. With Cenicafé, they are developing new strategies for the cultivation of the arabica coffee in new landscapes, or for the resistant of the coffee bean to extreme weather conditions.

Focusing now on the roasting coffee market, in the retail and cafeteria area, there are also some clear trends. First, Colombia internal coffee demand is increasing. As it was shown in chapter 5 Fig. 39, there have been an increasing tendency since 2009, mainly promoted by the FNC and the government with different incentive programs such as "Toma Café". The idea has been to transform the Colombians in coffee experts, because historically Colombia has been a coffee productive country but without coffee consuming people. The trend then, is transforming the Colombians in experts of their coffee, and that is why some projects like "Real Academia del Café" have been created. In 2021 the market presented an increase of 2,8 kg of coffee per capita per year in consumption, while in 2019 it was in 2,2. In 2022 the data showed that in average it is consumed 3,7 cup of coffee per person. This is an excellent panorama for companies like COLCAFÉ, leaders in the retail sector in Colombia, and that historically has focused on the Colombian coffee market.

Finally, analyzing the tendency of the Juan Valdez cafeterias, it is found that their strategy is the expansion around the globe. Their revenues have been increasing by 60% every year in average, with 539 profitable stores around the country. Fig.69 shows the distribution of the company around the world, including the stores and the retailers (together with Buencafé) [116].

## International presence of Juan Valdez

2022

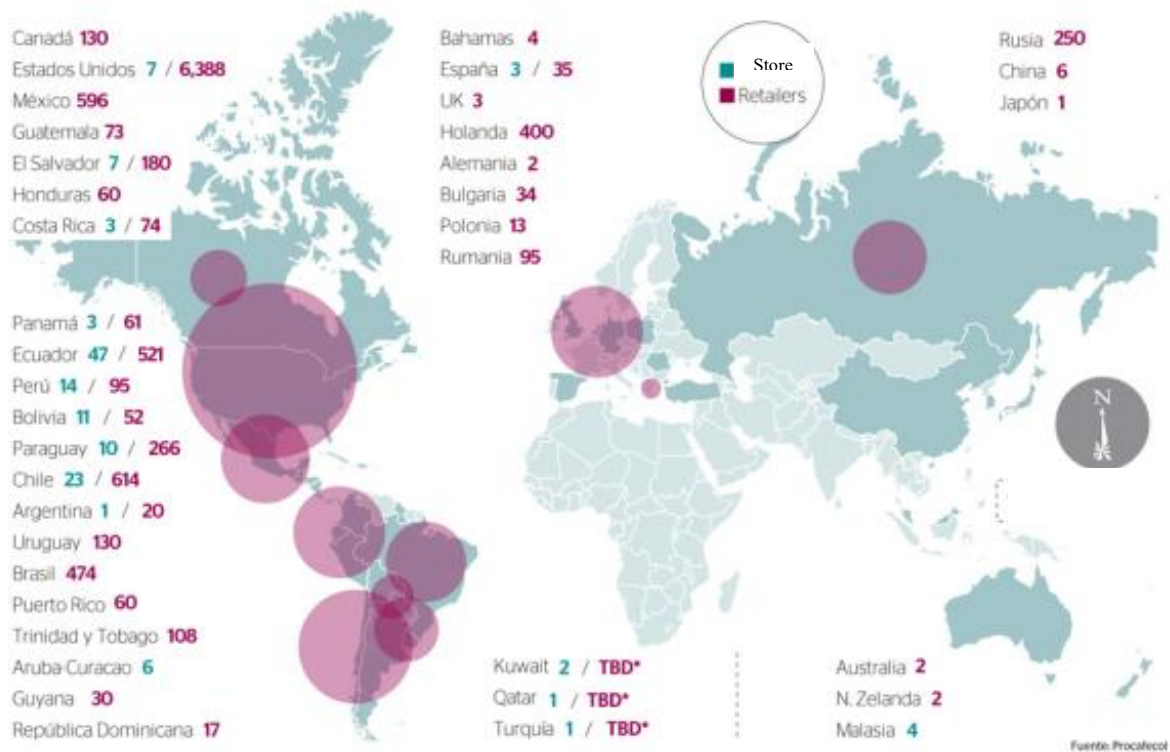


Fig. 69: Juan Valdez International presence. Source: [116]

As it can be seen in the figure above, the Federation is scattered around the world. Their strategy is to expand the Colombian coffee traditions around the world. As it was explained in subsection 8.1.1, the world is having a tendency in which there are new markets emerging as coffee consumers. The FNC is taking advantage of this trend by opening stores in those countries, such as its most recent opening in Turkey. Consequently, the company has as a goal for the 2027 to be a very relevant actor with international points. They want to open stores and start competing with the big players (the ones who have more than 500 stores out of their country of origin), which are not more than 10. Some of them are Starbucks, Dunkin Donuts, McCafé and Tim Hortons [116]. The company is willing to have 2.000 stores for 2027, with 800 of them located in Latin America, being Colombia, Chile, and Ecuador the leaders.

## 8.2 CONCLUSIONS

Coffee, a word that only by writing or pronouncing it fills people with various delicious thoughts. It is the second most consumed beverage in the world, after water, and it is present in almost all the life of the people in the world. With this thesis, a deeply overview and analysis of that simple word of six letters was done. The idea was to understand the most important players in the world, but mainly, understand the Colombian coffee market.

As coffee comes from the agriculture, it was found that the supply chain is divided in 3 main stages. The first one is the producing process (that involves all the part of supplies, cultivation, harvest and exports-imports). The second one is the industrial production part (roasting). The third one is the retailing sector, that could be performed through big wholesalers and retailers, or through hotels, catering, or restaurants (HORECA), being the coffee shops the dominant sector in these years. Exports and imports had experienced a growing tendency, in which the main players are the producing countries such as Brazil, Vietnam and Colombia, and the consuming countries such as United States, Finland or Netherlands. From this dynamic, also it was analyzed the biggest characters of the market, in which the top 4 companies were from the middle and the last part of the supply chain (roasting and retailing). The reason found was that the further back in the supply chain, the lower the sales and profits, the higher the costs and competition. Consequently, the top 4 were Starbucks, JDE, Lavazza and Nestle, being Starbucks the dominant of the market. Main cause was due their innovative coffee shops proposal, that has made revenues of around 30 billion dollars.

However, in the mentioned leaders of the market, none of them has had a strategy like the one that a coffee company from one of the producing countries has had. For this and more reasons, the Colombian coffee market was analyzed. For the country, located in South America, the coffee has been one of the main causes of their economic and social development. Its land conditions and weather made possible to grow one of the best coffees in the world, the mild Colombian arabica. From the end of the XIX century the growers of the country focused on the coffee. By a hand method, they created a sophisticated coffee cultivation process, based in the quality and the strict analysis of each coffee bean. In 1927, the coffee growers decided to create an institution that would be their representatives in the country and at international level, the National Federation of Coffee Growers of Colombia, FNC. Since that moment, this institution, that then became a private and federated company, has been dominating the Colombian coffee market. Not only with their companies, and the management of the National coffee fund of the country, FoNC; but also promoting the coffee consumption and establishing the rules of the coffee production that will most benefit the coffee growers.

The Federation applied a business strategy, that has benefited them and helped them to be present throughout the supply chain. This strategy is the Vertical integration, with the important detail that was a balanced approach and not a backward one, process that is even more difficult due to the large amount of time and money that must be invested. Today, the company apart from exporting coffee with the funds of the FoNC and their federated cooperatives, also is in the retail sector. With their Buencafé company and their Juan Valdez coffee shops, they have been expanding through all the world, with the idea of being by the

end of this decade, one of the most important players in the world. Nowadays they are already dominating the Colombian coffee market.

The uniqueness of this thesis remains in the fact that it is not only describing the international coffee market, but also is analyzing deeply the market of one of the most important producing countries (Colombia). By understanding the functioning of a complex institution such as the National Federation of Coffee Growers and presenting a business strategy that has been taken by big multinational companies around the world. However, just few of them have applied the same approach, that is a balanced vertical integration.

Also, this document gives rise to further questions, analysis, and studies to be carried out and could be taken as a base:

- The role of the FNC in the Colombian market in the future. Will there comes a time when the competition gets tired of accepting that the Federation acts as a judge and a competitor in the market?
- Is there any kind of oligopsony in the Colombian and international coffee market? How can coffee growers overcome this situation in a near future?
- Tradeoff between crop areas for cover future coffee demand at expense of forests. Does the climate contamination will obligate a changing of the panorama of productive coffee countries? Will new coffee producers appear that will adapt to the new climatic conditions?

Answers for these and more question could be find taking this thesis as a base plan. The subject is proposed, and ready to be analyzed....

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