



**Politecnico  
di Torino**

**Politecnico di Torino**

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**The European Coffee Market:  
differentiated demand and producers'  
strategies**

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# **ABSTRACT**

The purpose of this thesis is to analyze the European coffee market. Starting from an historical perspective, the thesis will focus on the roasting process, the differentiated demand and the strategy pursued by the largest roasting companies. In particular, the European market is examined by considering the countries with the greatest influence in terms of per capita consumption, and for each, one or two large roasters were identified, to have a complete view of the competitors in Europe. In addition, the three largest chains for out-of-home consumption were analyzed. Finally, to get a more complete picture of the context, analysis of the coffee market was carried out through PESTEL framework and the Porter's Five Forces.

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# 1. The history of coffee

*Coffee, to be good,  
must be black as night,  
hot as hell and sweet as love.  
Turkish proverb*

The origin of coffee is an ancient story, so varied and elusive, starting with the name. Was it the Kaffa upland in Ethiopia, rich in crops, that gave the name to the famous plant or was it that gave the plateau its name? Scholars still disagree on this topic; however, they agree in affirming that the term coffee derives from the Turkish *kahveh*, in turn coming from *qahwah*, which in the classical Arabic language indicated a drink produced by juice of some seeds.

Today, both the plant and the fruit roasted, ground, and infused in hot water, from which the name of the well-known drink derives, in most languages has a name that is very similar in spelling and pronunciation: with small differences they call it coffee.

## 1.1 Between myth and reality

According to legend, coffee was first discovered in Ethiopia, thanks to a shepherd named Kaldi who used to take his goats to graze in the mountains. One evening he realized that his goats were unusually lively after eating the strange fruits of a bush and decided to taste them, experiencing the same effects on himself. The news of this mysterious fruit with



Figure 1.1: The shepherd Kaldi and his goats discover the properties of coffee, source: [sipartedopoilcaffè.com](mailto:sipartedopoilcaffè.com)

prodigious properties reached the fruit of the monastery of Chehodet, in Yemen. But a local monk, considering it the work of the Devil, threw the red berries into the fire, which released a unique and incredible aroma into the valley. Intrigued, a monk collected the scorched beans, crushed them, and placed them in a container full of hot water: it was the first cup of coffee in history.

Another myth concerns Muhammad who, caught by an uncontrollable and sudden drowsiness, is rescued by the Archangel Gabriel, who brings him a black potion, which in the legend is called *qahwa*, sent directly to him by Allah. Mohammed drinks it, revives and manages to leave for his journey.

Legends aside, there is a common understanding that Ethiopia, Yemen, and Islam have played a fundamental role in the spread of coffee. The *Coffea* tree is native to the ancient province of Kaffa, in southwestern Ethiopia. It is in this area, between 900 and 2000 meters, that coffee finds its origin. As early as 2000 years ago the nomadic Oromo tribe, who lived in the kingdom of Kaffa, used to consume dried, ground, and mixed coffee leaves and fruits with salted butter and spices, which they then chewed or sucked during their travels.

## **1.2 The role of Islam in the spread of coffee**

Yemen, which the Romans called Arabia Felix, had long and intense commercial relations with the Empire of Ethiopia. We can assume that *Coffea arabica* was brought there from Ethiopia and exported throughout the Arab world from the port of Mokha (a city in Yemen from which the moka, the coffee maker designed by the Italian Alfonso Bialetti in 1933, will derive its name). A Sufi monk who lived in Mokha may have been the first to make coffee as we know it today. He and other Sufi monks began to use this drink during religious ceremonies and to stay awake during long night prayers. With their travels and pilgrimages, the Sufi monks spread coffee throughout North Africa and the Middle East, from Cairo to Mecca and Medina, to then reach the great cities of Damascus, Baghdad, and Constantinople. The great success of coffee among the Arab peoples and its diffusion were due in large part to the ban imposed by the Koran on drinking alcohol, the substitute of which became coffee, so much so that it earned the nickname of "Arabian wine" or "wine of Islam ". In 1517 the coffee arrived in Constantinople. During the sixteenth century, with the conquest of Egypt and Yemen, the Ottoman Turks began to appreciate and consume this dark drink. For the port of Mokha, coffee becomes such an important commodity for trade

that the export of the plant is prohibited. The sale of coffee plants and seeds becomes a crime of high treason and as such punished.

### **1.3 The spread of coffee in the ancient Europe**

The consumers of what was considered black gold were mainly Europeans, men, and aristocrats, who began attending the first "Cafes" throughout Europe about 400 years ago: in Vienna, London, Paris, Venice, and Trieste.

#### **1.3.1 Italy**

In 1570 a botanist, Prospero Alpini, returning from a trip to Egypt, brought coffee to Venice, describing it as a “drink with a black color and a taste similar to chicory”. Cataloged as a medicine and sold by apothecaries at a very high price as a medicine, coffee was considered effective against flatulence, headaches, rheumatism, and excellent for preventing gout and scurvy. In 1615 coffee arrived in large quantities on the European continent thanks to Venetian traders, along the *Via delle Spezie*. Coffee begins to be appreciated as a drink and to be sold by street vendors along with chocolate, lemonade, and liqueurs.

In 1683, the first Italian café named "All'Arabo" was inaugurated in Piazza San Marco. The success was such that a century later the Venetian government was forced to suspend the granting of licenses because the coffee shops in the city had grown to over two hundred.

In 1720 he opened the famous Caffè Florian and soon elegant cafes also flourished in other Italian cities, such as the Caffè Greco in Rome, the Pedrocchi in Padua, the San Carlo in Turin. But upon his arrival in Italy, the consumption of coffee met with great hostility: the ecclesiastical world distrusted its Arab origin. Some bishops even presented a petition to Pope Clement VIII to ban the diabolical drink, a satanic threat from the "infidels". But the Pope, after having tasted the coffee and enjoyed it, blessed it as a "Christian drink", stating that it would be a real mortal sin to leave its consumption only to infidels

#### **1.3.2 England**

In 1652 the first coffee house opened in London in the courtyard of the parish of St. Michael in Cornhill thanks to Pasqua Rosée. Coffee stimulated discussions, sparked debates, and all



without distinction of social class: everyone was allowed to enter (with the exception of women). Isaac Newton himself wrote his treatise on gravity in 1687 in a Cambridge coffee house, the *Grecian*. At the end of the seventeenth century these coffee houses took the name of "penny universities", as with a penny you could buy a cup of coffee and be informed about the latest events.

### **1.3.3 France**

The drink had already been seen in Paris but was not successful. The culture of coffee spread thanks to the Turks, when in 1669, Sultan Mehmed IV sent an ambassador to Paris. He arrives in the French capital, taking with him a large quantity of coffee, which was served in gold cups during parties with the Parisian elite. From there, it was immediately a success: between 1669 and 1670 in Paris it became fashionable to have a room decorated in the Turkish style where one could sit, and sip coffee dressed in oriental garments. But, after Vienna was besieged by the Turks, there will be a temporary decline in the fashion of coffee in Paris. Until in 1686, a Sicilian, Francesco Procopio Coltelli, opened the Caffè Procope in Paris, a royal and sumptuous café where, unlike the English coffee houses, women were welcome. Café Procope became a meeting place for the French Illuminists. It is said that Voltaire drank 40 cups of coffee a day and that his *Encyclopédie* was written right at the Café Procope. And it is in another historic café, the Café de Foy, that on 12 July 1789 Camille Desmoulins incited the revolution with the cry "Aux armes, citoyens".

### **1.3.4 Netherlands**

The spread of coffee in Netherland came thanks to Pieter Van Den Broecke, who had been to Mokha while working for the Dutch East India Company. He stole a plant and took it secretly to Netherlands, where it was planted in the Amsterdam Botanical Garden. This plant is the progenitor of all varieties of *Coffea arabica* grown later. Subsequently, the coffee was brought to the Dutch colony of Ceylon (now Sri-Lanka), then to Malabar (India) and Batavia (now Jakarta, Indonesia) and for half a century the Dutch dominated unchallenged and, in a few years, Java became the main producer and supplier of coffee in Europe. Soon the Dutch began to protect their coffee production by banning the sale and export of plants and fruits. In fact, during the Golden Century, Amsterdam was the most famous port for the trade of both tea and coffee,

so much so that the Dutch came to love these drinks. The Dutch dominance will be affected only at the end of the century by the French.

### **1.3.5 Rest of Europe**

In the mid-seventeenth century Cafes had sprung up in many of the main European cities, but the drink found it hard to spread. The Turkish fashion of drinking the bitter drink, perceived as heretical as a Muslim, did not appeal to European palates. In addition, supplies of coffee - through the ports of Mediterranean Europe - were irregular and the drink remained extremely expensive. Both tea and coffee immediately became the subject of medical and scientific treatment and continued in the eighteenth century to be the object of attention from religious, doctors, intellectuals, and public opinion. Stimulating drinks, exotic delicacies that entered Europe through aristocratic circles, were inserted during the eighteenth century into a new social language marked by sobriety and measure. Especially with regards to the properties the texts dedicated to him during the eighteenth century are characterized by the rejection of absolute and non-demonizing judgments. The material context had profoundly changed, and at the center of the dispute there was no longer the opportunity to consume unknown and exotic products or not, as the three drinks (tea, coffee, and chocolate) had become part of the daily consumption of small but important aristocratic circles. On the other hand, to understand the change in the attitudes of intellectuals and doctors it is necessary to consider the change of mentality that characterized the European Enlightenment, as well as its implications on the evolution of concepts: it is precisely in this century that there will be a great diffusion of these drinks in Europe.<sup>1</sup>

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<sup>1</sup> Irene Fattacciu, "Socialità, esotismo e 'ispanizzazione' dei consumi nella Spagna del Settecento", Trieste, EUT Edizioni Università di Trieste, 2018, pp. 144.

## 2. Botanical aspect

The *Coffea* genus includes over 100 species, however, commercially the coffee varieties are offered in two main types: Arabica (*Coffea Arabica*) and Robusta (*Coffea Canephora*). There is a third main variety: *Coffea Liberica*, but its share of the coffee production is less than 2%. About ten species of coffee are grown locally and are therefore little known. The best known are *Coffea Stenophylla*, a native of West Africa, *Coffea Mauritiana*: the brown coffee of Mauritius and *Coffea Racemosa*, originally from Mozambique.

The species differ in taste, caffeine content and adaptability to climates and soils other than those of origin.

### 2.1 Coffea Arabica

*Coffea Arabica* belongs to the family of *Rubiaceae* and it originates in the mountainous territory of Ethiopia and was first cultivated in today's Yemen. Cultivation began in these regions, which then spread to tropical regions around the world. It is the finest quality of coffee, and it covers 60% of the world's total coffee production, hence it is currently the dominant one. Arabica grows luxuriantly in tropical areas between 900 and 2,200 meters above sea level, with temperatures no higher than 20°. This species is more delicate than the Robusta variety and presents a minor

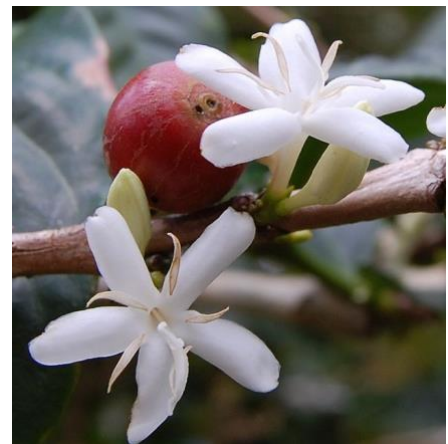


Figure 2.1: *Coffea arabica* flowers and bean, source Pinterest.com

caffeine content with respect to the other species. It does not tolerate drought or continuous rains, frost, or strong winds. This plant thrives easily in Central and South America, but also on the eastern coasts of Africa. The fruit (drupe) is generated from the white flowers, which then ripens from green to red. Each berry usually contains two Arabica coffee beans or seeds with a greenish yellow color. Precisely because of their delicacy, Arabica coffee beans must be treated more delicately even during the roasting phase, with greater attention, with lower temperatures and precise times.

## 2.2 Coffea Robusta

*Coffea Canephora* – or Robusta – it is the second most produced coffee species in the world after Arabica, and it also belongs to the family of *Rubiaceae*. Discovered in the 18th century in Congo, it grows in Brazil, Africa, and Southeast Asia. This species is characterized by its adaptability, growth speed and high tolerance to temperature changes. In fact, unlike Arabica, it grows well at lower altitudes, from above sea level up to 600/900 meters high and as the word itself says it is very resistant, that is, less prone to parasites, diseases, and climatic shocks: it does not need much care and does not present difficulties even in hot-humid climates. Resisting well to humidity and temperature changes, Robusta has a high productivity and today represents about 1/3 of world coffee production.



Figure 2.2: *Coffea Robusta* flowers and beans, source Pinterest.com

## 2.3 Coffea Liberica

Arabica and Robusta make up more than 98% of world coffee production, but there is also a third variety: Liberica. It is named after the forests of Liberia and like the Robusta variety it is resistant to high temperatures and high rainfall. The trees are very tall, and the leaves are also huge in comparison to those of the other two coffee varieties. The beans have a very particular and easily recognizable shape, in fact they are pointed. It is cultivated in west Africa, Indonesia, and Philippines. A famous variety of Liberica is *Excelsa*, discovered only in recent times.

## 2.4 Differences in shape and flavor

Moving on to the shape of the beans, those of the Robusta coffee variety are harder and more rounded in shape with a linear groove than those of Arabica which are elongated, oval, with a more irregular groove. From Arabica, a coffee of excellent quality is



Figure 2.3: differences between Arabica, Liberica and Robusta coffee beans, source zen.yandex.ru

obtained, aromatic, with a less bitter and more persistent flavor. It contains less caffeine percentage than Robusta and accounts for 3/4 of world production. Complementarily, Robusta constitutes 1/4 of the production and allows to obtain a very full-bodied coffee, with a bitter taste, and a higher percentage of caffeine as shown in the table below. The caffeine concentration of Liberica is lower than the one of Arabica and Robusta, presenting 1.23% of caffeine concentration. Liberica coffee beans taste sweet, strong, fruity, and unique when prepared and roasted well. It gives fragrant beans but of a quality considered lower than the other varieties, for this reason it is often used to create crosses with other coffee species.

Characteristics	Arabica	Robusta
Ideal temperature	15 - 25°	20 – 30°
Altitude	1000 - 2000 m	200 – 600 m
Rain	1500 – 2500 mm	2000 – 3000 mm
Sugar	6 – 9%	10 – 12%
Caffeine	0,8 – 1,6 %	1,7 – 4%
Chromosomes	44	22

Table 2.1: Summary table of the main characteristics of the two most popular varieties of coffee.

## 2.5 Caffeine

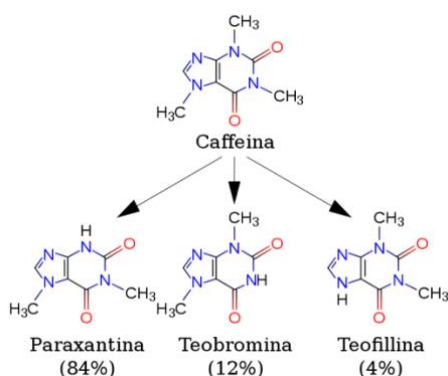


Figure 2.4: Chemical composition of caffeine, Theophylline and Theobromine, source: Wikipedia.org

The active substance contained in coffee is caffeine. This was discovered at the beginning of the 19th century in Germany by the doctor Ferdinand Runge. It is said that the doctor was motivated to start the study after meeting Johann Wolfgang Goethe, a great drinker and admirer of coffee. The philosopher recognized the drink's great stimulating properties but complained that he did not let it sleep at night. It is considered the most widespread and most consumed psychoactive substance in the world, being used both for recreational and medical purposes.

Caffeine is legal in all countries, unlike other psychoactive substances, and accepted or tolerated by nearly all major religions. its chemical formula is  $C_8H_{10}N_4O_2$ : is an alkaloid compound, theophylline (contained in tea) and theobromine (contained in cocoa) also belong to this group

of substances. As can be seen in the figure 3.1, their chemical composition differs only in the absence of CH<sub>3</sub> in these two compounds: in this lies the explanation of their similar effects on the organism.

### 2.5.1 Positive and negative effects

Caffeine, like the other alkaloids (atropine, nicotine, strychnine, morphine, etc.) is physiologically active on animals even at very low concentrations. In humans, caffeine also influences numerous biological reactions. Some of these interactions are beneficial for the body while others are responsible for the side effects of this substance. In fact, its chemical conformation makes it suitable for interacting with specific biological receptors that regulate the functionality of the cardiovascular, endocrine, and nervous systems. The intestinal tract absorbs caffeine very quickly and plasma concentration peaks are observed approximately one hour after its ingestion. Among the benefits we certainly have excitability, improvement of reflexes and ability to concentrate, analgesic action, increase in body metabolism, heart rate, blood pressure and the number of respiratory acts, consequently increasing blood oxygenation. However, there are also negative effects: in fact, coffee reduces the absorption and of some substances such as vitamin B<sub>2</sub>, calcium, iron, and creatine. Caffeine intoxication caused by the massive intake of this substance (over 500-1000 mg in relation to individual sensitivity) causes excessive excitement, nervousness, insomnia, and tachycardia.

<b>Beverage</b>	<b>Caffeine content</b>
Coffee	80 mg (one cup)
Coca-Cola	35-40 mg (one can)
The	28 mg / 150 ml
Cocoa	100 mg / 100 gr

Table 2.2: Caffeine content in various foods, source [mypersonaltrainer.it](http://mypersonaltrainer.it)

### **3. The production process: from seed to cup**

The supply chain is the set of activities necessary to transform a raw product into a finished product, available to be sold to consumers. In the following chapter the process that allows coffee beans to turn into the beverage we all drink will be analyzed.

For coffee we can identify three main stages:

1. Agricultural steps that include coffee cultivation and harvesting.
2. Treatment and processing up to the green coffee and production steps consisting of roasting and grinding coffee.
3. Retailing, consumption, and disposal.

The coffee bean supply chain is a long process that involves several steps: the first is the cultivation of the beans done by the farmers who grow the coffee plants and harvest the beans. After cultivation, coffee cherries are treated by dry/wet processing from which green coffee is obtained. Then, a variety of measures are applied in the refining process consisting of polishing, sorting, washing, and drying, which is followed by roasting process. After roasting and packaging, coffee is ready for retailing and consumption.

Consuming coffee requires water and energy, which are the most concerned environmental issues in the coffee lifecycle. Finally, coffee grounds, filters and packaging are disposed by consumers. Note that in the coffee supply chain, the transportation distances are the most important concerns of shipping green and roasted coffee from producing to consuming countries.<sup>2</sup>

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<sup>2</sup> Byrnes, W., Khodakarami, N., Navaro, C. (Nov 2016) The Value Chain: A Study of the Coffee Industry, § 32.01 - § 32.04. Practical Guide to U.S. Transfer Pricing. LexisNexis

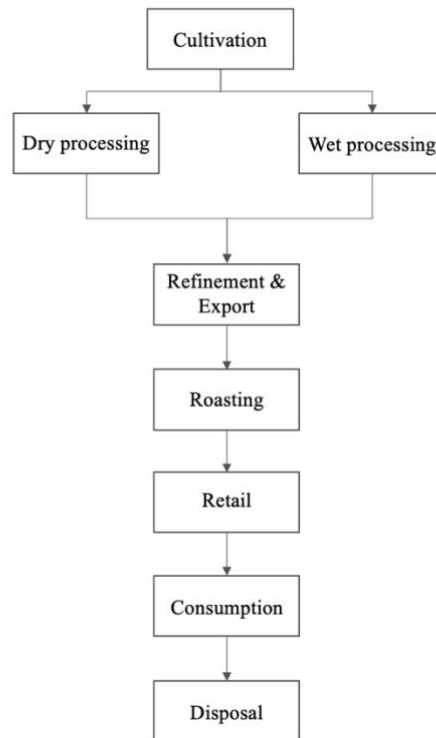


Figure 3.1: Coffee supply chain, source researchgate.net

### 3.1 Growing & Harvesting

It can take four to seven years for a coffee plant to produce its first crop of beans. The harvesting process is a very laborious exercise because not all the red cherries that contain the coffee beans are ripe at the same time. Therefore, the workers must continuously check the trees by harvesting only the ripe cherries from time to time. Parts of the cherry must be removed to access the kernels and they must be left to dry.

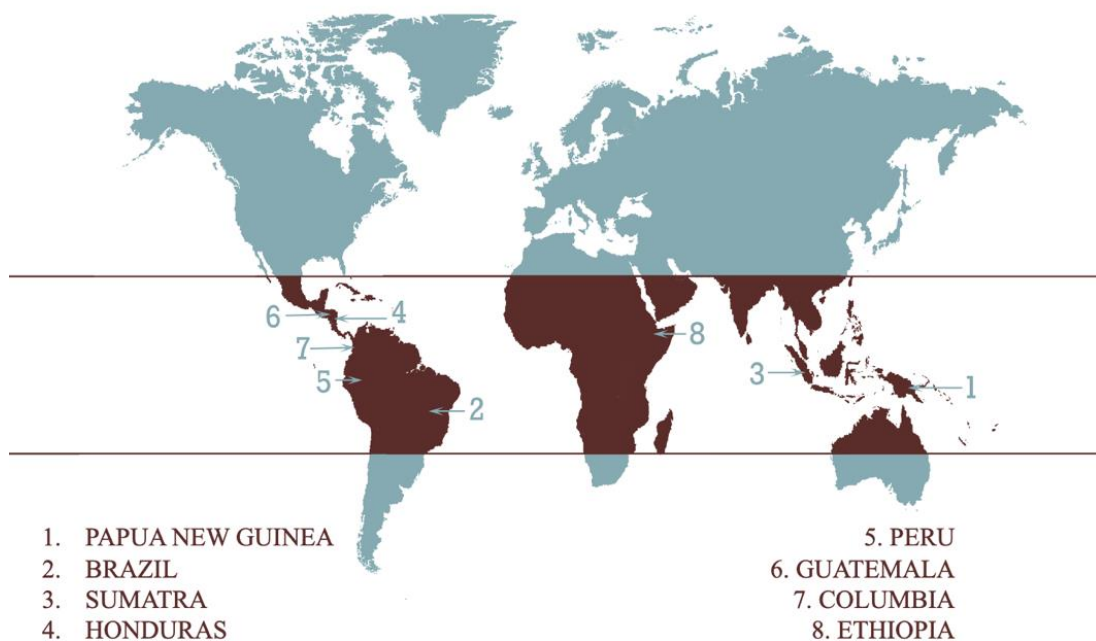
#### 3.1.1 The coffee Bean Belt

Coffee grows mainly at certain latitudes: all areas between the Tropic of Capricorn and the Tropic of Cancer. This area has an ideal climate for the cultivation of coffee beans and is often referred to as the "Coffee Bean Belt": it extends for an area of approximately 5100 km, crossing 5 continents (South America, North America, Africa, Asia and Oceania) and comprising 70 countries.



The coffee plant needs a very specific set of conditions to survive and thrive, and this is where the coffee belt comes in. In fact, the geographical location of the coffee belt guarantees sufficient rain with distinct dry seasons, the climate that is moderately sunny days with cool and stable temperatures, high enough altitudes for the coffee plants to thrive and the soil is fertile.

Just like wine, the taste of coffee can differ even slightly by changing the conditions of soil, temperature, rainfall, and altitude: in fact, even if the conditions between the countries within the belt are very similar, it is possible to obtain a coffee with a noticeable different taste.



*Figure 3.2: The bean belt with some of major producers, source pinterest.it*

### 3.2 Processing

The coffee fruits are fleshy and green drupes that turn bright red as they ripen, like cherries. They contain a kernel that contains two seeds: coffee beans. The fruits must be harvested by hand to avoid damaging them and as soon as they mature to prevent them from rotting. Immediately after harvesting, the coffee processing can begin.

### 3.2.1 Dry method

There are two different methods of separating the beans: the dry method and the wet method. In the dry method, the fruits are dried in the sun in special dryers that move the beans to avoid fermentation. Once the moisture content is below 12.5%, the outer layer of the cherry can be removed to produce the

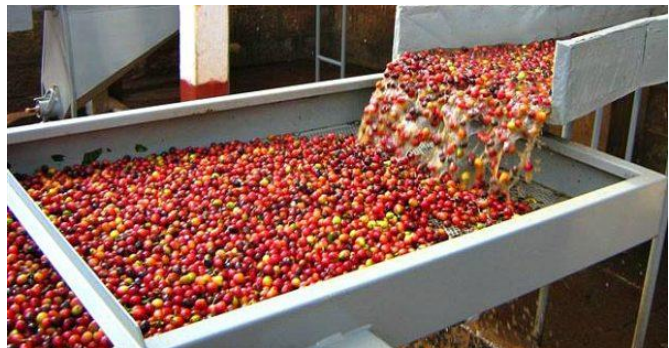


*Figure 3.3: workers put the beans to dry, source bigcaffè.it*

so-called "green coffee". This method is the fastest but of the lowest quality. When the pulp is dry, the pitting takes place, thus obtaining the coffee beans. At the end, there is then sieving with special machines that separate the beans by dividing them by size: the coffees treated with this method are called "natural" coffees.

### 3.2.2 Wet method

In the wet treatment, on the other hand, the grains are removed from the pulp by stripping machines which, using a continuous flow of water, break the skin and pulp, releasing the seeds. The beans are then placed in the sun for about 10 days, to reduce the moisture content by



*Figure 3.4: jet of water used in the wet method, source bigcaffè.it*

up to 12.5%. After drying, as for natural coffee, the pitting is carried out. It is then sent to sieving, with sieving machines that select and divide them by size.

### 3.2.3 Roasting

Green coffee can be kept for a long time without problems, but after being roasted its taste and aromatic characteristics last a few months: for this reason and for the degree of roasting that varies from region to region, roasting always takes place in the consuming country.

Roasting is a very important phase of the coffee production process: the term derives from the latin word *torrefacere* and means “to dry”. At the base there is a procedure which consists in the simple cooking of raw beans: it is necessary to know the ideal roasting point for each variety of coffee, to ensure that the aromatic profile remains intact.

The roasting process increases the value of the product up to 300% compared to the value of the unprocessed raw material.<sup>3</sup> Green coffee reaches the plant inside 60 kg bags or inside special tanks, after a strict quality control during which any foreign bodies present are removed from the batches. Subsequently, the green coffee is placed inside temporary storage silos. The passage to the first phase of the production

process, that is toasting, takes place only after having defined the blend to be used. During the roasting phase, the different origins are thus mixed thanks to the convective motions inside the roasting machine.

The process is carried out in dedicated coffee roasting machines, which have the capacity to roast batches weighing anywhere from 1kg to more than 100kg at a time. Almost all machines are composed of a metal cylinder with a system of blades inside that guarantee the mixing and homogeneous exposure to heat of all the coffee beans. The heat required for roasting is normally produced in a combustion chamber heated by means of a gas-fired burner, while some small machines, with a capacity of 1-2 kg, are electrically heated. The main roasting systems are two, conduction and convection, plus a third consisting of a hybrid of the former.

- In the ***conduction roasting system***, the heat energy is transferred to the coffee by contact, from the metal walls of the cylinder heated by an underlying heat source. This method does not ensure perfect control of the roasting process, in fact it could get a not very homogeneous roasting and go towards "scorching": coffee, in fact, has a low thermal conductivity, which hinders the transfer of heat to the inside of the grain: it is therefore probable to obtain roasted beans only on the surface and raw inside and this



Figure 3.5: freshly roasted beans come out of the roasting machine, source pinterest.it

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<sup>3</sup> Yeritzian et al., 2002.

can also have repercussions on the flavor of the drink served. Scorching also causes another phenomenon: the coffee in contact with the metal walls, in fact, causes the detachment of small flakes of the grains, called Tips, which burn during extraction and give the coffee a sour taste. Due to these problems, this conduction system is now almost completely out of use.

- ***Hybrid roasting system*** marked the transition from conduction to convection roasting. The adoption of gas as a fuel for heating the combustion chamber has made it possible to better control the heat. In fact, with the appropriate modifications to the cylinders, no longer closed but perforated to allow the passage of air, the roasting process was partially dependent on a flow of heated air, rather than totally derived from the heat transmitted by the walls of the cylinder to the roaster. In this way, less direct heat conduction is obtained on the metal walls, while the hot air that penetrates the rotating cylinder from the holes acts directly on the coffee beans. The hybrid model helped to improve the result on roasted coffee compared to conduction roasting. For this reason, the most qualified manufacturing companies have continued the technical path in this direction, until obtaining a roasting method with heat transfer mainly by hot air.
- ***Convection roasting system*** is the method used by the most modern roasters: the beans are cooked by convection, through the hot air that flows and is forcibly conveyed into the cooking drum of the machine. The coffee is roasted using air that guarantees a uniform result, both inside and outside the bean, and ensures the chemical-physical transformations necessary to obtain a perfectly roasted coffee. Convection roasters allow you to optimize the variables of the volume and temperature of the conveyed air, as well as the modulation and power of the burner and the rotation speed of the cooking drum. In this way, different roasting profiles can be obtained, ranging from 190 ° C to 250 ° C, while the time can vary from 8 to 20 minutes. Coffee roasted with this method lends itself to various types of extraction: espresso, filter coffee and Turkish coffee.

### **3.2.1 Grinding**

To be used in most used coffee machines, Coffee must be processed and ground into powder. Grinding is the process in which, through a machine called a grinder, the coffee beans are broken to then extract the soluble substances with water and obtain the drink. The grinding is therefore a fundamental variable in the preparation of coffee. The main objective is to facilitate the transfer of soluble substances in the drink.

### **3.2.2 Degassing**

At the end of roasting, the coffee, due to the various physical and chemical transformations it undergoes, continues to degas, releasing carbon dioxide and aromatic compounds into the air. If it is transferred directly to the packaging, a one-way valve is inserted in the special packages that allows the coffee to continue degassing, thus avoiding swelling and the consequent loss of integrity of the package.

If it is intended for grinding, it is instead placed in special degassing cells in which, by inserting nitrogen, which acts as an inert gas which prevents the coffee from meeting oxygen and therefore from oxidize, the release of carbon dioxide and other gases continues.

This process is necessary and essential for ground coffee as the smaller the size of the powder, the faster the release of gas into the air. It is not followed for coffee beans which have a much longer degassing time and, for this reason, is degassed inside the package.

If the coffee is intended for vacuum packs, this process lasts a few hours. For capsules, on the other hand, the degassing process can take longer than 24 hours due to the limited headspace.

### **3.2.3 Packaging**

If left open, roasted coffee loses most of its qualities in just fifteen days, so its packaging is very important. Once roasted, the still hot coffee is immediately packaged to preserve its qualities for longer. However, roasted coffee beans give off gases resulting from combustion, which packaging techniques must consider preventing the package from bursting or swelling.

Four methods are used to package coffee:

- **Packaging with non-hermetic closure:** the coffee is closed in bags by making 1-2 small holes in the package (in an inconspicuous position) that allow the gases released by the beans to escape, but also to enter the air. The packaged coffee should be used within one month of roasting. It is a suitable solution for all companies that sell the product quickly.



Figure 3.6: non-hermetic packaging, source thebagbroker.eu



Figure 3.7: vacuum packaging, source topperroster.it

- **Vacuum packaging:** the coffee is packaged after removing the air; the container is equipped with a one-way valve that lets the gases out but prevents outside air from entering. This system, widely used for packaging of coffee beans, allows the product to be kept optimally for about six months. For ground coffee is used a **high vacuum packaging**, in which the coffee is packaged by eliminating the air inside the container, but in this way part of the volatile aromatic substances and carbon dioxide that are released from the beans after roasting are also sucked (to avoid breakage). This can keep the coffee for about three months, even if degassing impoverishes the mixture of aromas.

- **Packaging with pressurization:** the coffee is packaged in highly resistant, watertight metal containers, creating a vacuum, and introducing inert gases (nitrogen or carbon dioxide) at low pressure. A one-way safety valve eliminates any excess pressure due to the gases released by the coffee. This more expensive method allows a long conservation (even over 3 years) and a better preservation of volatile aromas.



Figure 3.8: pressurization container, source caffemolinari.it



In the case of single-serving coffee packaging, we have two categories: pods and capsules.



Figure 3.9: coffee capsule and coffee pods, source: baristamind.it

The first are pre-packaged rice paper filters or made from a paper wrapper made of cellulose, which contain portions of ground and pressed coffee. Given the porous nature of the casing, the pods cannot be hermetically sealed. The boiling water passes through the filter with the coffee, dispensing it into the cup. The coffee capsule, on the other hand, is a rigid cylindrical casing, usually made of plastic or aluminum. The fact of being sealed helps to perfectly preserve the typical aroma of coffee and to make it impervious to humidity and heat. Both pods and capsules have in common the fact that they are very comfortable in the preparation of coffee compared to the classic Moka pot and less expensive than an Espresso bought at the bar, therefore they are ideal solutions in case of low consumption such as household ones. Furthermore, being single portions already packaged, do not cause problems as regards the dosage of the ground coffee. In recent years, with the common growth of sensitivity relating to environmental issues and food safety, there has been talk of *sustainable packaging*. Also, with reference to the coffee sector, which has recently seen a surge in terms of sales and consumption of pods. In fact, the pod being of standard size (the most common type of pods is the one that meets the values of the E.S.E. standard, which provides a diameter between 43.5 and 44.5 mm and a thickness that varies from 9.1 to 10.6 mm. The pods in E.S.E. they are single pre-packaged doses of 7 grams of ground coffee) is compatible with any Espresso machine.

Therefore, coffee pod packaging is certainly more sustainable than that of capsules. They are also healthier, as it has been established that both the plastic and the aluminum of which the capsules are made release furan at high temperatures. Also, from an ecological point of view, capsules have a greater environmental impact than pods. Being made with an aluminum or plastic packaging, or formed by a mix of these components, separating the materials that compose them is difficult. This makes the product disposal process more complicated. In fact, if thrown whole, the spent capsules would normally go undifferentiated, ending up in landfills and incinerators. But despite this, the market continues to promote capsules more than pods. As there is no standard for capsules, the consumer is bound to also purchase the machine related

to them at least until compatible models are studied, but which in any case will not be compatible with the pods. Even the self-ejection of the machines that extract capsules can be decisive for the consumer, who evidently considers it tiring to remove the pod from the filter holder after having extracted the coffee.

According to a study, around 10 billion coffee capsules are sold each year in the world, generating 120,000 tons of waste, of which about 70,000 in Europe alone. Precisely for this reason, a project funded by the EU "life-pla4coffee" has started, which aims to replace coffee capsules in Pe, Pet, or aluminum with compostable pods

Issues related to environmental sustainability are intertwined with those related to food safety. And the packaging turns out to be an indispensable factor for a correct and long conservation of the coffee.

### 3.3 Distribution channels

Distribution takes place through all sales channels: Retail, Foodservice, Office Coffee Service (OCS), Vending and online.

Segmentation of the market		
Retail	Ho.Re.Ca	O.C.S. & Vending

*Table 3.1: Distribution Channels*

#### 3.3.1 Retail

With Retail we refer to the channel destined for domestic consumption. The offer is differentiated for each country and includes both coffee beans and ground coffee for espresso, mocha and filter preparations, but also pods, instant coffee, ready to drink and capsules for the most popular domestic systems in the world.



### **3.3.2 Ho.Re.Ca**

Horeca is a trade term that refers to the hotel industry sector. It is the acronym for *hotellerie-restaurant-café*. The Horeca channel is represented by those who, by profession, supply food and drinks. For this channel, the offer includes professional machines and specific service materials for administration. In addition to coffee, complementary products such as chocolate drinks, ginseng, barley, tea, infusions, and slushes complete the offer.

### **3.3.3 O.C.S. & Vending**

O.C.S. is an acronym which means Office Coffee Service. In this case, the offer includes a wide selection of coffee capsules and other beverages, able to offer all consumers their favorite product every day, as well as a range of design machines for manual use suitable for any environment.

Vending, on the other hand, refers to automatic distribution in public places, such as airports, stations, universities, factories, large companies, hospitals. Thanks to the use of "free standing" and "tabletop" automatic machines, it is possible to enhance the characteristics of a wide range of specific blends for this channel. To complete the offer, there is also a range of dedicated coffee beans, with distinctive characteristics.

Today there are also automatic machines with "eco Cups", fully recyclable and compostable paper cups, the use of which reduces the environmental impact by over 63%, compared to other machines with plastic cups.

### **3.3.4 Online**

The sector of online coffee sales should not be overlooked. It is a sector that saw a significant increase during the lockdown period, in which consumer habits had to change due to the emergency. In fact, more and more people have purchased online what for many is a real indispensable passion: coffee. It is a channel that has been growing steadily for years (+ 50% in value only in 2019) and between January and April 2020, coffee sales have already jumped to 11.4 million euros, which represents 84% more than in the previous year first quarter of 2019. Even in the post-pandemic period, continuing to see growth is certainly an important fact, which shows us how much coffee is something intrinsic to our culture and society.

## 4. Green coffee production Countries

Coffee is the second most traded commodity on the planet with more than 9 billion kilograms being produced annually. The production is concentrated in the areas seen in the chapter 3, and the 20 major producing countries are shown below in the table 4.1.

Country	Prod. of Arabica in metric tons	Prod. of Robusta in metric tons
Brazil	2,455,020	1,102,980
Vietnam	91,500	1,738,500
Colombia	858,000	0*
Indonesia	57,780	584,220
Ethiopia	441,000	0
Honduras	390,000	0
India	240,243	88,857
Mexico	262,080	10,920
Peru	270,000	0
Uganda	45,900	209,100
Guatemala	209,520	6,480
Nicaragua	137,592	2,808
China	138,000	0
Malaysia	0	120,000
Côte d'Ivoire	0	108,000
Costa Rica	82,500	0
Tanzania	39,000	36,000
Papua Guinea	50,760	3,240
Thailand	0	42,000
El Salvador	39,000	0

*Table 4.1: top 20 countries producing Arabica and Robusta coffee in 2020, source elevencoffee.com*

*\* The production is considered zero if it is less than 1000 bags of 60- kg per year*

Contribution of individual Countries in the production of both Arabica and Robusta Coffee

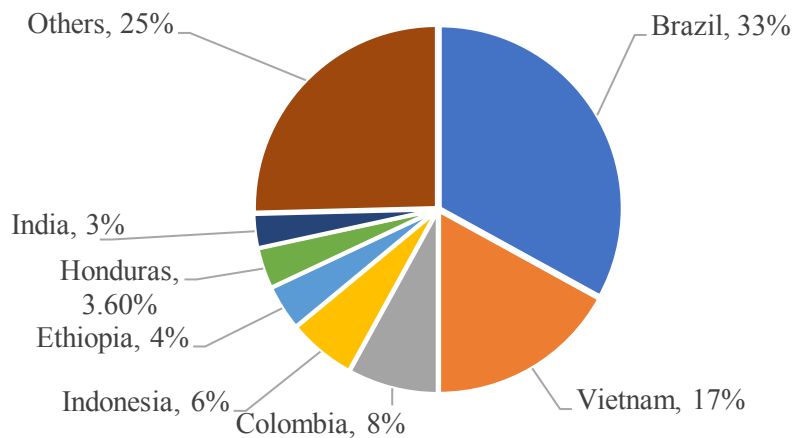


Figure 4.1: Contribution of individual Countries in the world production of both Arabica and Robusta coffee

Analyzing the table 4.1, Brazil is the largest coffee producer in the world. With a total production of 3,558,000 tons of coffee in 2020, which represents about one third of the world's coffee. In percentage the production is divided as follow: for 69% Arabica quality and 31% Robusta. Vietnam is the second largest producer of coffee in the world. With a production of 1,830,000 tons, Vietnam supplies 17% of the world's coffee. Here the difference in production between the two varieties is clearer: Robusta makes up about 95% of Vietnamese coffee, while Arabica the remaining 5%. Colombia is the world's third-largest coffee producer, even if the production volumes in relation to the first two are lower, in fact Colombian coffee accounts for 8% of the world's coffee. Annually in Colombia are produced 858,000 metric tons of a specific quality: as a matter of fact, it's the second highest producer of Arabica in the world. Indonesia produces 642000 metric tons of coffee and accounts for 6% of the world's coffee, covering both varieties of coffee: Robusta makes up 91% of the production, with the remaining 9% being Arabica. Following there is Ethiopia, that produces 441000 metric tons of coffee, providing 4% of the world's total coffee. All the coffee produced in Ethiopia is only Arabica variety, but one of the best qualities. The rest of the countries in the table 4.1 contribute according to the values described and in the figure 4.3; the contribution is summarized to highlight the main producers in the world. Some areas like Ethiopia or Colombia are specialized in producing a single variety. In table 4.1 the Liberica variety has not been considered, only because the production numbers compared to those of Robusta and Arabica are irrelevant, constituting only 2% of world coffee production.

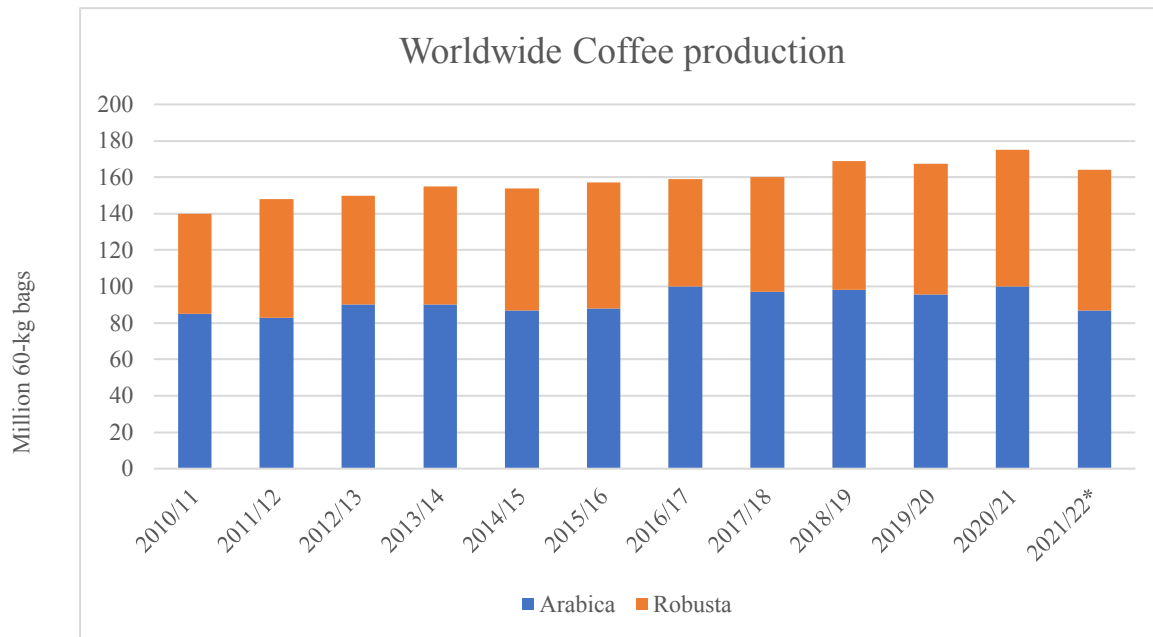


Figure 4.2 Worldwide coffee production from 2011 to 2022, source I.C.O.

In the figure 4.2 we can see more in detail the worldwide production highlighting the contribution of the individual qualities of coffee. In 2018/19 the production has been estimated at 169 million bags, with an increment with respect to year 2017/18. The production of Robusta also increased to 70.67 million bags, and so does the Arabica. These increases are due to an increase in production in Brazil, offsetting the decrease in the "bean belt" in other states.

In the year 2019/20 there was a drop in production of 0.9% to 167.4 million bags. Robusta production increases to 71.72 million bags, while Arabica production decreases to 95.68 million bags: this decline in Arabica production is largely due to Brazil considering its large incidence, since the year 2019/20 coincides with the rest year of its two-year cycle. In the 2020/21 the production of Arabica and Robusta will increase to meet the growing demand. For the year 2022 the quantities are estimated at 87 million 60-kg bags and for Robusta 77 million 60-kg bags.

## 4.1 Export

The coffee export process is not fluid, but rather fragmented. As we have seen from the analysis of the supply chain, the coffee is transferred from the plantations of the producing countries to a "central market" where it will be purchased by a local exporter, who will resell it to an international trader and who will take care of the distribution to the roasters that will prepare the raw material for the consumer. On average, in the various countries exports mainly concern

green coffee (95%) while only a limited share of coffee is exported in other forms, soluble or roasted. Although the consumption and demand for soluble coffee has increased strongly in recent years, most of the developing countries, except for Brazil (benefiting from a significant internal demand), have not yet established a soluble coffee industry. The economy of many developing countries is heavily concentrated in the production of commodities. Among these, coffee often occupies the leading position, as in the case of African countries, where the percentage of exports of coffee on total exports exceeds 60%, and numerous countries of Central America, where the percentage is around to 26%.<sup>4</sup> Since the 1970s, Brazil, through the diversification of exports and industrial development, has instead significantly reduced its dependence on the export of this product, reducing the percentage of coffee exports out of total exports from 20% to less than 3%.

<b>Country</b>	<b>Production (in 60 kg bags)</b>	<b>Export (in 60 kg bags)</b>	<b>% of Export</b>
Brazil	58210,7127	40510,7127	70%
Vietnam	30487,1644	26537,1644	87%
Colombia	14100,1182	12639,3442	90%
Indonesia	11432,9425	6626,9425	58%
Ethiopia	7343,4329	3812,4329	52%
Honduras	5931,22	5506,22	93%
Mexico	3984,6011	2954,6011	74%
Peru	3836,3817	3588,3817	94%
Uganda	5509,154	5355,154	97%
Guatemala	3605,7644	3212,7644	89%

*Table 4.2: Exports of all forms of coffee, Elaborated with data from ICO website, year 2020*

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<sup>4</sup> FITTER, R., KAPLINSKY, R., 2001. *Who gains from product rents as the coffee market becomes more differentiated? a value chain analysis*, University of Sassex.

Calendar years	2015	2016	2017	2018	2019
Brazil	37.563	34.269	30.925	35.637	40.698
Vietnam	21.944	29.721	25.092	31.385	27.400
Colombia	12.716	12.831	12.985	12.808	13.672
Indonesia	8.379	6.545	8.198	4.539	6.334
Ethiopia	2.985	3.001	3.773	3.589	3.921
Honduras	5.030	5.306	7.341	7.144	6.765
India	5.262	6.086	6.542	5.967	6.028
Mexico	2.458	2.233	2.911	2.888	2.627
Peru	2.790	3.960	3.946	4.064	3.772
Guatemala	2.961	2.991	3.383	3.327	3.613
Nicaragua	1.753	1.963	2.449	2.300	2.954
Côte d'Ivoire	1.418	1.432	855	1.522	2.104
Costa Rica	1.128	1.007	987	1.208	1.039
Tanzania	709	905	664	856	1.069
Papua New Guinea	711	1.133	794	870	787
Others	8.589	7.950	8.676	8.492	8.910
Total	116.396	121.334	119.519	126.598	131.694

Table 4.3: Exports of all forms of coffee in major producing countries in thousand 60kg bags, own interpretation of I.C.O. data

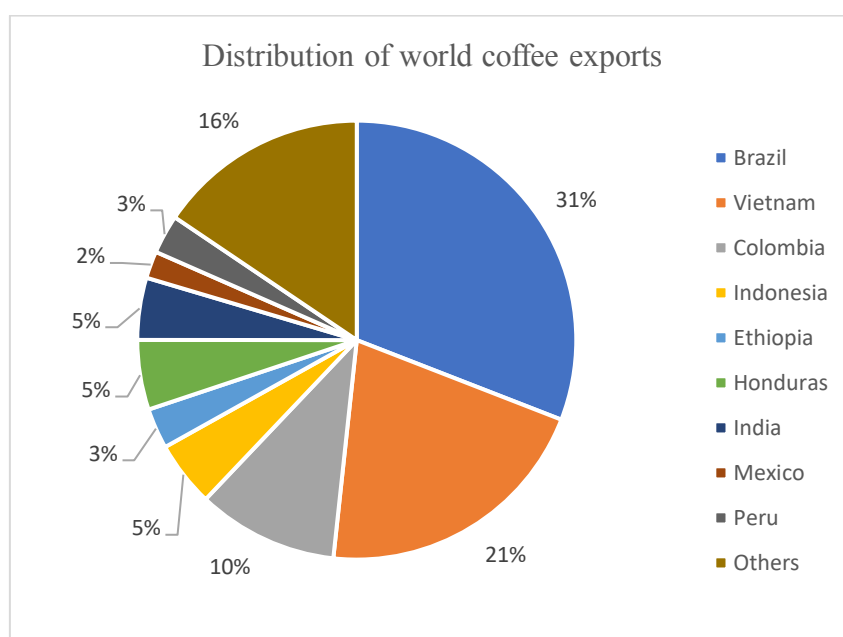


Figure 4.3: Distribution of world coffee exports, 2019 source: own processing I.C.O. 's data

From Figure 4.4 Brazil's weight in exports is slightly reduced compared to production since it is also characterized by a large domestic consumption market, unlike other coffee producing countries. And Apart from this small variation, the high levels of concentration of exports in the three countries Brazil, Vietnam, and Colombia, which make up about 60% of the world total, are confirmed. Export data reflect the trend of production: it is obvious, in fact, that the more a country produces this raw material, the more it will have available for the needs of its country and even more for exports, drawing a large profit. Most producing countries export all the coffee they grow. Only a few, including Brazil, India, and Mexico consume a substantial share of their production. Unlike European countries, although there are roasting companies in Brazil, it generally does not adopt an export strategy due to the European Union regulation that imposes tax barriers for the import of Brazilian roasted coffee. Therefore, roasted coffee is mainly produced for the domestic market, which, as we have already said, is also an important consumer market.

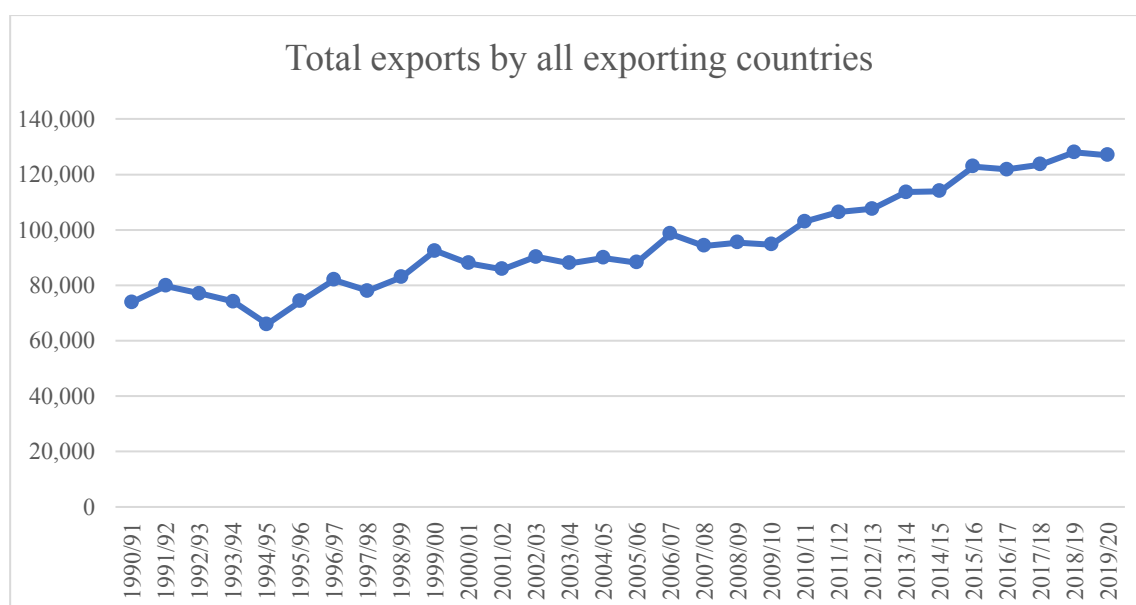


Figure 4.4: Total exports by all exporting countries, in thousand 60kg bags, source: I.C.O.

According to the ICO monthly export data for the 2021/22 coffee year, exports of coffee in all forms amounted to 12,115,749 bags, equal to 8.9% more than in December 2020.

This is mainly due to the greater quantities of Robusta coffee exported, thanks to the production of Asian countries, particularly Vietnam. In fact, shipments of the less valuable variety recorded an increase of 25.8% and almost 5 million bags, compared to less than 4 million a year ago. Among the main exporting countries, Brazil and Colombia stand out. In 2019, the global coffee

supply increased from 11.34 million compared to 2018, supported by the supply of furniture and higher prices. The global exportation of coffee in 2018 and 2019 grew slightly to 109.41 million dollars, continuing to grow fine in 2020 with the total amount of exports being 142.37 million dollars. Exports are made up of 91.3% of green coffee (circa 99.86 million dollars). Increasingly the orders of soluble coffee accounted for 8.3% of the total, while the orders of roasted coffee accounted for only 0.4%.

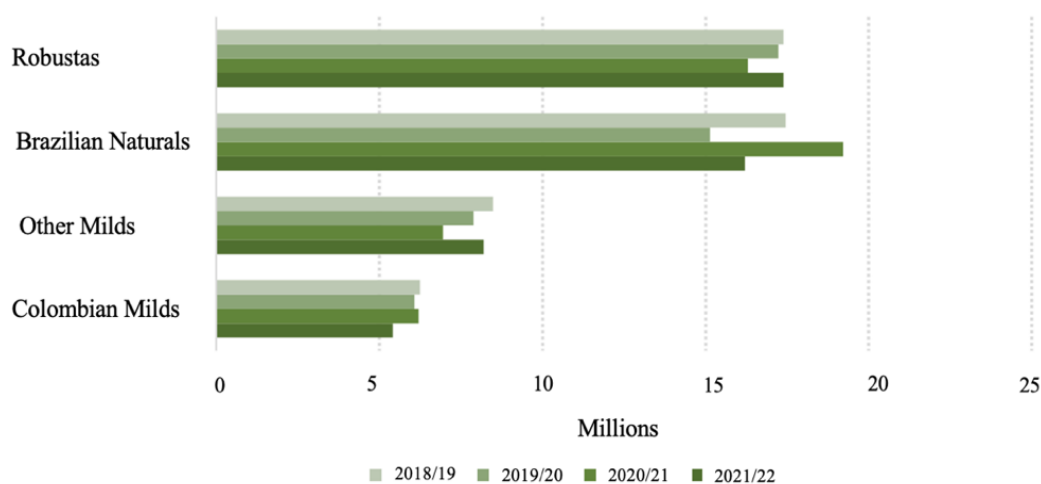


Figure 4.5: Green Exports per year, source: I.C.O.

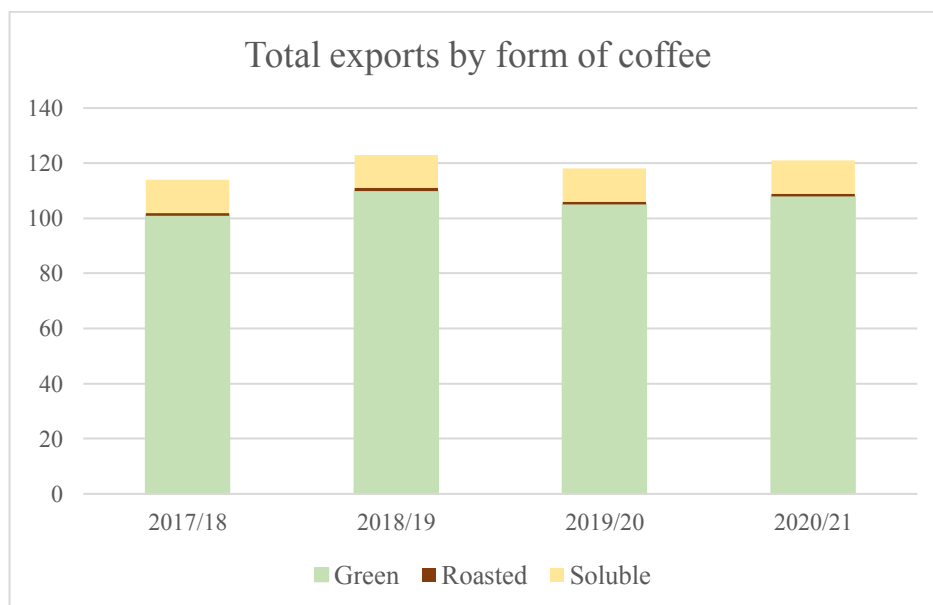


Figure 4.6: Total export by form of coffee, in million 60-kg bags, source: I.C.O.



### 4.1.1 Transport

In the context of world trade statistics, coffee is among the most important commodities: about 110 million bags of total world production are exported, while the rest is reserved for consumption in the countries of production or is stored.

The usual route of the daily coffee trade is illustrated in the figure 4.7 but not all stages are always mandatory. An exporter can certainly also be the owner of plantations and processing plants at the same time and therefore carry out the related processing steps already in the country of origin.



Figure 4.7

All the phases of the supply chain are characterized by a strong specialization that allows to achieve substantial economies of scale and in the phases of trade and transport there has been a similar phenomenon. The first transport of the coffee, from the plantations to the port of embarkation, is carried out by local agents or companies. The main ports essentially correspond to the delivery points accredited by the Liffe in London for Robusta quality and by Nybot in New York for Arabica quality. In particular, the delivery points accredited by the Liffe are Trieste, Antwerp, Amsterdam, Barcelona, Bremen, Hamburg, Le Havre, London, Marseille, Rotterdam, New Orleans and Genoa. For the Nybot, the accredited ports are New York, New Orleans, Miami, Houston, and at European level: Antwerp, Hamburg, Bremen.

The import-export activities are usually carried out mainly by large international traders (Neumann, Volcafè, Esteve are the three main ones). By treating large volumes of coffee along different links in the production chain, these companies can offer buyers a wide range of services. On the other hand, the high market power that derives from their size is harmful to local producers. In addition, some of these companies perform fundamental integrated services from plantations to roasting plants: in addition to trading, they therefore deal with processing at origin, storage, grinding and, through technologically advanced systems, complex chemical interventions on product quality.

From the main producing countries, the coffee is exported by ship all over the world, in fact in almost all the big port cities there are deposits of green coffee.

The green coffee is sent for boarding packed in bags placed in containers. Once at the port, the bags of coffee are unloaded from the truck into the container, which is taken to the ship. Today another method is also applied which consists in emptying the coffee from the bags, which is transferred, by means of large suction pipes, into containers lined internally with plastic sheets or jute fabrics. In this case we speak of "bulk" transport, or bulk transport.

## **4.2 Costs**

The final price that the buyer will have to pay is determined not only by the value of the coffee itself, but also by the additional costs of oil, transport, insurance, etc. In recent years, various organizations have created support projects aimed at ensuring a stable income for coffee producers.

### **4.2.1 Production costs**

The production of raw coffee suitable for export includes general care of the soil and plants, fight against parasites, harvest, processing, selection, and partial storage. The costs are influenced by the density of the coffee plants and therefore by the yield per hectare. The number of plants per hectare ranges from 500 to 8,000 units. The yield fluctuates between 600 kg / hectare and 3,600 kg / hectare.

The calculation of production costs is difficult as the locations and regions of cultivation are very large and very varied. Furthermore, these costs also vary according to the different processing methods which are different, as mentioned above.

In general, the average price for natural coffee is 70 cents / lb if processed by large, mechanized companies, while it rises to 148 cents / lb if we refer to smaller plantations. Due to the high interest rates in producing countries, small farmers are unable to bear the costs of production and storage. For this reason, coffee is sold before harvest to local traders, processing companies or exporters. Often the transformation of cherries into coffee suitable for export is undertaken by cooperatives. However, if co-operatives participate in a sustainable development program, they must bear additional costs for certification. Major producers typically operate at every level of production: as growers, processors, stock managers and exporters.

### **4.2.2 Import/Export costs**

Also, in producing countries, like import duties, various export taxes are collected in the form of taxes or direct export taxes. These taxes are adjusted to the market situation so that a rising market price leads to higher currency revenues for the producing country. These measures are implemented very differently from country to country.

For roasters in consumer countries, it is impossible to verify the offer in one country of origin, least of all in several countries of origin. Over the course of many years of work, exporters and importers / traders create a reputation for the quality and prices they offer. In some countries, export quotas are distributed only to exporters, thus making it completely impossible for a direct negotiation between the roaster and the planter or the processing company.

The expenses for the exporter / importer are irrelevant for the calculation of the price and amount to a figure that varies between 0.5 and 1 US- \$ for every 50 kg. Merchants in consumer countries take on partial tasks for small coffee roasters such as importing, customs clearance, warehousing, financing, and consultancy. Consequently, most of the expenses for these services pass from the roaster to the merchant.

### **4.2.3 Roasters' costs**

As regards the costs borne by the roasters, it can be certainly found the capital invested for buildings, machinery, and installations, on which interest must be paid. Furthermore, this capital is subject to amortization.

The stocks, held by most of the roasters, correspond to the needs of about three months and interest must also be paid on these stocks. In most cases, as mentioned above, raw coffee is paid at the origin immediately after boarding, the financing period increases by at least one month.

The weight loss during roasting varies according to the degree of roasting and is approximately equal to 15/20%. During the roasting process, energy costs also come into play, for example for heating the roasting machine (natural gas, oil, electricity) or for cooling the roasted coffee using filtered and cooled air. Further weight loss occurs in the production of soluble coffee. The income from roasted coffee in commonly marketed products is approximately 35/45%: from one kg of roasted coffee, it is possible to produce between 350 and 450 grams of soluble coffee. The costs related to the workforce should not be underestimated. In fact, despite the growing automation, intensive work by the staff is required for both the surveillance of the plants and the packaging machines.

The latter also represents a non-negligible cost for roasters: today the products that are marketed are mostly in airtight packages. As discussed in the previous paragraphs, efforts are being made to decrease the number of materials that pollute the environment, such as aluminum. But in the same way, great importance is given to the assortment and presentation of the product at the point of sale.

The size of the company, the assortment of offers and services, together with the cost elements listed, finally establish the price of the products available on the market.

### 4.3 Prices

The price of coffee, like that of many commodities, is characterized by marked volatility.

Since October 2018, the prices of coffee, especially Arabica quality, listed on the InterContinental Exchange have increased significantly. While Robusta quality coffee has seen its price rise by + 26%, Arabica quality coffee has increased its value by over 70%.

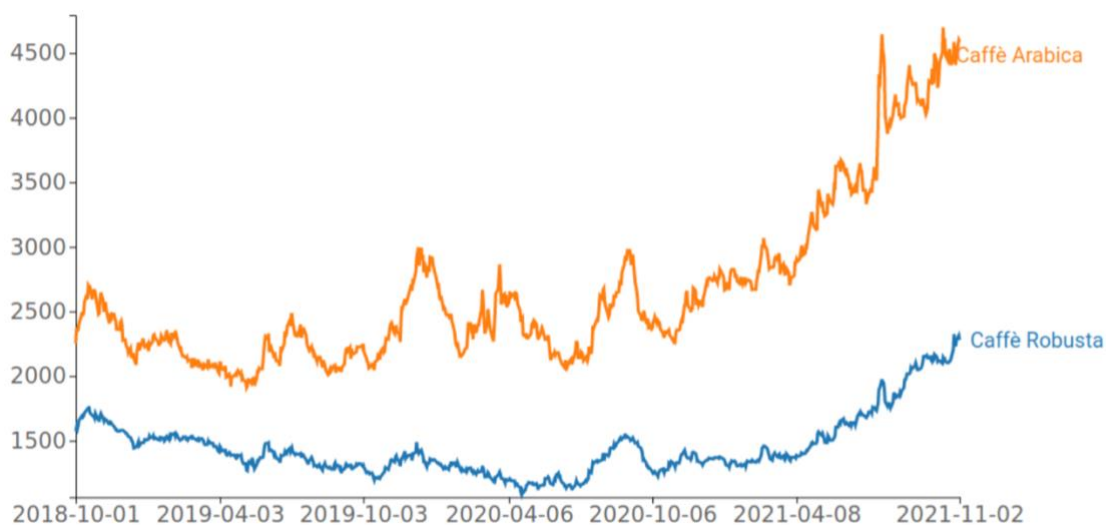


Figure 4.8: Comparison between Arabica and Robusta spot prices in dollars per tons, 2021, source: pricepedia.it

Looking at the figure 4.8 we can see how the spot price of Robusta coffee in the last year has gone from 1370 dollars per ton to 2280 dollars per ton, while the price of Arabica coffee from 2765 dollars per ton to 4587 dollars per ton, or respectively + 66.4% and + 65.9%.

The cause of the increase in coffee prices is mainly attributable to a series of environmental events that are affecting Brazil. As we have seen in the previous paragraphs, Brazil is currently the largest producer of Arabica coffee, accounting for about 35% of the global crop. Thanks to the massive stocks of the producers, the Brazilian harvest has never particularly affected the final price, but nevertheless the combination of the severe drought that is hitting Brazil coupled

with the recent frosts in July could affect next year's harvest more than expected, bringing it to the lowest level of the last 12 years, thus reducing the supply from Brazil.

The shipping crisis is also influencing the increase in prices. Shortage of containers and congestion in ports will keep coffee prices high for a long time to come. In fact, the bottlenecks that have been created in the context of shipments prevent the supplies of coffee, available in the major producing countries, from moving quickly to meet demand in some areas of the world, with the consequent increase in price.

For example, Vietnam, the world's second largest producer of coffee and leader in the production of Robusta coffee, despite the large availability of coffee and massive stocks, has shown difficulties in exporting the good out of the country. The prices of moving containers by sea had never been higher. For intercontinental exports, a container cost 3 thousand euros a year ago, now it costs 12 thousand, and then the prices of fertilizers have also risen, the costs of packaging starting from paper and plastic (up to 25%).

In the last months of 2022, there was an increase of + 37.6%. The situation is, to say the least, delicate: roasters are struggling to obtain supplies, market prices have doubled and "the top" is not yet in sight. The Arabica quality is at its highest for 11 years now. If prices are at their highest, stocks are at their lowest. The Covid emergency has helped to highlight the fragility of the chain, and to this have been added the unpredictable weather damage suffered by Brazilian plantations, the largest in the world. The high demand from Europe and the United States not satisfied by the main coffee producers, due to the climate crisis and blockages in the shipping sector, could lead in the coming months to an ever-decreasing availability of the product and to a further increase of prices.

## 4.4 Import and re-export

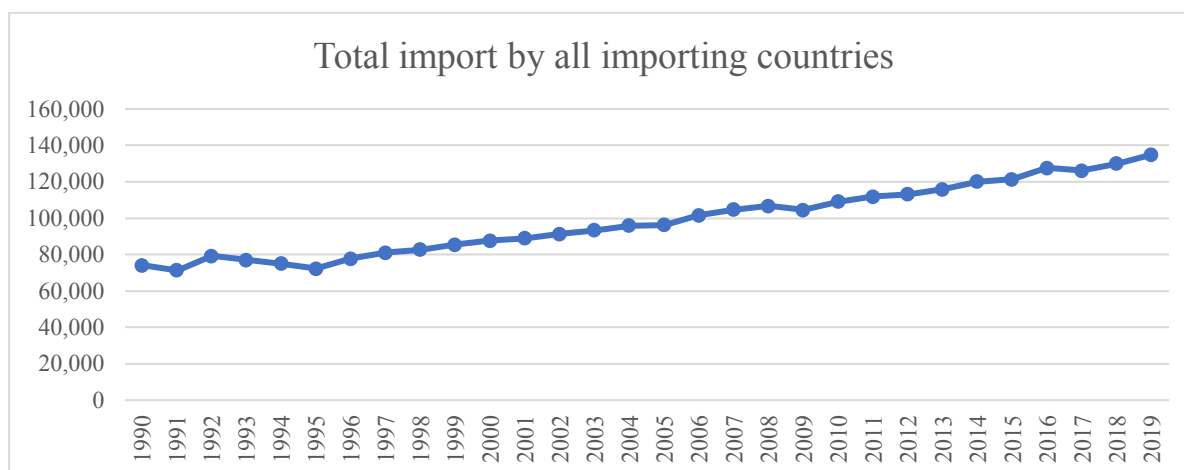


Figure 4.9: Total import by all importing countries, in thousand 60kg bags, source: I.C.O.

Country	Average annual consumption
USA	24.033
Germany	8.839
Japan	7.463
Italy	5.743
France	5.772
Spain	3.323
Sweden	1.460

Table 4.4: Annual consumption in thousands of 60 kg-bags, source: I.C.O.

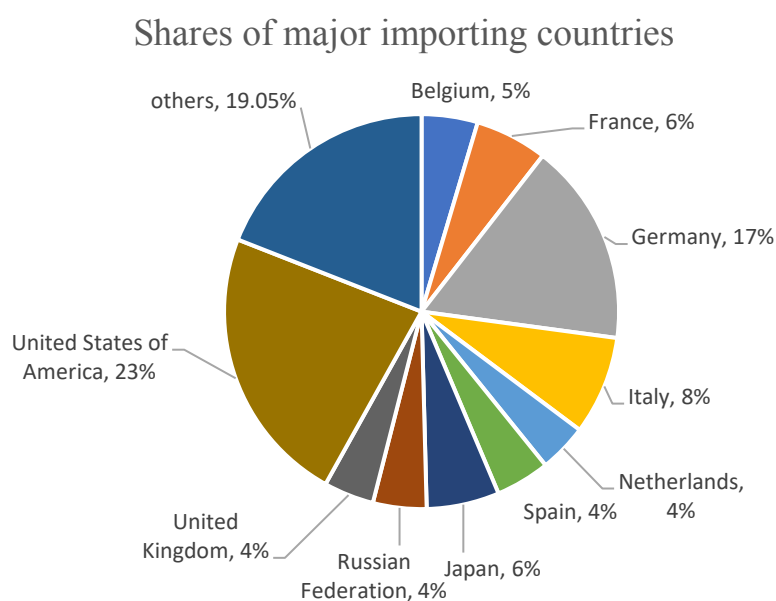


Figure 4.10: Shares of major importing countries in 2020, own processing I.C.O.'s data

Green coffee exports are mainly directed to European countries, the USA and Japan, where the greatest consumption of coffee is concentrated as shown in the table 4.4.

The Figure 4.10 highlights the primacy of the United States among the major importers of green coffee (23%), followed by Japan (19%), Germany (17%), Italy (8%) and France (6%). Only the European countries import every year about 59% of the global production, that are about 58.377 thousand 60 kg bags of coffee. Most of the coffee consumption in Japan concerns soluble coffee, while in other countries roasted and ground coffee prevails.

Looking at these data it must be considered that they are indicative of import and do not tell us anything about consumption. In fact, in many cases (especially in European countries) the importing countries are in turn exporters of coffee to other markets.

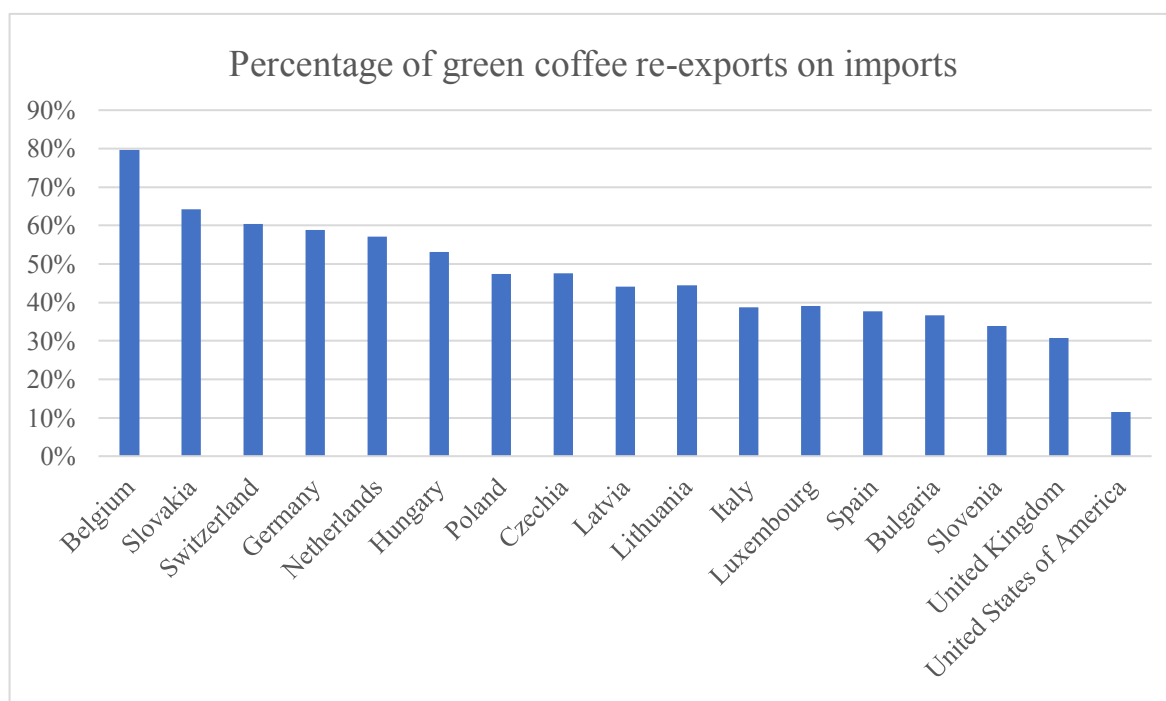


Figure 4.11: Percentage of green coffee re-exports on imports, average 2010-2019, personal re-elaboration from ICO

In the figure 4.11 the major coffee re-exporters were compared: Belgium ranks first, followed by Slovakia and Switzerland. In fourth place we find Germany and Netherlands, which, as we will see later, are also major consumers of coffee. Generally, the countries of the European Union re-exported 49% of green coffee in 2020, equal to 38,890 60kg-bags.

These countries can be defined both as *importers* of green-coffee and producers of roasted coffee, whose production is directed both to the internal market and to external markets, thus becoming *exporters* of roasted coffee. This is, for example, the case of Italy, which is considered one of the main exporters of roasted coffee, as well as being an important consumer country as we will see later in Chapter 10.

## 5. Market Regulation

In 1906 Brazil qualified as the largest coffee producer in the world. In subsequent periods, the quantities of product placed on the market increased to such an extent that prices could collapse and consequently market failure. The hypothetical and probable uncontrolled overproduction of the commodity would have generated difficulties such as to damage the interests of both producers and consumers and be detrimental to economic expansion policies. The need for regulation was clear, so in 1940 the United States, Brazil and Colombia signed the first Coffee Agreement and set maximum export quotas to the USA.

In 1959 the producing countries of Latin America and African countries signed the first International Coffee Agreement which, considering a short-term time horizon, fixed maximum quarterly export quotas for the following year. On September 28, 1962, the first long-term international agreement was finally signed: the "International Coffee Agreement". The depositary of the documents was the International Coffee Organization, an intergovernmental organization established in 1963 by the United Nations for the management of international agreements, cooperation between coffee producing and consuming countries and the management of problems relating to the market for this good.

The first agreement provided for the definition and annual review of export quotas to all importing countries with the exception of those defined as "new markets", i.e. new importing countries, a practical measure necessary for the achievement of various objectives, including such as the realization of a long-term balance between supply and demand, in order to determine a stable and fair price for both producers and consumers, the alleviation of the difficulties deriving from the presence of heavy surpluses and excessive fluctuations in the prices of market and the protection of the purchasing power of producer countries by keeping prices at a fair level and encouraging consumption. In the following years, numerous changes were made to the agreement, such as the possibility of increasing exports by 2.5% on the fixed value (if the quantity requested was greater than a million bags) or the introduction of a goods stock verification system to obtain a new method of calculating the quota (based 70% on export performance and 30% on available goods stock), with the aim of making changes in export quotas less tied to price fluctuations.

Between the end of the 70s and the early 80s, two phenomena occurred that revealed the inefficiency of the current system: the accumulation of stocks and the two-tiers market. The latter, literally "two-level market", refers to the tendency of producing countries to export



mainly to non-quota members (formerly called new markets), since they are not tied to the quota system. Non-quota members bought coffee at prices 20-40% lower than the price paid by the quota countries (and therefore the market price). Given a market price, the lower price paid by the new markets allowed producers to deliver to buyers larger quantities of green coffee than those delivered to quota members, for the same amount of money, allowing them to "get rid" of burdensome and expensive stock of goods deriving from particularly profitable years.

In 1989 a new International Coffee Agreement was signed, with the introduction of a system governed by the laws of supply and demand. The effects of the agreement were immediate: the transfer of the entire stock of goods to the market caused the price of coffee to collapse to such low levels as to guarantee no profit for farmers and what was later called the "coffee crisis" began.

The 1994 International Coffee Agreement set objectives that were based above all on the commitment to achieve international cooperation, on the creation of a forum for consulting and negotiating prices and a statistical database for the dissemination of transparent information of a global nature.

Starting in 1994, projects financed by the CFC (Common Fund for Commodities) began, aimed at maximizing the benefits deriving from international cooperation and trade liberalization. These interventions focused mainly on 4 fronts:

- The elimination of harmful animals and diseases capable of weakening crops for Asian and African areas.
- On the improvement, dissemination, and maintenance of quality at a global level and the start of diversification of production to satisfy increasingly specific demands.
- The rehabilitation of normal production capacity in areas marked by recesses caused by "force majeure".
- The market analysis through marketing studies and commercial policies.

Also in 1994, the collaboration between the private sector and the ICO board is important. This collaboration led to the formulation of the penultimate agreement, which entered into force in 2001, in which we began to discuss the sustainable economy of coffee, projects for the benefit of its global economy and an article was introduced concerning the commitment of the ICO towards the improvement of living and working conditions of the populations linked to the coffee sector. A new price collapse occurred in 2000 due to a new imbalance between supply and demand led to a new awareness on the part of member countries of a more market-oriented

perspective. The member countries thus became 77: 42 exporting countries and 6 importers (the European Union represents all its member states as a single member), representing respectively 97% of production and 80% of consumption. The same countries signed the last International Coffee Agreement in 2007, committing themselves to economic, social, and environmental sustainability and the development of strategies aimed at helping small local communities of producers to benefit from coffee production.

## **5.1 Fair Trade**

Fair trade is a form of trade that aims to guarantee the producer, and his employees, a fairer price (ensuring a higher income than that received from the traditional market), while also ensuring the protection of the territory. It opposes the profit maximization practiced by large, organized distribution chains and large producers. A typical feature of this trade is to sell the products to the final customer, limiting the chain of intermediaries. (Wikipedia)

Coffee, at the origin of its supply chain, involves nearly 25 million families in the collection of raw materials. Their living conditions owe their constant precariousness to the presence of small local intermediaries (coyotes), the only subjects willing to buy the product of their labor and therefore endowed with a high bargaining power, such as to snatch the crops from producers for a price slightly higher than the production costs.

The collapse of prices following the fall of the ICA cartel in 1989 brought the collectors to conditions of extreme poverty, due to the further drop in the prices paid to them by the coyotes (often below the production costs) for the delivery of the goods.

Although most producers are still characterized by suboptimal living standards, the conditions of some of them have significantly improved. The reason for this improvement lies largely to the intervention given by the associations that operate through fair trade.

## **5.2 Associations**

While the conditions of workers worsened from year to year, at the beginning of the nineties, there was a radical and fundamental change in the characteristics of the demand for consumer goods. The growing attention of the media towards socio-economic issues, especially of a humanitarian nature, and the subsequent use of the Internet and search engines, which allowed access to information and rapid documentation on the most disparate topics, slowed down the

unbridled search for the minimum price, leaving space in the mind of the consumer for a growing awareness of the importance of valorization and fair remuneration of the subjects involved in the production chain. The first organizations were born from the request for respect for the living conditions of workers and in general for social, environmental, and economic sustainability. Their main objective is to eliminate all those commercial practices unfortunately widespread within the work of multinationals and that the producing populations are forced to suffer. These activities are justified by the strong bargaining power held by international commercial operators. In fact, multinationals, guided by the maximization of profits, impose exchange rates close to the cost of production and very often traders pay for the supply of the goods at a long time with respect to the moment in which they have the same. The peasants, to obtain the means to produce, go into debt. The non-payment by their debtors pushes them into the usury circle, ruinous for them and their families. On the other hand, traders do not have the convenience of tying up with a supplier, if they find better purchasing conditions elsewhere they can move their activities quickly. This undoubtedly induces producers to be unable to plan their activities over the long term, condemning them to a situation of constant uncertainty also regarding the immediate future.

Another critical issue is "over-supply", that is, quantities of goods that can only be obtained thanks to the use of a large workforce. Faced with similar reminders, producers also resort to the employment of children, pregnant women, and the elderly, that is, all sections of the population with little protection. The associations and cooperatives were born with the aim of counteracting the practices described above and try to enhance the work of local producing communities, thanks to the negotiation of relations between the association and producers / cooperative of producers. They also invest in training and education and in production with a reduced environmental impact, to improve the living conditions of the populations and the environment. The most important associations are Fairtrade Foundation and Rainforest Alliance UTZ Certified. The coffee market is the first in which concrete action was taken to remedy the unfair activities described in the previous paragraph, since the sector, given its vastness, is one of the most affected by the negative effects generated by them, together with that of cocoa. and sugar.

The Alliance for Coffee Excellence specializes in the coffee sector and has been active since 1999, and among the objectives aimed at member states, it proposes encouraging the development of a sustainable coffee sector both in socio-economic and environmental terms.

The associations act as intermediaries: once some production areas have been identified in which a medium-high quality product grows, they proceed by sending an association proposal

to local producers: against the payment of a premium to be paid by the final consumer. , the fair trade association undertakes to invest a percentage of this in improving the living conditions of workers and a percentage in improving the quality and production capacity, while the remaining part is collected by the association, as a profit deriving from its role of intermediary. The investment of a part of the bonus in improving the quality of the product is a necessary condition for the proper functioning of the business of traders operating in the fair trade. In fact, no consumer, even if moved by the will to act ethically, would be willing to pay, in the long term, a higher price than that of perfectly replaceable products, or products characterized by the same quality. The associations that operate within the fair trade, to obtain the qualification of "certifier", must register with the World Fair Trade Organization (WFTO), which is the parent organization of the group of the same name that brings together all the organizations sharing the same purpose. To obtain the registration qualification it is necessary to satisfy the requirements dictated by the WFTO itself, among which "transparency and responsibility" stand out: fairness and clarity towards all the economic operators involved are the keys to obtaining trust and commitment, not only by consumers, but also by producers, who in this way obtain consideration and motivation to pursue their growth objectives. Today, the market segment consisting of consumers who prefer a fair-trade coffee to a coffee imported from a plantation identified only through the region of origin, has gone from being a niche segment to being an expanding sector.

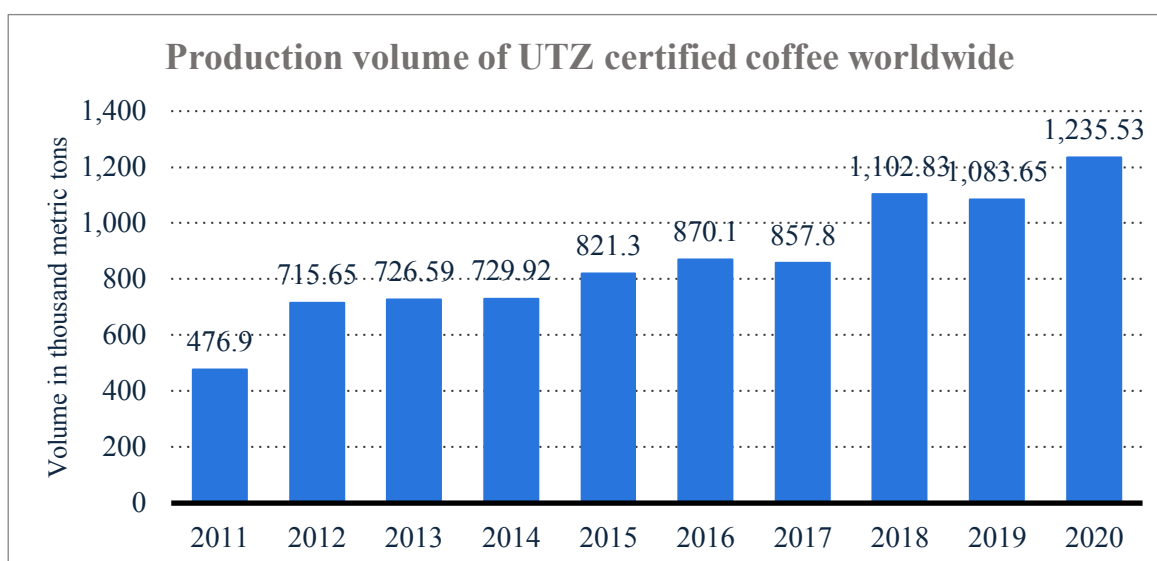


Figure 5.1: Production volume of UTZ certified coffee worldwide from 2011 to 2020 in 1,000 metric tons, source: Statista

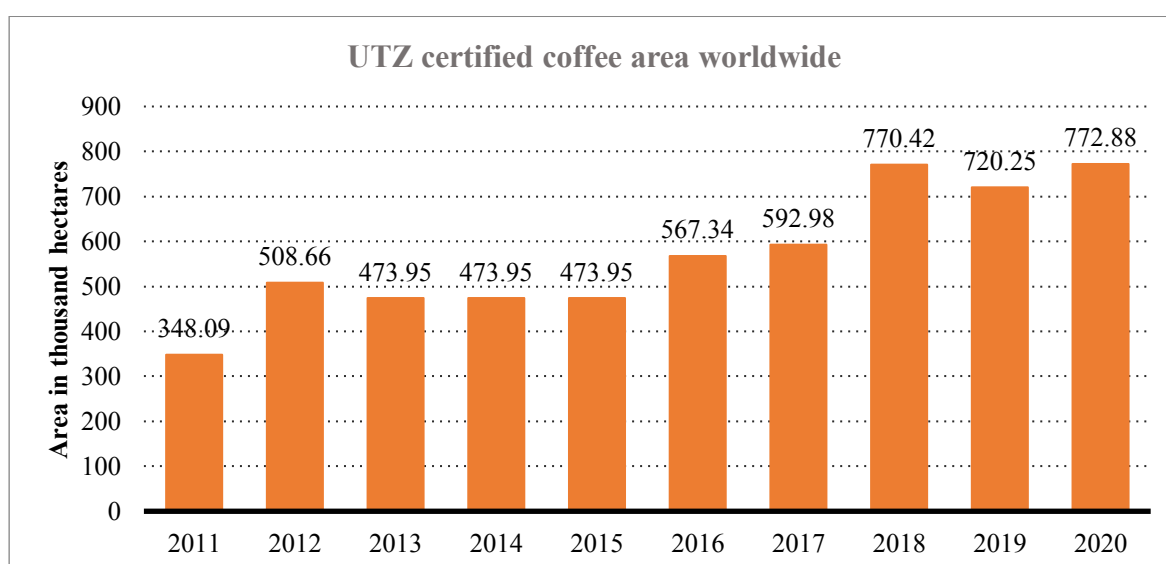


Figure 5.2 UTZ certified coffee area worldwide from 2011 to 2020 in 1,000 hectares, source Statista

## 6. The “Coffee Waves”

They are called "waves" because they are seen as moments of change. In this case they refer to the main moments of transformation in the history of coffee culture.

These "coffee waves" focus specifically on how consumers interact or relate to coffee as a commodity, and this has changed significantly and rapidly with other historical and cultural trends around the world. The three waves of coffee represent how accessible or appreciated coffee was at certain times: the first wave represents the transition from novelty to commodity, the second wave represents the transition from commodity to culture, and the third wave represents a transition from culture to awareness of the consumer.



Figure 6.1

### 6.1 First Wave

The first "wave" of coffee coincides with the first "wave" of the industrial revolution, which is defined by a global increase in mass-produced consumer goods. Many describe this wave as the transition from novelty to commodity. Before this time, access to coffee in any form was a privilege of the elite. The average person, aside from the coffee farmers who harvested the beans, would not have had a chance to try this drink before the industrial revolution.

This shift towards widespread accessibility and convenience for consumers was also thanks to companies like Folgers and Maxwell House that made coffee affordable and widely available in grocery stores by the mid-1950s.

This first "wave" was probably the longest of the three, mainly because the boundaries of where it starts and ends are still debated by coffee historians, but the ending is probably assigned between the 1950s and 1970s.

## **6.2 Second Wave**

With the second wave of coffee, consumers began to take an interest in the origin of what they drank. The "mass production" of coffee made access to caffeine easy and convenient but gave priority to quantity over quality. In fact, with the second wave of coffee there is a change in consumer expectations, in fact in the 90s the demand for superior quality beans increased.

Even TV shows like "Friends" perfectly capture this transitional period in coffee history: as cafes started popping up and becoming popular in metropolitan areas, new coffee companies like Starbucks seized the opportunity to capitalize on the emerging demand for coffee. best coffees. The popularity of coffee shops has increased, so much so that it has earned the name of "third place": a physical space that invited casual socialization with others in an escape from the office / home environment. This theoretical "third place" has since become a truly popular cultural phenomenon among coffee consumers.

The second wave of coffee also introduced the steamed milk and espresso market: just in these years cappuccinos, latte macchiato and other drinks were made more widely available.

## **6.3 Third Wave**

With the second wave of coffee, it started to make consumers think about where their coffee was produced. Consumers of the third wave have begun to appreciate the many origins and different flavors of coffee. Home-use coffee-making tools (such as home grinders or espresso machines) have also started to become affordable options.

This transition to homemade specialty coffee is a clear indicator of the start of the third wave of coffee, as consumer trends have spurred the supply and demand of a specialty coffee market. The variability of brewing time, roasting and grinding have begun to become common reference points for a new and growing segment of the coffee market: the consumer of "special" coffee. The actual provenance of green coffee has also seen wider recognition and appreciation among consumers in general. Unlike consumers within the first or perhaps even the second wave, the true supply chain (and the mistreatment of farm workers by large coffee producers) has become the priority for those interested in higher quality coffee. and more sustainable. Organizations such as the Specialty Coffee Association (SCA) have been a huge impetus to raise awareness and demand for specialty coffees at the consumer and industry level by introducing the public to concepts like "Direct Commerce".

## 7. Different ways of drinking coffee

To better understand the consumption of coffee in different countries of the world, we must know how it is used. For this we will first analyze the different ways of drinking this drink. The methods for obtaining coffee are different, but they can be grouped following two main techniques:

- *Maceration*: characterized by prolonged contact of the coffee powder with water.
- *Percolation*: in this case the water passes through the coffee and quickly falls into a container.

### 7.1 Coffee obtained with maceration

- **Coffee with infusion**: it is obtained like all infusions. It is the simplest and oldest of the methods used in the Western world. Bring the water to a boil in a container, turn off, pour the coffee powder, leave to infuse for at least 5 minutes and pour into a jug or directly into the cups, filtering with a strainer.
- **Coffee with Melior system**: it is a variant of the infusion and uses a plunger infuser consisting of a pyrex jug and a metal mesh filter the same size as the coffee pot, joined with a rod to the lid. Pour boiling water into the jug, add the coffee powder, and leave to infuse for at least 5 minutes; then the filter is inserted and pushed towards the base of the carafe, compressing the powder on the bottom.
- **Turkish coffee**: it is a very common system in the countries of the Balkan peninsula and in the Muslim ones. The water, added with coffee powder and sugar, is brought to a boil in a jug for three consecutive times. It can be drunk with the powder in suspension or left to rest before drinking it for the powder to settle.





*Figure 7.1: plunger coffee maker for Melior system and Turkish coffee maker in copper, source: Picclick.it and Granbazaar.it*

## 7.2 Coffee obtained with percolation

- **Filter coffee:** the coffee powder is placed in a paper filter bag placed inside a perforated container, on top of a carafe; boiling water is poured into the bag, which flows down through the powder. Typically, special machines are used that heat the water and make it fall onto the dust; the carafe is placed on a base that keeps the coffee hot. The result is a light drink with a delicate aroma. Filter coffee is widespread in Northern Europe and the United States.
- **Neapolitan coffee:** the Neapolitan coffee maker is used, which uses the same principle as filter coffee. The Neapolitan is divided into two overlapping containers, with a filter filled with coffee in the middle: the water contained in one of the two containers is brought to a boil, then the coffee maker is turned, so that the water falls into the container below passing through the coffee powder. The Neapolitan is not very common today, it has been replaced by the moka and espresso machines for domestic use.
- **Mocha coffee:** in this case the coffee is crossed by water from bottom to top, thanks to the pressure generated by the steam in the lower kettle. The result is a coffee with a strong taste and an intense aroma.

- **Espresso coffee:** this is the system that makes the most of the coffee powder. Thanks to the extraction with strong pressure, the soluble substances responsible for taste are extracted, as well as the insoluble substances (oils and colloids) that give body and imprison the aromas. The result is a concentrated liquid, with an intense and persistent taste, rich in aromas and creamy.



*Figure 7.2: various types of coffee makers, from the left: filter coffee machine, Neapolitan coffee maker, moka and espresso machine.*

### 7.3 Coffee consumption habits in Europe

It is interesting to compare the different coffee drinking habits in Europe. Between November and December 2021 an online survey was conducted by YouGov among 5,204 respondents representing the 18+ national population of each country, respectively 1,024 from France, 2,049 from Germany, 1099 from Spain and 1032 from Italy. The results at the national level were weighted to be representative of the national population aged 18 and over and based on the size of the population of each country. The survey reveals some important data: 73% of Europeans over the age of 18 drink coffee regularly, while only 9% never drink coffee. Spanish and Italians are more likely to drink coffee than the French and Germans. The average number of regular coffee drinkers is highest in Italy and Spain, where 80% and 78% respectively of the adult population report drinking coffee regularly.

However, Germans are inclined to consider themselves "passionate" coffee drinkers (27%), second only to Italians (33%).

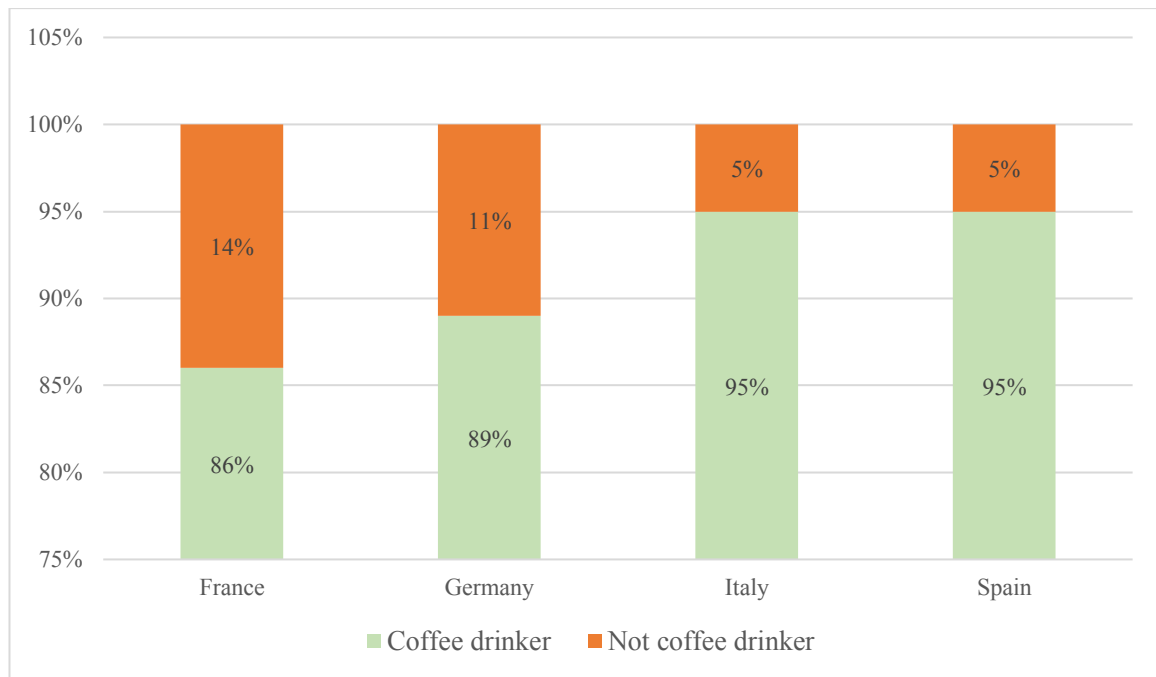


Figure 7.3

The aroma of coffee is the main reason for drinking it, but there are also different reasons: coffee allows to take a break, helps them stay awake or simply makes them feel better. Coffee is mostly drunk at home, with 78% of coffee drinkers consuming it more than once a day. Italians are the top consumers of coffee at home, where they drink at least one coffee a day (83%).

When buying coffee for home consumption, taste/aroma is the main driver (66%), followed by price (43%) and brand (38%).

The French respondents are more likely to make the choice based on the type of supply, the Germans are more subject to the price, the Italians to the brand.

The supermarket is the preferred place to buy coffee in the countries analyzed, with a percentage of 4 points above the average in Spain. Germany is the only country that chooses to buy coffee in specialized shops (16%) as a second option after the supermarket, while Italy is the country that chooses to buy coffee online to a greater extent (23%). Finally, France is the same both online and in specialty stores. See Figure 7.4.

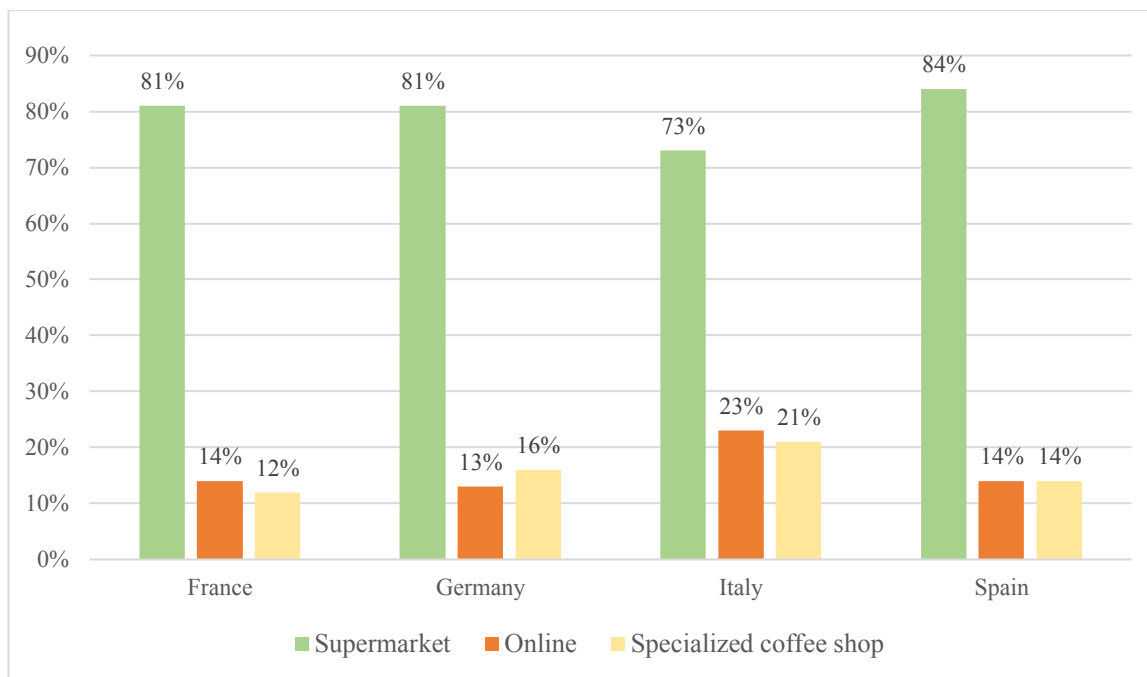


Figure 7.4

We can differentiate the ways of dispensing coffee at home and away from home by seeing in detail the differences between these 4 European countries. In general, capsule coffee machines are the first choice at home (22%), while ground coffee machines (43%) represent most of the out-of-home consumption.

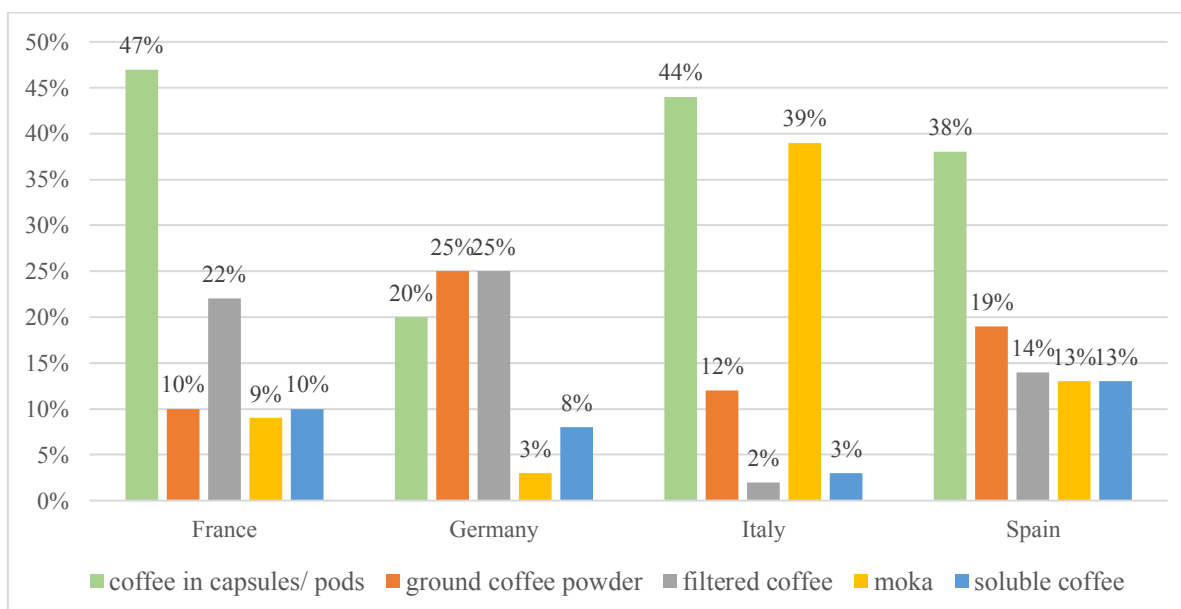


Figure 7.5

Italians choose the mocha coffee (39%) and reject instant coffee (3%), while the Germans often drink filtered coffee but do not like capsules or pods, which are the first option for French and Spanish respondents.

Regarding out-of-home coffee consumption 3,0% consume it at least once a day. Italians are again the most frequent consumers, with 45% drinking coffee away from home at least once a day, followed by Spaniards (40%), French (25%) and Germans (19%).

Outside the home, the number of those who never or hardly drink it is higher (26%), with the Germans at the top of the ranking (37%).

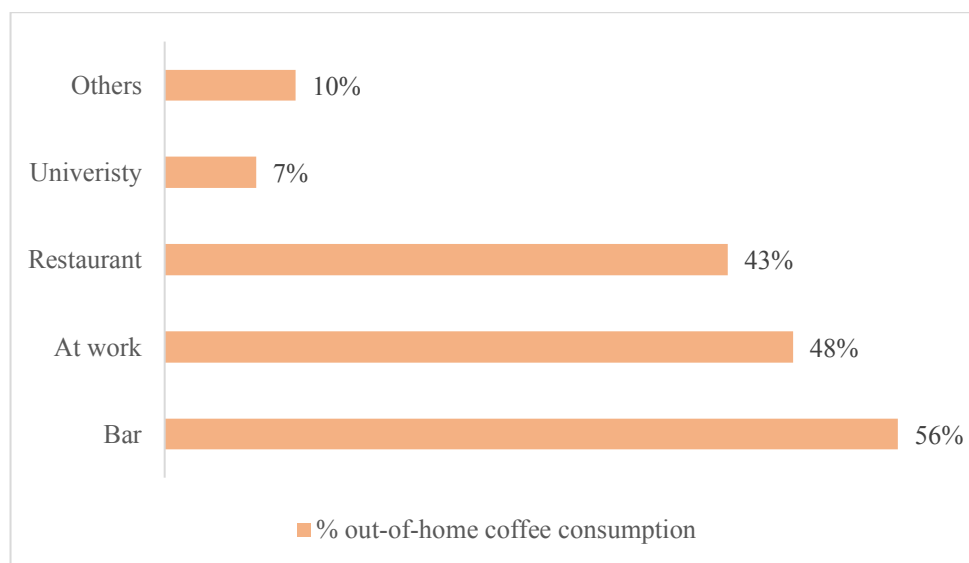


Figure 7.6

Consumption outside the home takes place mainly at the bar (56%), followed by the office (48%) and the restaurant (43%). Finally, university or school, where 7% of respondents say they drink coffee. For Italians and Spaniards, the bar is the preferred place to drink coffee away from home (82% and 80% respectively) while the French and Germans drink it more often at work (56% and 52%) or at the restaurant. For Italians and Spaniards, the bar is the preferred place to drink coffee away from home (82% and 80% respectively) while the French and Germans drink it more often at work (56% and 52%) or at the restaurant.

## **8. Coffee Market**

The Coffee segment that will be analyzed is composed of Roast Coffee, which incorporates caffeinated and decaffeinated coffee in the form of ground and bean coffee, which is prepared with coffee machines or through a French press, and Instant Coffee, which includes instant coffee that does not require equipment. additional for preparation. The segment does not include Ready-to-Drink coffee drinks which are instead included in the soft drinks segment of the soft drinks market. While roasted coffee, or fresh coffee, is especially popular in traditionally coffee-prone countries such as the United States, Germany, Italy, or Brazil, instant coffee is important in traditionally tea-prone countries, such as the UK. Even in the Czech Republic and Asia, the method of preparing coffee is very similar to that of tea.

Often the coffee market is unified with that of tea and cocoa. All three together these foods are the "hot drinks" market, which we will now see in detail.

### **8.1 Hot Drinks Market**

The Hot Drinks market includes the Coffee, Tea and Cocoa segments. The Coffee segment is further divided into Roasted Coffee and Instant Coffee. Roasted coffee includes "fresh" roasted coffee in the form of beans, ground powder, pods or pods, while instant coffee means coffee that has been processed by freeze drying or spray drying to extend shelf life and generate powder blends from which the coffee drinks can be obtained without additional equipment by simply adding water. The tea includes fresh leaves, sachets, pods or pods of the Camellia Sinensis and Yerba mate tea plant but excludes herbal infusions. Cocoa includes ready-made powder mixes from which cocoa or hot chocolate drinks can be prepared by adding water, milk or similar liquids.

In retail, the biggest player in the Hot Drinks Coffee segment is Nestlé, whose Nespresso and Nescafé brands are globally recognized household names. Other notable players are Jacobs Douwe Egberts (JDE), Keurig Dr Pepper, Tchibo, J.M. Smucker and Lavazza. Away from home, Starbucks, Tim Hortons, Panera Bread, Costa Coffee, Peet's Coffee, Dunkin' Donuts and Caribou Coffee are the biggest players. A major company in the home and away-from-home coffee sector is Luxembourg-based JAB Holding, which has built a sizeable portfolio of retail and café brands and owns at least part of both Jacobs Douwe Egberts and Keurig Dr Pepper. as well as Panera Bread, Peet's Coffee and Caribou Coffee, among others. In the tea segment,

Unilever (Lipton), Associated British Foods (Twinings) and Tata Global Beverages (Tetley) are the largest players by revenue while Nestlé is the largest player in the cocoa kingdom. In 2021, the Hot Drinks market generated a total revenue of US\$634.4 billion worldwide. Coffee was the largest segment (65%) of the Hot Drinks market with US\$409.9 billion in revenues in 2021.

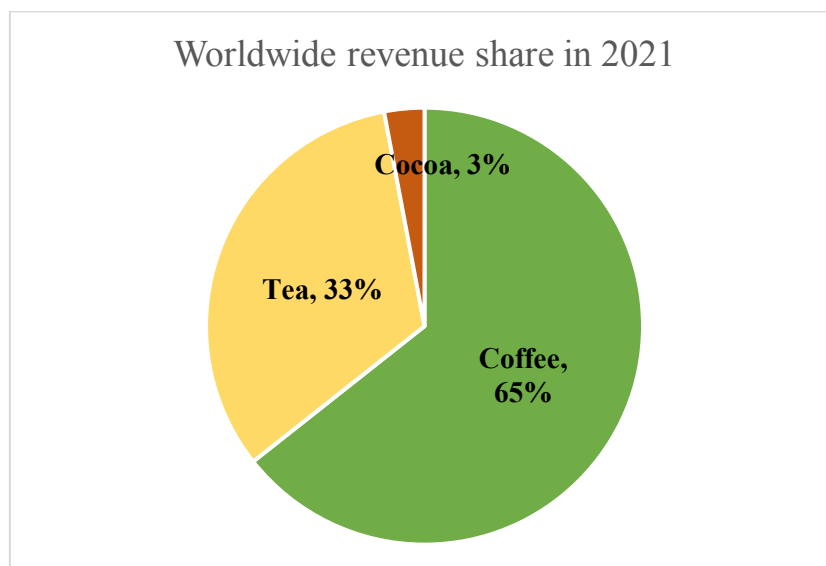


Figure 8.1: Worldwide revenue share in 2021, source: Statista

## 8.2 Demand

Coffee is the most popular drink in the world after water. Almost 1.6 billion cups of coffee are consumed every day, in any corner of the planet. Global coffee consumption for coffee year 2020/21 is estimated at 167.26 million bags, an increase of 1.9% over 164.13 million bags recorded in coffee year 2019/20. The projection for total production in coffee year 2020/21 is 169.64 million bags, representing a marginal increase of 0.4%.<sup>5</sup>

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<sup>5</sup> I.C.O. 's coffee market report, 2021

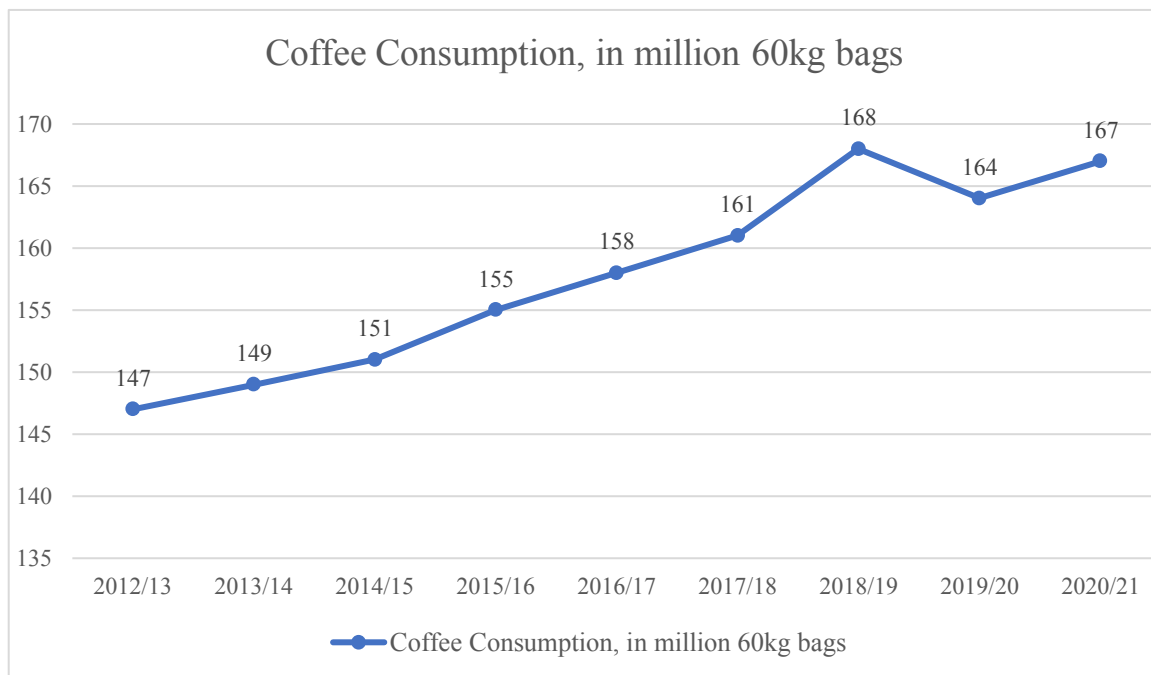


Figure 8.2: Coffee consumption in million 60kg bags, source ICO

Contrary to popular belief, Italy does not rank among the countries where the most coffee is drunk. On the podium we find three cold countries, which suggests a correlation between climate and coffee consumption. In first place is Finland, where a person consumes an average of 12 kg of coffee per year. The culture of coffee in Finland is almost as consolidated as in Italy, and the numerous work breaks imposed by the unions, during which time is spent sipping a good espresso or an American, seem to make the consumption of the drink so frequent. In second place is another Scandinavian country, Norway (9.9 kg of coffee per year per person). Here coffee arrived in the eighteenth century as a drink of the rich, then slowly it was cleared through customs and made popular. Norwegians love black coffee, which they eat for breakfast and as an accompaniment to desserts. Third place for Iceland (9 kg), where in the main cities there is a very high concentration of coffee shops (but not of large multinational chains). Among the top 5 we find two other northern European countries, namely Denmark (8.7 kg of coffee per person per year) and Holland (8.4 kg). It was the Dutch, the first Europeans to obtain and plant live coffee trees brought from Yemen. Italy is in thirteenth position. According to a study, the average Italian drinks 5.9 kg of coffee per year. Low position also for the USA (25th with 4.2 kg), where in every corner of the street it is possible to find a chain that sells huge American coffees. The highest non-European country is Canada, tenth with 6.5 kg per year per person.



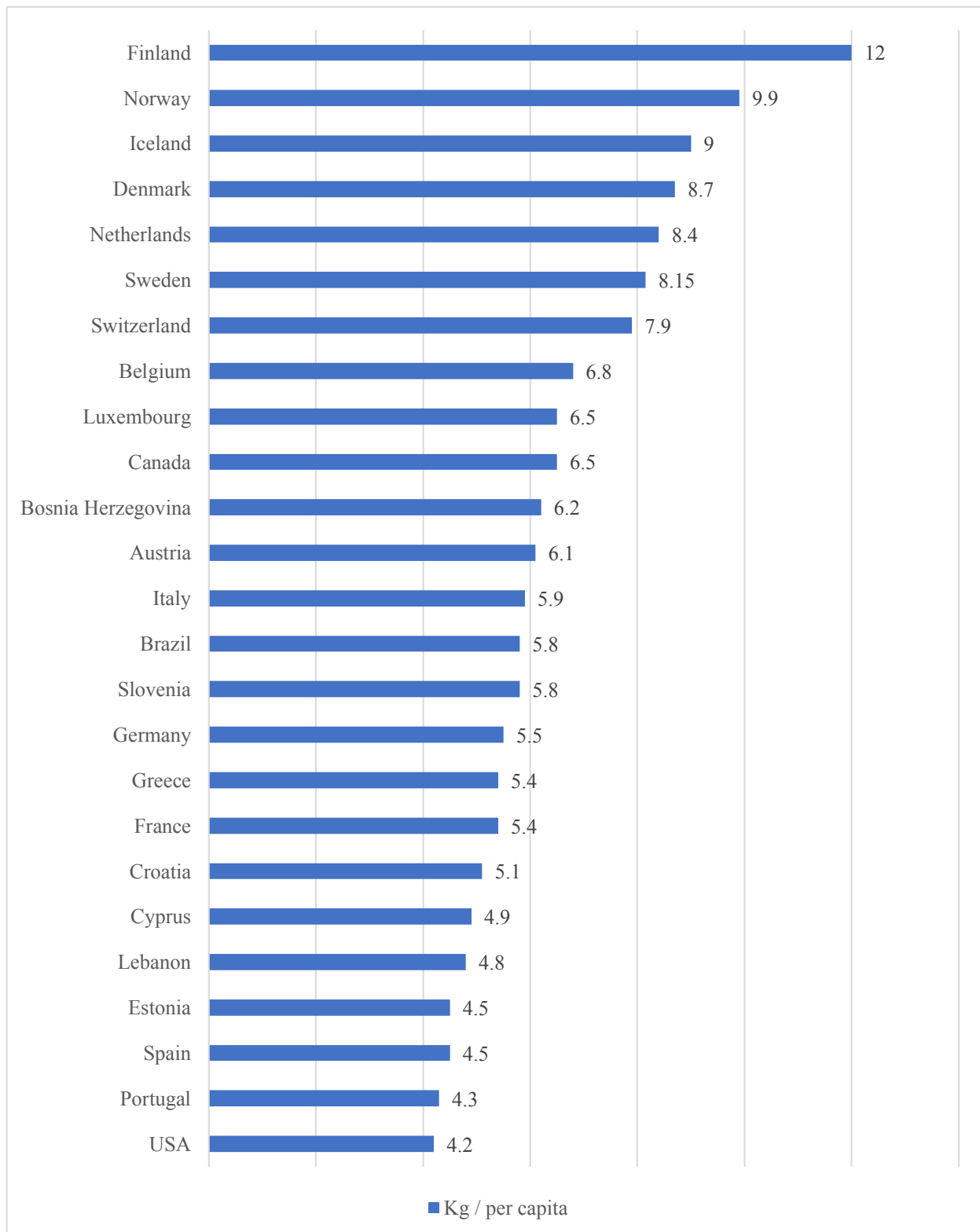


Figure 8.3: top 25 countries for per capita coffee consumption, source comunicaffè.it, 2020

The figure 8.3 also shows that Brazil is also one of the countries that consumes the most coffee, as well as being a producer. As we can see in the following figure, there is a global trend of population increase, but in recent years the growth in areas such as South America and Asia

have also significantly impacted the demand for coffee, increasing consumption in exporting countries.

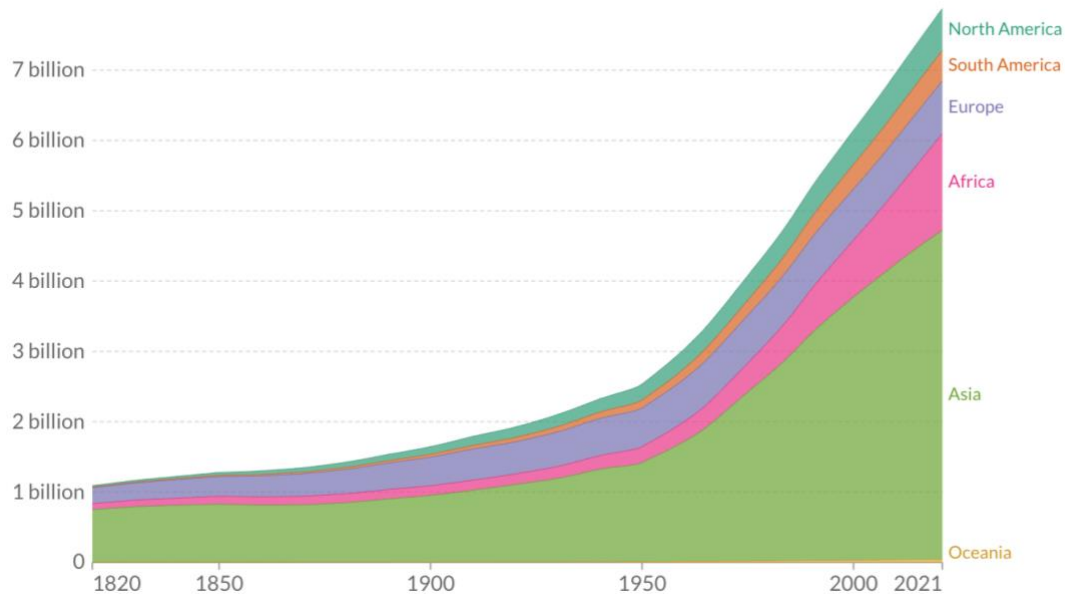


Figure 8.4: population growth from 1820 to 2021, source: ourworldindata.com

### 8.3 Revenues

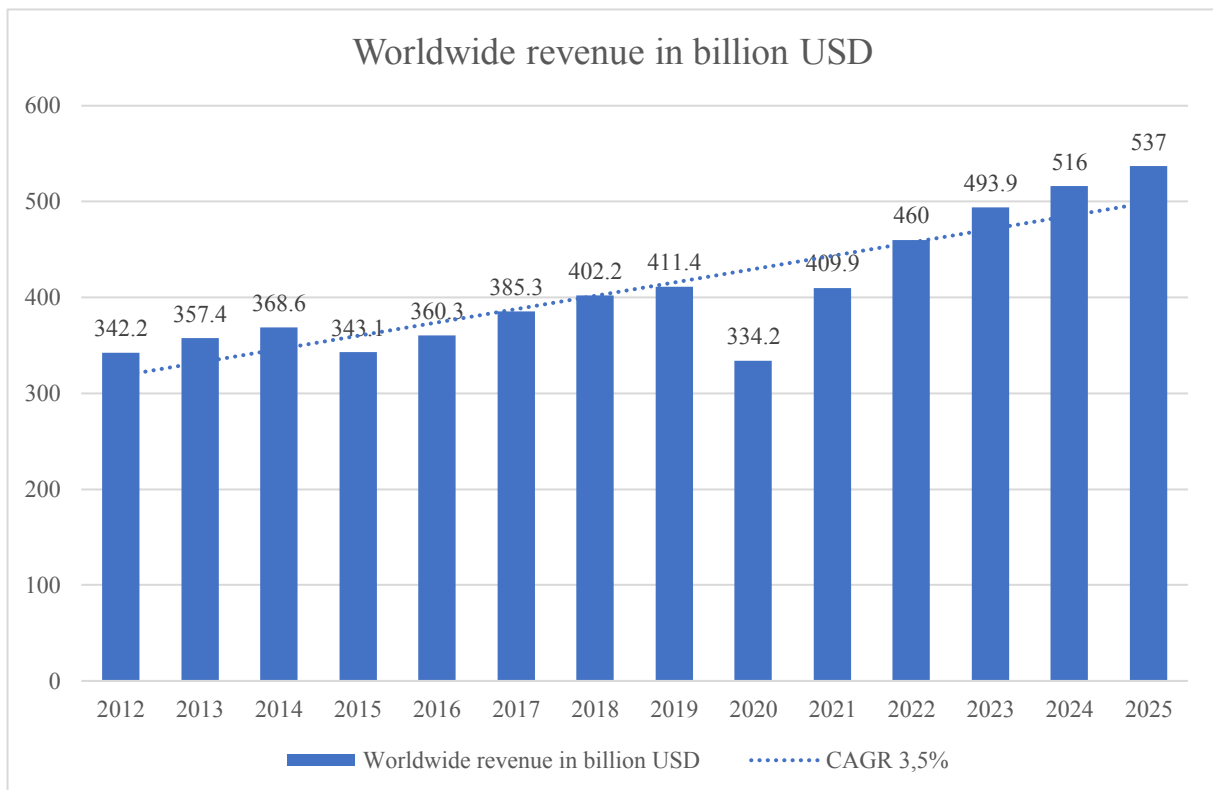


Figure 8.5: Worldwide revenue in billion USD and CAGR, 2012-2025\*forecasted, source Statista

The revenues of the coffee market in 2021 were equal to 409.9 billion US \$, and it is estimated a growth at a CAGR of 3.5% up to 2025. At the same time, sales will also undergo an estimated growth of 2.5% up to 2025. the volume of sales in the year 2021 was equal to 7.2 billion kg.

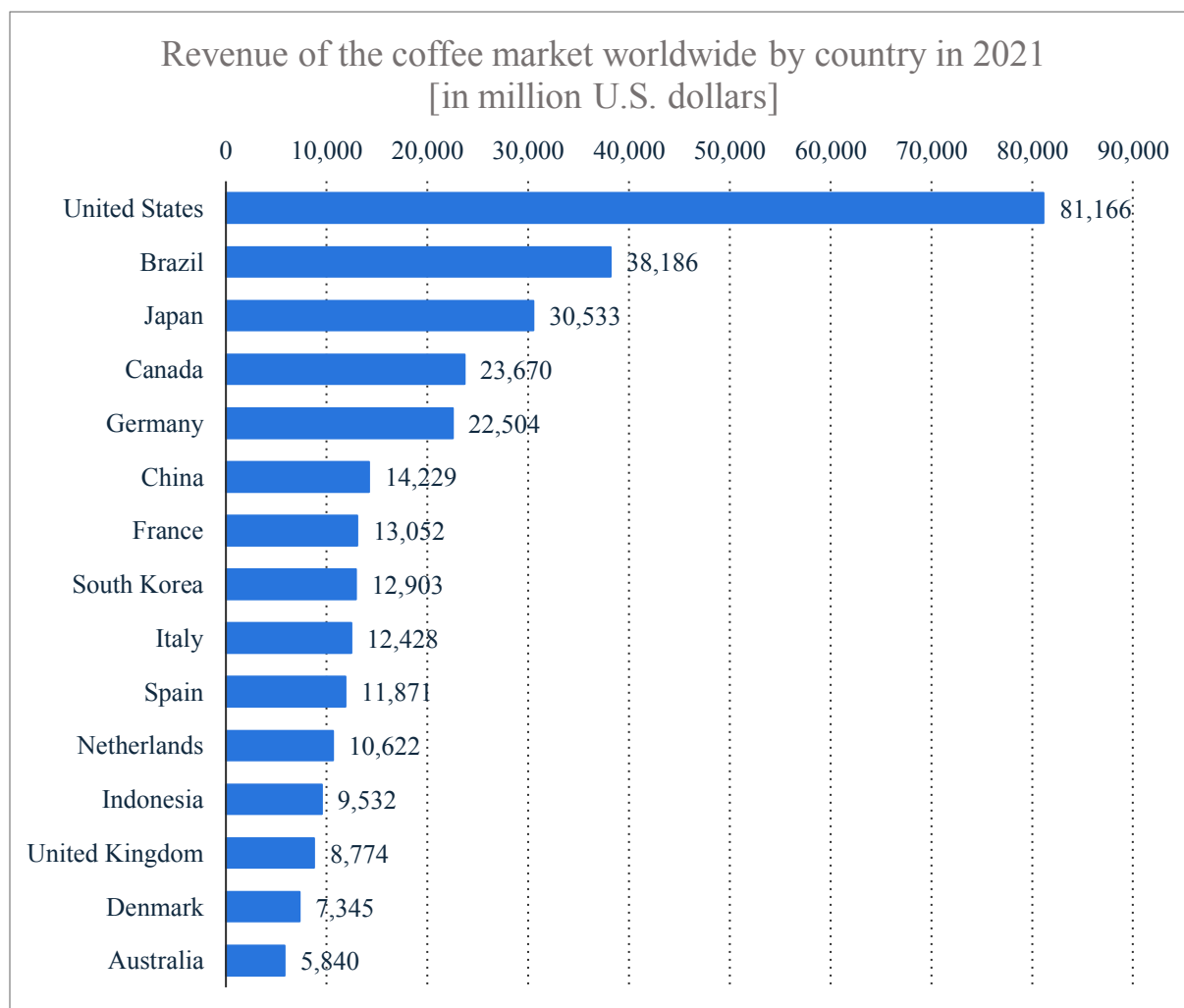


Figure 8.6 Revenue of the coffee market in 2021, first 15 countries, source: Statista

The US, Brazil and Japan generate the most profit globally. Then we find Canada and then the first European: Germany. Analyzing the market by segment, Roast Coffee generates the highest turnover, equal to 73% of the total in 2021, against 27% for Instant Coffee. It is estimated that in 2025 the share will remain the same between the market segments: in fact, 72% is expected for Roast coffee, to leave more space for Instant Coffee which will reach 28%.

In 2021, only 19% of the expenditure for coffee was attributable to home consumption, while the remaining 81% was for coffee outside the home. In 2021, Europe accounted for 33% of the revenue share, followed by the Americas with 32%, Asia 26%, while Africa, Australia and Oceania accounted for 4%

## 9. European Market

Europe constitutes a large and popular market for coffee. In fact, the European consumption of coffee is about 1/3 of the world consumption. In 2020/21 Europe consumed about 3,244 million tons of coffee, equal to 33% of world consumption. Asia and Oceania are in second place with a market share of 22%, followed by Latin America with 20% and North America with a market share of 19%.

	2017/2018	2018/2019	2019/2020	2020/2021	CAGR*
Europe	53,251	55,637	53,372	54,065	0,5%
Asia & Oceania	34,903	36,472	36,002	36,503	1,5%
Central America & Mexico	5,273	5,431	5,327	5,364	0,6%
Africa	11,087	12,017	12,024	12,242	1,0%
North America	29,941	31,779	30,580	30,993	1,2%
South America	26,992	27,156	26,898	27,180	0,3%
World	161,377	168,492	164,202	166,346	1,0%

*Table 9.1: World coffee consumption in thousand 60kg bags and CAGR, source I.C.O., 2021*

For the last 4 years, from 2017 to 2021, an average annual growth rate of 0.5% in volume has been estimated. Although the trend in coffee consumption is growing, also due to population growth, demand in Europe should "stabilize" in the long term as the European coffee market is saturated, but Europe remains an attractive market for large exporting countries seen in Chapter 4, and consumer demand for specifically higher quality coffee is expected to increase.

As the largest coffee market in the world, Europe is also the largest importer of green coffee. Total European green coffee imports were over 3.6 million tones in 2020. There was a decline between 2016 and 2020, possibly due to the global pandemic, which caused disruptions in the supply chain and the closure of many bars and restaurants across Europe.

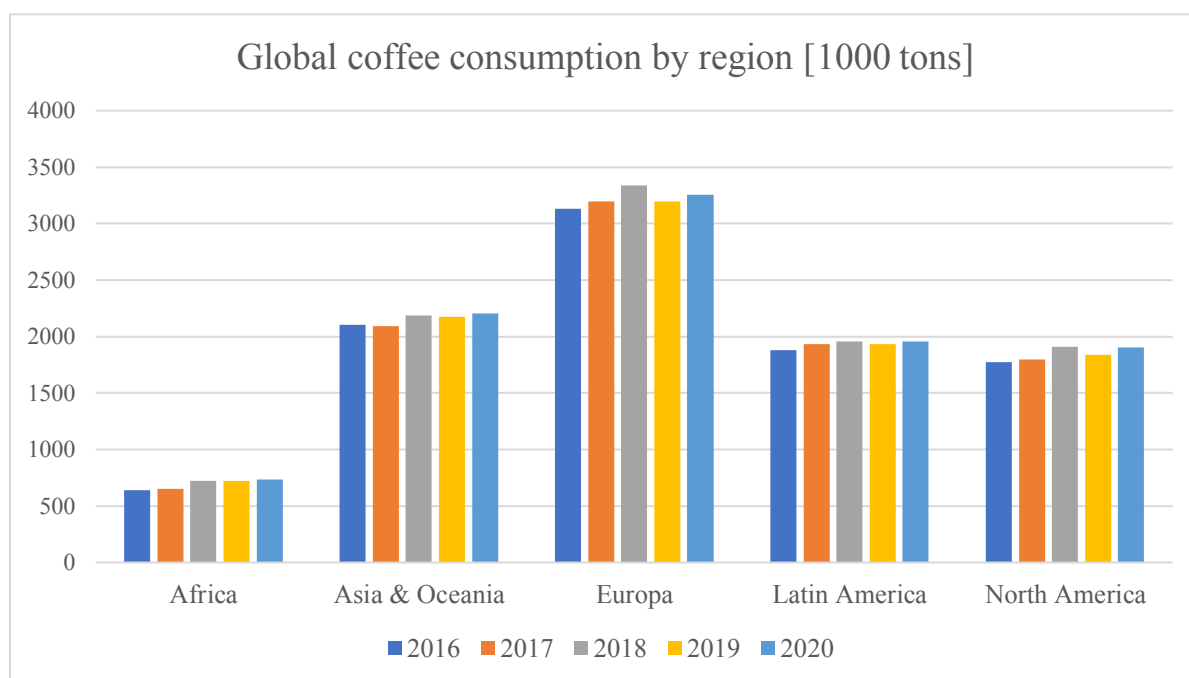


Figure 9.1: Global coffee consumption per region, in 1000 tons, source I.C.O.

In 2020, importing countries purchased a total of 3.1 million tons of green coffee beans from producing countries, about 87% of the total produced. While figure 9.2 shows the shares of the major importers worldwide, the next graph highlights the major direct importers from producing countries as a percentage of total European imports.

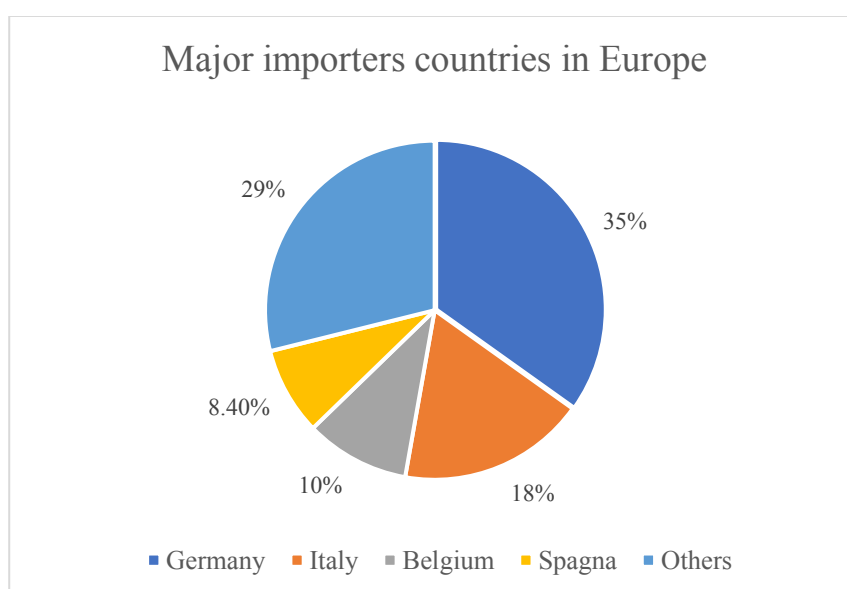


Figure 9.2: Major importers country in Europe, in % out of European imports, personal re-elaboration from ICO source

The European need for coffee is satisfied thanks to the producing countries of the "coffee Bean-Belt" seen in previous chapters. The largest suppliers of green coffee on the European market

are Brazil and Vietnam. In fact, these two countries supply almost half of the total European imports: respectively Brazil supplies 28% while Vietnam 18%. Other major suppliers of green coffee in Europe include Honduras (6.3%), Colombia (5.5%), Uganda (4.7%) and India (3.4%), as seen in the Figure 5.5.

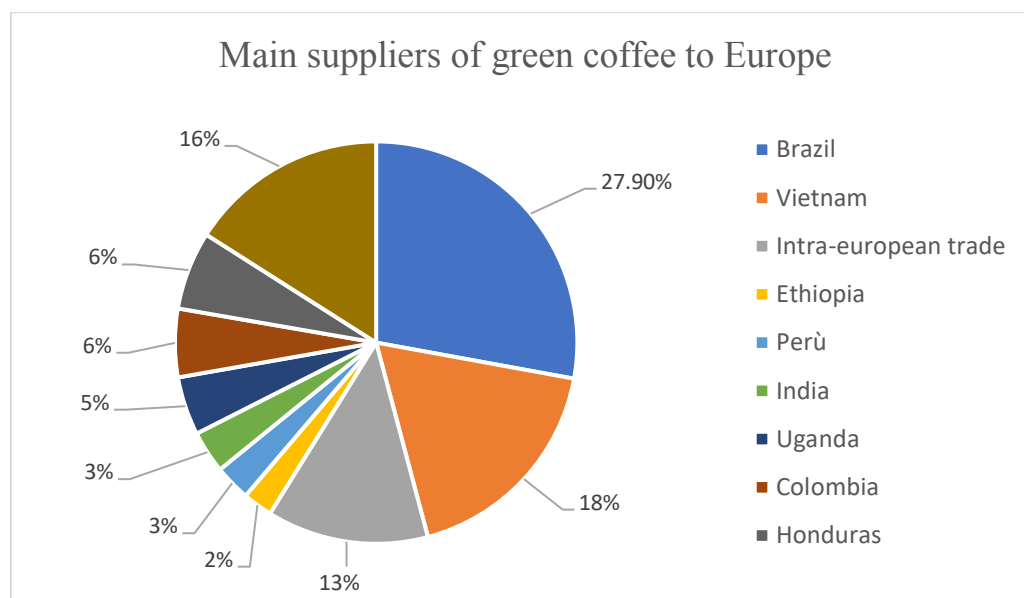


Figure 9.3: Main suppliers of green coffee to Europe, 2020. source Eurostat

Brazil is a major supplier of both Robusta and Arabica varieties but with a clear majority of the latter (71%) in 2020/21. Over the past 4 years, the total volume of Brazilian coffee production has increased at an average annual rate of 5.7%, reaching nearly 4.2 million tons of green coffee in 2020/21. Coffee exports from Brazil to Europe amounted to 999 thousand tons in 2020, registering an average annual increase of 0.4% between 2016 and 2020.

Vietnam, India, and Uganda contribute 26% to the European need for variety green coffee. Robust. The production volume of Vietnam was made up of 97% of Robusta in 2020/21, 85% of Uganda and 73% of India.

Between 2016 and 2020, Indian and Vietnamese exports to Europe decreased on average by - 5.7% and -3.2% respectively due to the greater need to add value in the different stages of coffee processing. as well as the growing demand for specialty coffees, while exports from Uganda increased by 8.0% over the same period. The improved performance was attributed to an increase in production driven by newly planted coffee trees and favorable weather.

Colombia is the third largest coffee producer in the world, with a production of 858 thousand tons in 2020/21, but the production trend in the last 4 years has been decreasing, and consequently supplies to Europe have also decreased slightly. Ethiopia is also a well-known

supplier of Arabica coffee and certified organic coffee. Ethiopian exports are mainly destined for Germany, France, and Belgium. Peru produces mostly Arabica and organic coffee, in fact it is the largest supplier of organic coffee in Europe, with quantities reaching 44 thousand tons in 2020. Much of Peruvian coffee supplies are directed to Germany, the main organic market in Europe. This production also offers potential for specialty and niche markets in Europe. Honduras is the second largest European supplier of organic coffee. In 2020 it supplied 41 thousand tons.

	2015	2016	2017	2018	2019	2020	2021	2022	2025*	CAGR
Hot drinks total	139,3	141,8	149,2	155,8	151,9	127,1	156,7	173,5	192,7	1,9%
Coffee	118,2	120,4	126,7	133,6	130,0	108,4	134,7	149,4	165,4	2,0%
Share of total market (%)	84,9	84,9	85,0	85,7	85,6	85,6	86,0	86,1	85,8	0,1%

Table 9.2: Coffee sales revenue in Europe, in billion USD, forecasted 2015-2025 forecasted, source: Statista

The market is growing, in fact, as can be seen in the table 9.2, coffee sales in Europe even if in 2020 they suffered a sharp decline, from 2021 onwards they will tend to return to the values of the years prior to the pandemic. It is estimated that they will grow at a CAGR of 2%. From the table it is also evident that they will not leave room for other "hot drinks", but rather the market share of coffee is estimated to increase: coffee, even in the long term, will be preferred as a drink over the others in the segment.

Country	Revenue ranking in billion USD
Germany	22,5
France	13,1
Italy	12,4
Spain	11,9
Netherlands	10,6

Table 9.3: Countries that generates most revenue in the coffee segment, 2020, source Statista

Specifically, in Europe the country that generates the most revenues in the coffee segment is Germany, followed by France, Italy, Spain and finally the Netherlands.

## 10. Roasters in Europe

In this chapter we will see the analysis of the major coffee roasters by European country. The analysis was carried out from the main coffee consuming countries in 2021. For each country, one or two main coffee roasters were selected with Orbis, a database provided by Bureau van Dijk that contains data from companies around the world. The search was carried out by applying two filters: one on the type of company that allowed only companies that had a role in the "processing of tea and coffee" to be grouped, while with the "geographical area" filter, the roasters of coffee for each specific country. The financial data collected in Orbis is "standardized" as each country has a unique way to record financial data, so comparing data between companies based in different countries would be complicated. To have a general view and to compare these data, the averages relating to the individual indicators of the coffee industry were taken as benchmarks, which were calculated by Orbis taking into consideration the biggest companies in the sector.

(%)	2012	2013	2014	2015	2016	2017	2018	2019	2020
<b>ROA</b>	11,27	9,67	4,27	3,85	5,79	5,04	5,26	5,15	4,02
<b>ROE</b>	24,83	19,67	8,88	11,52	14,82	14,12	12,33	12,97	9,27
<b>ROCE</b>	15,16	10,21	10,18	11,40	15,97	14,83	11,16	6,98	9,16
<b>EBITDA</b>	8,60	10,27	10,77	10,09	10,17	9,88	9,63	10,43	8,66
<b>EBIT</b>	8,07	8,39	6,69	6,01	5,99	5,78	6,19	5,95	4,96
<b>Profit Margin</b>	5,37	5,98	5,77	4,78	5,20	5,88	6,54	5,66	4,50
<b>Current Ratio</b>	2,46	2,73	2,50	2,26	2,21	2,33	2,51	2,58	3,34

Table 10.1: Average profitability indexes of companies in the coffee industry, source: orbis-bvdinfo.com

Several indexes were considered, which will now be described.

- Return on Activities (ROA):

ROA is calculated as net income divided by total assets. ROA is an indicator of efficiency in the use of the resources available to the company to produce profits. The more resources a company has accumulated, the more sales and potential profits the



company can generate. As economies of scale help reduce costs and improve margins, returns can grow at a faster rate than assets, ultimately increasing ROA.

- Return on equity (ROE):

ROE is used to measure the ability of equity to generate profits. ROE is a key shareholder ratio as it measures a company's ability to earn a return on its equity investments. It is calculated as net profit divided by equity; it can increase without further participation. The ratio may increase due to higher net income generated by a larger debt-financed asset base.

- Return on Capital Employed (ROCE):

is a long-term profitability ratio that measures how effectively a company uses its capital. Indicates the profit generated by every dollar or other unit of currency used measures the return of a company on its capital, the degree of efficiency with which a company uses the capital to produce revenues. It is calculated as EBIT on capital employed.

- EBIT and EBITDA:

The Earnings Before Interest Taxes Depreciation and Amortization, EBITDA, also known as Gross Operating Margin, is one of the main measures used to evaluate the cash flows of companies and the health of the accounts. It allows you to check if the company can make positive profits from ordinary operations. It is an income margin that measures the profit of a company before interest, taxes, fees, extraordinary components, write-downs, and depreciation. It therefore expresses the real result of the company's business. Otherwise, EBIT (Earnings Before Interests and Taxes) does not consider either the taxes or the interest paid by the company, focusing exclusively on its ability to generate profits. Literally it is the "profit before interest and taxes".

- Profit Margin:

The net profit margin, or simply net margin, measures how much net income or profit is generated as a percentage of revenue. It is the ratio of net profits to revenues for a company or business segment. The net profit margin illustrates how much of each dollar

in revenue collected by a company translates into profit. It is calculated as net income over total revenues.

- **Current Ratio:**

The current ratio is a liquidity ratio that measures a company's ability to pay short-term or maturing obligations within one year. A current ratio that is in line with the industry average or slightly above is generally considered acceptable. A current ratio below the industry average may indicate a greater risk of bad debt or default. Likewise, if a company has a very high current ratio to its peer group, it indicates that management may not be using its resources efficiently. The current ratio is called current because, unlike other cash relations, it incorporates all current assets and liabilities. (Investopedia, 2021)

The analysis was carried out using the indices described above (where present), in parallel with the value of sales revenues, net profit and the cost of the goods sold. The companies analyzed, as mentioned above, were considered by country of origin or (as in the case of Nestlé) by the primacy in the market of the reference country, but it is assumed that their profits also come from foreign markets.

## **10.1 North Europe**

As we have seen previously, in Northern Europe filter coffee (the more diluted one) is preferred over espresso or Ristretto. This is because the extraction methods for the espresso allow to concentrate the flavor of the starting coffee to the maximum and are not suitable for the so-called "Scandinavian" type of roasting because the result would be an excessively acidic drink. This type of roasting, in fact, requires a more delicate extraction method, and lends itself to excellent quality coffees because it allows for more balanced drinks in which it is easier to appreciate the aromatic profile. In fact, this process gives life to very different drinks compared to "traditional" coffee where the body is much lighter, and the aromas more delicate. It is precisely from the dark roasts, therefore very toasted, that unpleasant hints of burnt and earthy could arrive that many try to cover with spoonful of sugar or liters of milk. Precisely for this reason, the Nordic countries have opted for this combination of roasting and extraction that best suits their culture. Making lighter, clearer roasts means safeguarding the most fruity and floral

aromas and therefore subjecting the beans to shorter cooking times and lower temperatures. Scandinavian roasting therefore represents the emblem of delicacy and elegance. Coffee roasters such as Robert Thoresen and Tim Wendelboe (Norway), La Cabra (Denmark), and Drop Coffee (Sweden) are among the most popular and famous names in the Specialty Coffee industry in Northern Europe. These quality micro-roasters have already had a strong impact on market trends, even in the brand sector, about the selection of mono varieties.

The Nordic approach, from a market point of view, is also considered as one of the most important green examples to follow and from which to draw inspiration. All these brands are in fact promoting a much more sustainable, traceable, and transparent coffee supply chain.

### 10.1.1 Finland

#### 10.1.1.1 Finnish coffee culture

Finland is the country where most roasted coffee is consumed in the world. One of the reasons for this is undoubtedly the type of the main Finnish coffee, that is long, very similar to the coffee that is consumed in the United States. Coffee consumption is deeply rooted in Finnish society, and the most consumed is medium roasted filtered coffee, mixed with milk at any time of the day, often in large cups. The need of Finns for caffeine seems to be due to the need to overcome the days in the dark. It is therefore normal for one of them to consume up to 8 cups a day of filtered with light roasting. The phrase "let's go get a coffee" is used when they want to make an appointment.

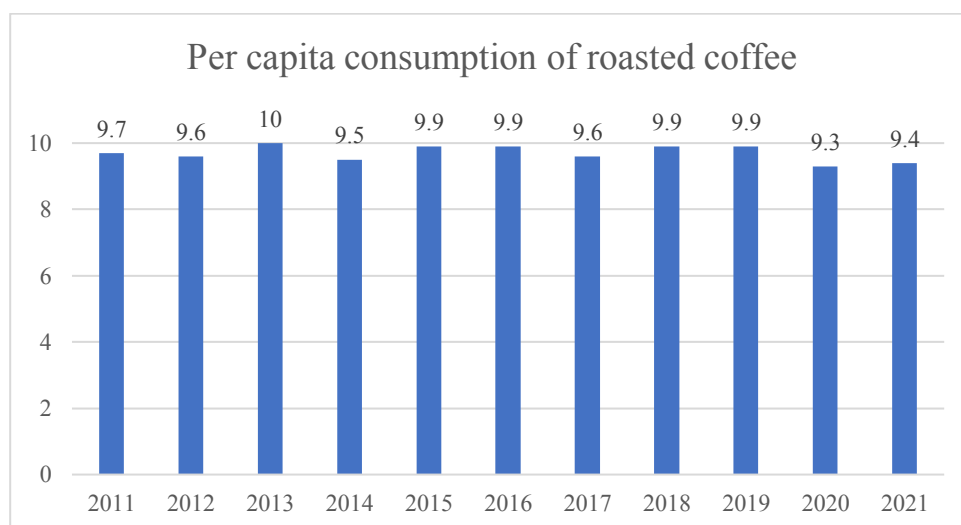
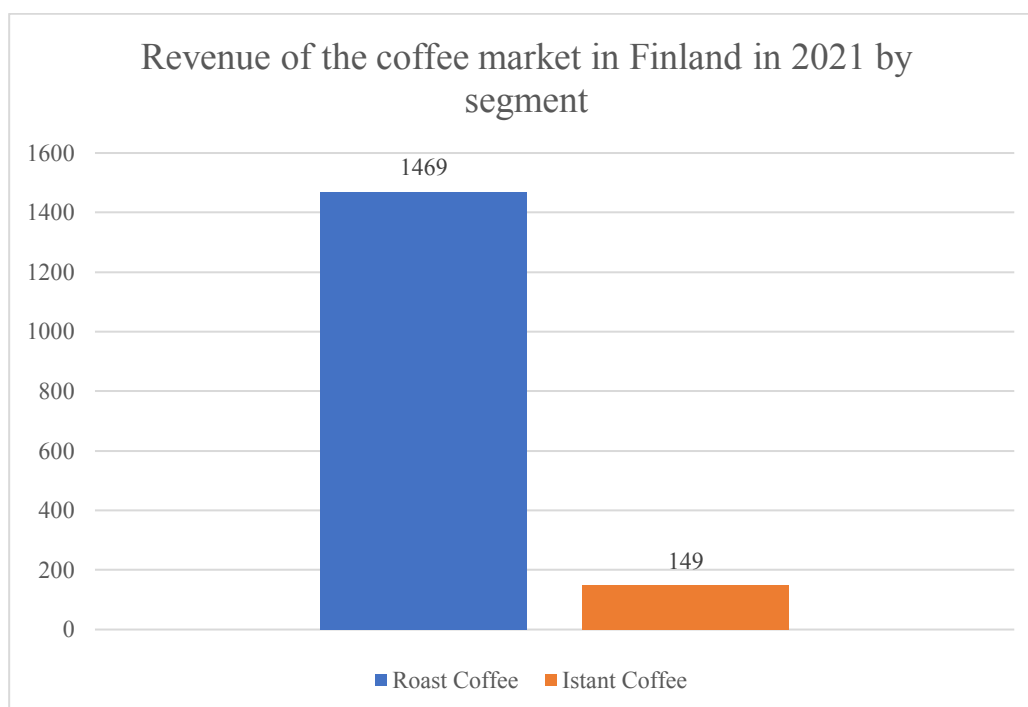


Figure 10.1: Per capita consumption of roasted coffee in Finland from 2011 to 2021 (in kilograms), source: Statista

Coffee consumption in Finland has slightly decreased in the last year (2021) compared to previous years, with an average of 9.4 kilograms of roasted coffee per person. In the last ten years, the average consumption of coffee per person has remained constantly around ten kilograms per year, in fact it is among the nations that consumes the most coffee in the world.

#### **10.1.1.2 Growing market**

About 80% of all coffee consumed is light roasted, although dark roasted coffee has increased its popularity. Espresso-based drinks are certainly on the rise. At home too, Finns choose high-quality machines.



*Figure 10.2: Revenue of the coffee market in Finland from 2021, by segment (in million euros), source: Statista*

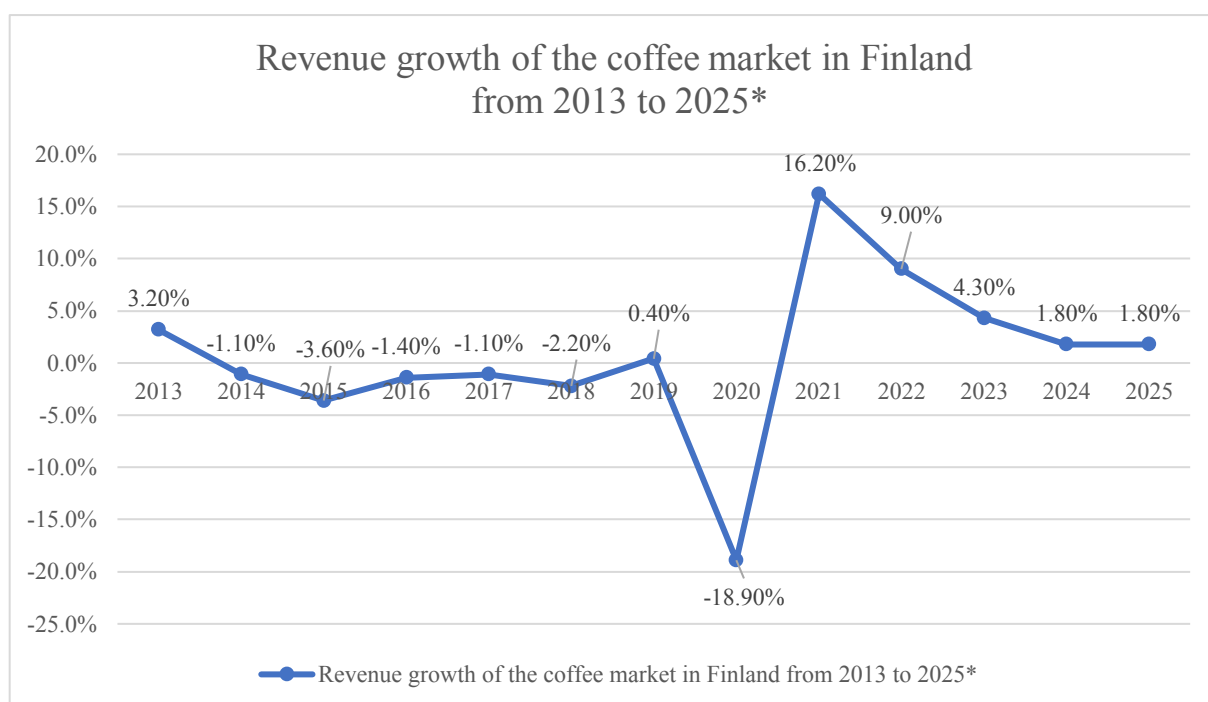


Figure 10.3: Revenue growth of the coffee market in Finland, 2013-2025 forecasted, source: Statista

The revenue created by the coffee market in Finland increased in 2021 by 16.2 percent to around 1.62 billion euros. The Statista Consumer Market estimates that the coffee market in the country will continue to grow, although at a significantly lower rate.

While the average per capita coffee consumption has remained relatively stable in Finland, the volume of coffee imports has increased in recent years. The volume of green coffee imports in Finland reached a peak of 75,000 tons in 2019 and 60,411 tons in 2020. The EU accounted for most coffee imports into Finland in 2020. Russia did not play a significant role considering Finnish coffee imports, but nevertheless imported coffee with a volume of 1 metric ton in 2020. About 80% of the green coffee brought to production in Finnish roasters was imported from Brazil, Colombia, and Honduras. While the volume of roasted coffee imports was over 11.5 thousand tons. The attention on the traceability of raw materials and on food safety is growing. More and more consumers want to know its origin and to know how sensitive producers are to the issue of sustainability. The coffee market is split between consumer and business-to-business.

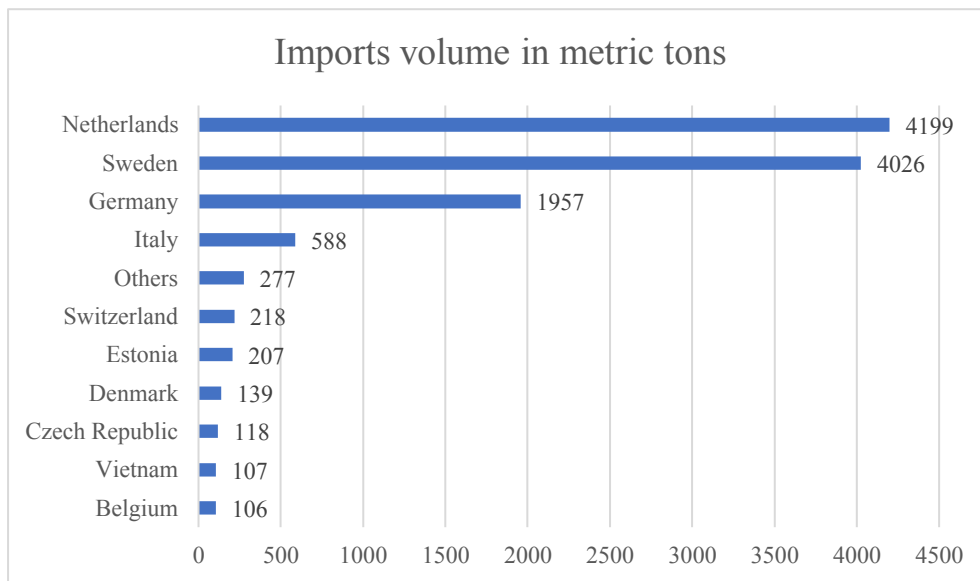


Figure 10.4: Volume of coffee imports to Finland 2020 in metric tons, source: Statista

The main export markets for coffee from Finland were the Baltic countries and Russia. In 2020, around 3,000 tons of coffee were exported from Finland to Estonia. The total amount of export is about 7,284 tons.

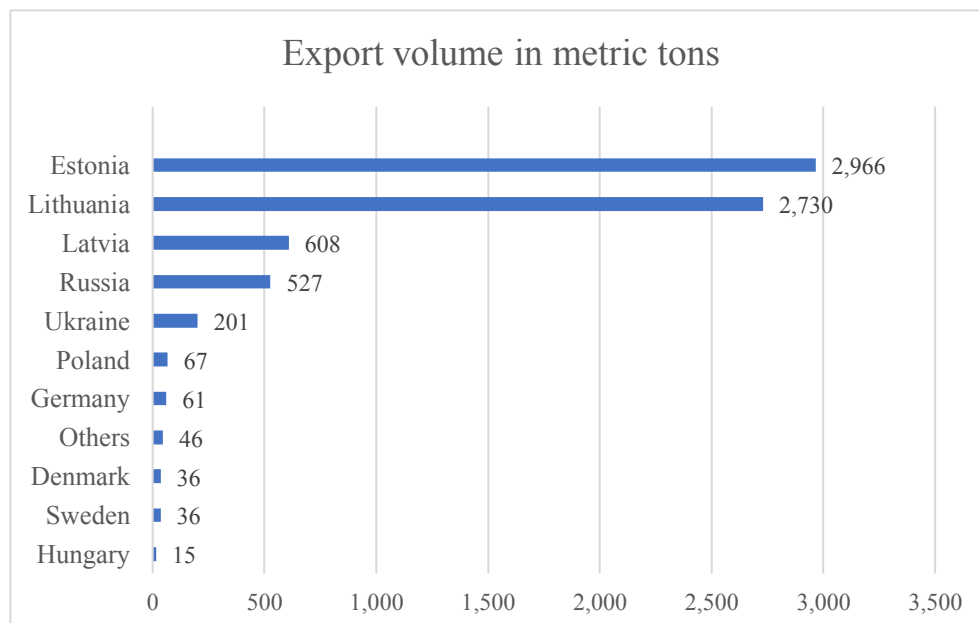


Figure 10.5: Export volume of coffee from Finland in metric tons by country, 2020, source: Statista

The most popular coffee brand among Finnish consumers is Paulig Coffee and Meira.

### 10.1.1.3 Paulig Ltd



Figure 10.6

The company is a Finnish family-owned international food business known for its high-quality brands and services. Founded in 1876, it offers coffee, food concepts, spices, plant-based products, and snacks under various brands: Paulig, Santa Maria, Risenta, Gold&Green and Poco Loco. Paulig has 2,000 employees in 13 countries and its net sales in 2019 were 921 million euros. The revenue of Oy Paulig Finland Ab decreased overall from 2016 to 2020, and in the last year Paulig's turnover was around 252 million euros. Due to lack of data, it is not possible to have the profit indices of this company but as can be seen from the revenues, they have always been positive with a decrease in 2020 probably due to the pandemic. In the figure 8.6 is also illustrated the operating profit, that is what is left when deducting operating costs, the cost of goods sold, and other daily expenses from income. Therefore, having a decreasing trend with revenue, the operating profit also decreases: the operating profit of Paulig decreased overall from 2017 to 2020. In the year 2020 there were many costs that the company had to bear, in fact in the same year the company's operating profit amounted to roughly 8.4 million euros.

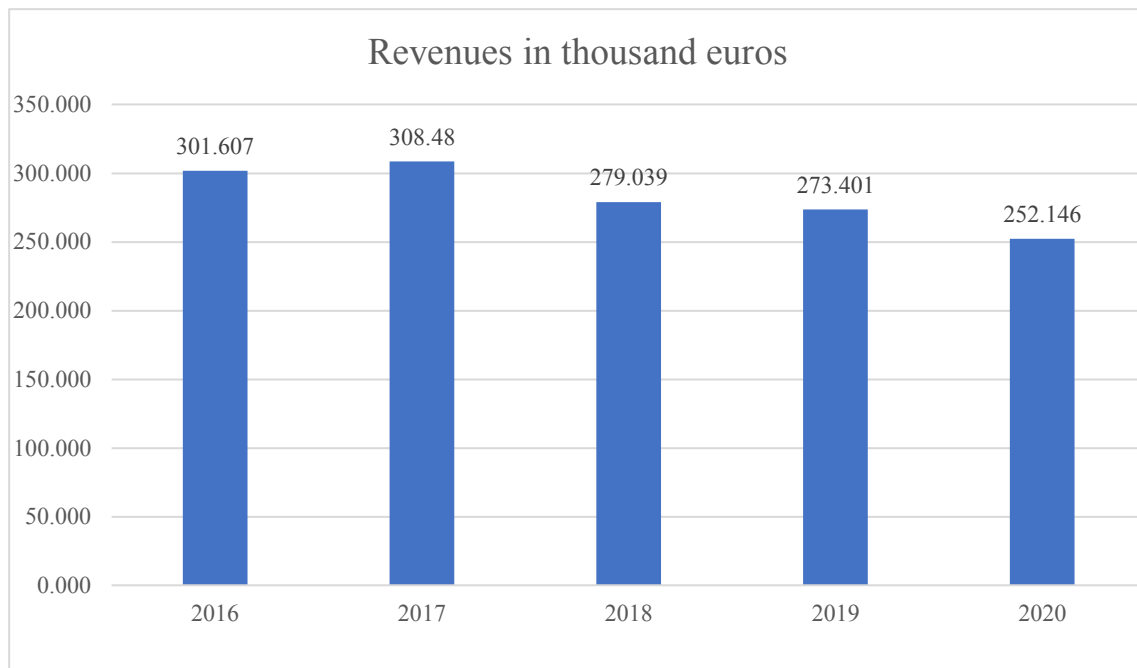


Figure 10.7: Revenue of Oy Paulig Finland Ab in thousand euros, 2016-2020, source: Statista

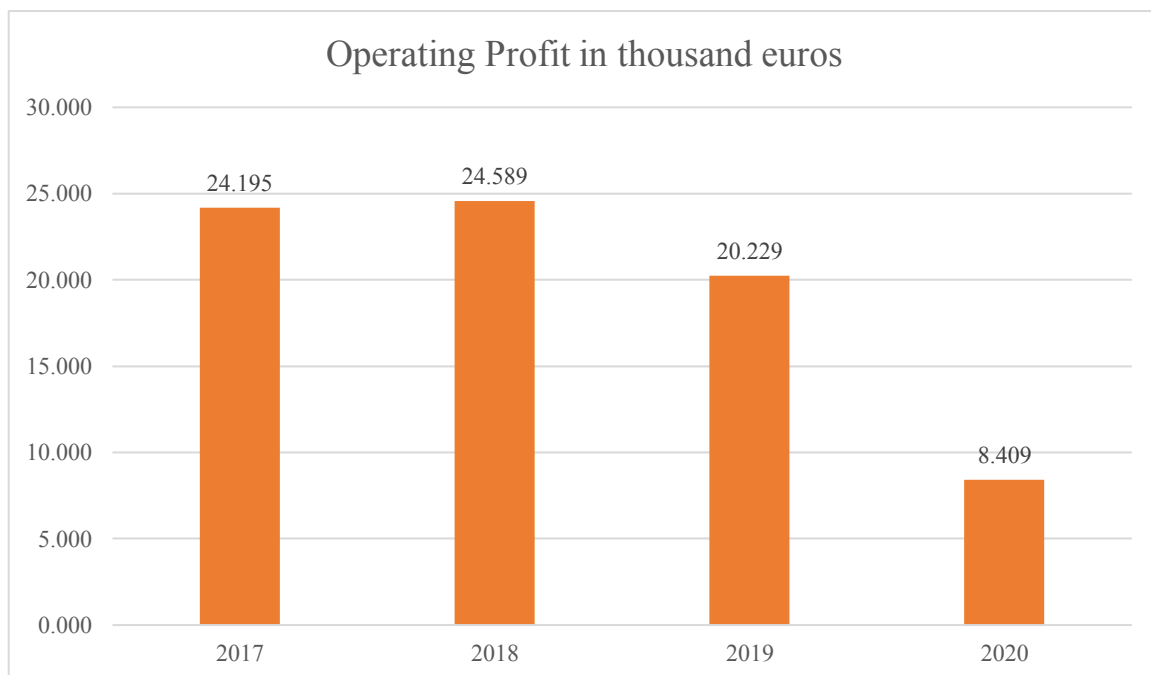


Figure 10.8: Operating Profit of Oy Paulig, 2017-2020, source: Statista



#### **10.1.1.4 Meira Oy**



Meira Oy is a Finnish company with a history dating back over a century. It produces and sells coffee and flavoring products in its exclusive production facility in the heart of Helsinki.

Meira's growth story continues as it focuses on a deep understanding of consumers, strong brands and customer relationships, value-added products, smart and sustainable manufacturing. The company has been part of the Massimo Zanetti Beverage Group since 2002, which is one of the largest companies in the coffee industry in Europe and has become strongly international in recent years. In addition to Italy and Finland, the company has coffee roasting operations in France, the Netherlands, the United Kingdom, Brazil, the United States and Australia. Worldwide, Massimo Zanetti Beverage Group operates in more than 100 countries. In 2019, the company's turnover was EUR 914.5 million and the number of employees was approximately 3,300. Meira occupies an important position in the coffee roasting sector, covering approx. 27% of the Finnish market \*. Nearly one in three packs of coffee sold in Finland is "Kulta Katriina", Meira's best-selling brand. Segafredo plays an important role in the Finnish premium coffee segment, and Saludo is a mainstream brand with a history dating back to the 1960's.

Meira is also the market leader in the category of dry spices, baked goods, ketchup, mustard, walnuts, almonds, salt and salad dressings. Meira has a sales company in Estonia and distributors in the Baltic and Nordic countries. Meira's net sales in 2020 were € 84,8 million and the company had 181 employees. The market share parallel to the volume of coffee has had a growing trend since 2010.

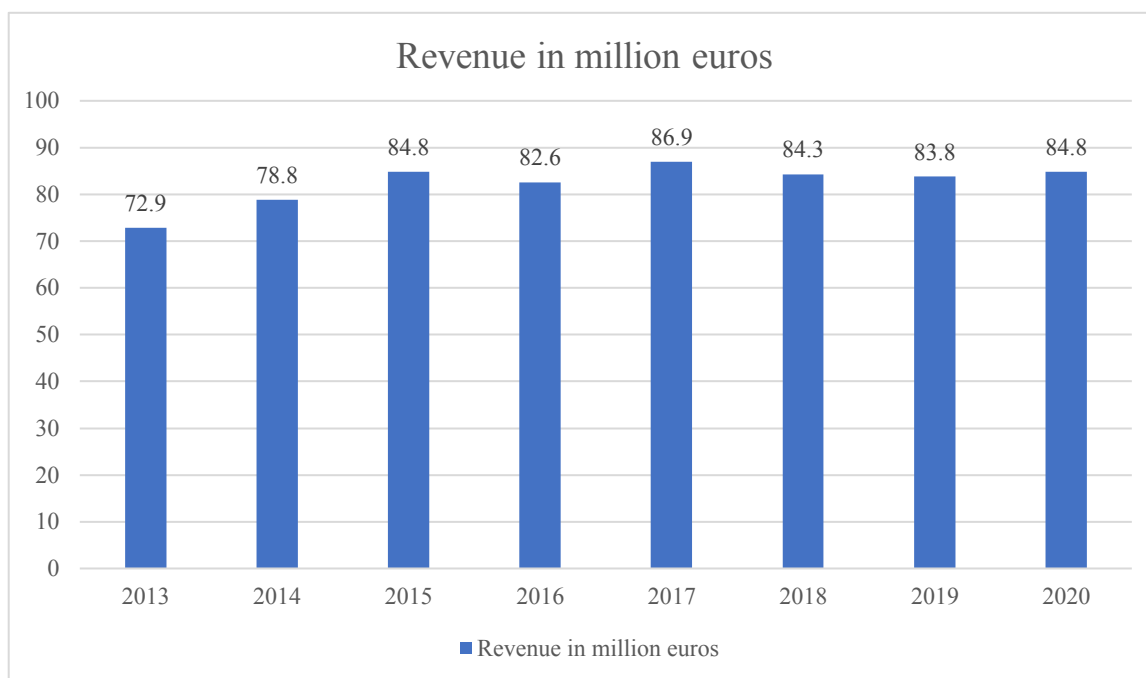


Figure 10.9: Revenue of Meira in million euros, 2013-2020, source: Statista

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
ROE (%)	3,25	8,66	21,66	-18,64	15,88	10,30	12,65	12,64	7,31	-1,77
ROCE (%)	3,78	10,57	17,84	14,06	10,90	n.d.	n.d.	n.d.	n.d.	n.d.
ROA (%)	1,29	3,73	9,43	-6,68	6,42	5,36	6,70	7,34	4,30	-0,96
Profit Margin (%)	1,96	3,13	6,42	-2,31	5,43	2,89	3,80	4,12	-0,92	-0,35
EBITDA (%)	4,91	7,13	10,05	9,08	7,74	4,44	5,41	5,73	3,46	4,05
EBIT (%)	2,90	5,16	8,00	7,01	5,82	3,02	3,90	4,20	-0,85	-0,19
Current ratio (%)	1,12	1,29	1,41	1,23	1,30	1,54	2,75	2,61	2,47	2,36

Table 10.2: Profitability indexes and current ratio of Meira from 2011 to 2020, source: Orbis-bvdinfo.com

The best year was 2016, and all the indices reflect its productivity. Since 2017 we have noticed a negative ROE, given by a negative profit as seen in the following table. In 2018 there is a general recovery, and the indices realign themselves on the sector average, only to return to low values in 2019 and 2020.

	2020	2019	2018	2017	2016	2015	2014	2013
<b>SALES REVENUES</b>	104,059,248	94,174,610	96,520,114	104,233,192	87,091,814	92,314,134	95,698,198	100,471,570
<b>COGS</b>	69,210,855	62,139,740	59,032,795	68,713,741	60.019.375	0	0	0
<b>EBIT</b>	3,039,525	4,930,602	7,717,304	7,360,431	5,159,817	2,790,338	3,743,093	4,239,353
<b>NET INCOME</b>	787,798	2,103,005	5,447,913	-3,822,252	3,782,109	2,105,546	2,863,848	3,152,623

Table 10.3: Historical data of Meira's sales revenues, cost of good sold, EBIT and net income in USD. source: orbis-bvd.com

Sales revenues are positive, 105 million USD, with an increase of + 9.7%. The net income amounted to 788mil USD, decreasing by 63%. Like all companies, the pandemic had a strong impact.

### 10.1.2 Scandinavian Countries

Norway, Denmark, and Sweden have some of the highest per capita coffee consumption rates in the world after Finland. Norway currently ranks second in the world in per capita coffee consumption at an estimated 9.9 kg annually, Denmark is fourth with with 8.7 kg, and Sweden is sixth in the top 10 coffee consuming countries with 8.2 kg per capita.

The top of the list for the world's coffee consumption can be summarized as follows:

- Finland: 3.5 cups of coffee per person per day.
- Sweden: 3.2 cups of coffee per person per day.
- Norway and Denmark: 3.1 cups of coffee per person per day.

In all these three countries, coffee is consumed mainly black, pure and therefore without milk and sugar: this is why the quality of the coffee is very important in these markets, just like the Finnish one, which are oriented towards high quality coffee: in fact the market Scandinavian imports high relative volumes of Arabica and low volumes of Robusta. Interest in certified, organic, and fair-trade coffees is strong in Scandinavia, where consumer preference for these products is growing rapidly.

### 10.1.2.1 Green coffee import

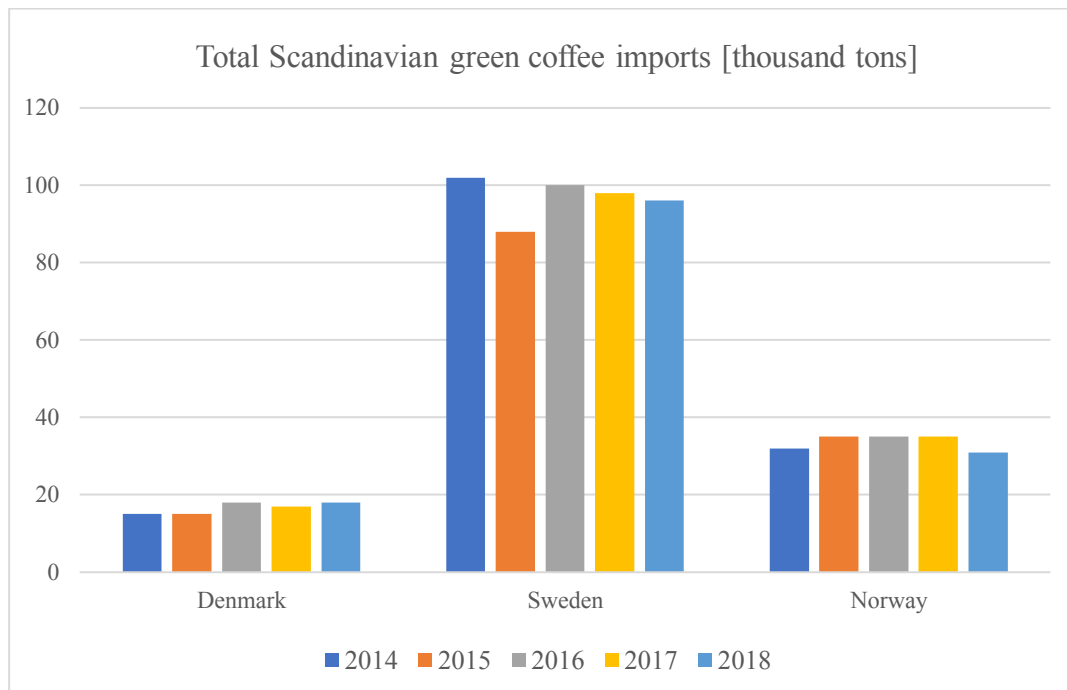


Figure 10.10: Total Scandinavian green coffee imports from producing countries, 2014-2018, source: International Trade Centre

Although the Scandinavian countries are the first in per capita consumption of coffee, their share of green coffee imports in comparison with other European countries is relatively low. In fact, together the 3 countries held a market share of 4.2% of total European imports in 2018 (respectively Sweden 2.9%, Norway 0.9%, and Denmark 0.5%), equal to 156 thousand tons. of green coffee. On average, the volumes of green coffee imports in the two-year period 2016-2018 suffered a sharp decline in all three countries. Sweden recorded the smallest decline at -1.8%, while Norway (-5.4%) and Denmark (-5.6%) recorded the deepest declines.

The 3 countries bought over 90% of their green coffee directly from the producing countries. Brazil, Colombia and Peru are the largest suppliers of coffee in Sweden, Norway and Denmark. The largest supplier of green coffee in the region is Brazil, which supplies 44% of Norwegian coffee, 40% of Swedish supplies and 27% of Danish coffee. Scandinavia mainly imports Arabica beans, the share of inferior quality Robusta imports is small, especially compared to other European markets. Most green coffee beans enter Scandinavia via the ports of Oslo (Norway), Aarhus (Denmark), Gävle or Stockholm (Sweden). Examples of large coffee importing and roasting companies in Scandinavia include Friele, Joh. Johansson Kaffe (Norway), Arvid Nordquist (Sweden) and BKI (Denmark). Examples of specialist importers

include Collaborative Coffee Source and Nordic Approach (Norway), which sells high-quality green coffee to roasters around the world.

#### ***10.1.2.2 Specialty Coffee***

The concept of specialty coffee has been used since the 1970s in America to indicate a coffee produced in special climatic and environmental conditions, which give it a particular profile of taste and aroma, therefore well selected and processed to respect its unique characteristics. It is a document of the SCA (Specialty Coffee Association) that defines in detail what a specialty coffee is: it is intended as a green coffee of the highest quality, roasted to best express its aromatic potential, and extracted according to precise standards. The focus is therefore on the origins of the coffee, on the botanical variety grown in a particular production area, but also on each step of the supply chain: a specialty coffee has no defects when it is raw and freshly roasted to preserve all its properties.

In practice, the definition of "specialty" is assigned if the coffee has obtained a score of at least 80 points in the evaluation form provided for by the cupping protocol (tasting with the Brazilian method) of the SCA. Closely connected to the third wave that has brought back the quality of the coffee drink, the world of specialty coffees is today bringing out new tastes, single plantation coffees and lighter roasted products, which are distinguished by greater acidity and aromatic complexity, precisely like Nordic coffees. Alongside the classic blends proposed by roasters, dedicated lines appear, in which the packaging "traces" and tells the story of the coffee, the best methods to extract it and the sensations to look for in the cup. A new generation of customers is making its way into this scenario, increasingly interested in getting to know the first part of the supply chain and in visiting both the places of origin and the roasting, to taste the coffees of different origins, discover their singular characteristics: in addition to a product, a story and an authentic experience are also sought.

Norway, Sweden, and Denmark are seen as major players in the global specialty coffee market, which continues to grow in the region. Sales of coffee with sustainability certifications and organic coffee show continuous growth in Scandinavia but also throughout the region: in fact, the first Specialty Coffee Association in Europe was born in Norway.

Parallel to the growth of the specialty coffee market in Scandinavia, we find strong growth in out-of-home consumption by coffee drinkers, who are looking for more and more unique and high-quality coffee in bars. Denmark, Sweden, and Norway have seen the highest growth in retail coffee shop sales since 2010.

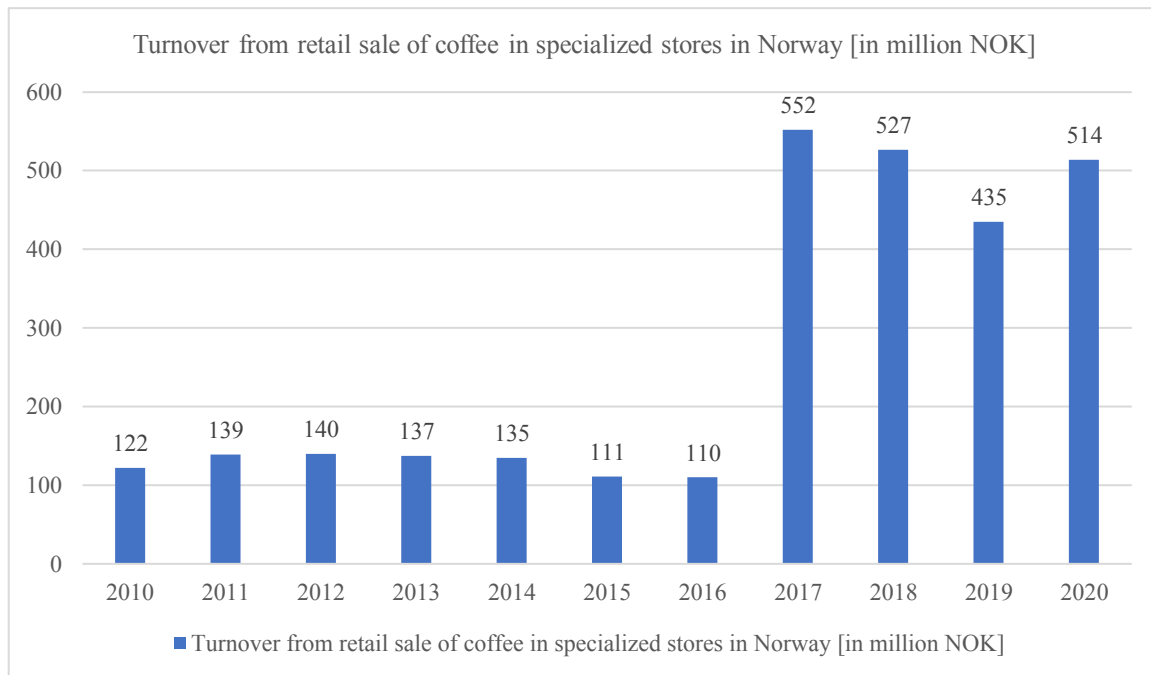


Figure 10.11: Turnover from retail sale of coffee in specialized stores in Norway, 2010-2020, source Statista

Consequently, the number of coffee chains and micro roasters is also growing: Sweden had over 1,700 coffee outlets in 2018 and the number of small coffee roasters is continuously growing at the rate of 10 new places every year. In the same year, Denmark even recorded the highest rate of new coffee shops in Europe in proportion: 14.5%. The largest coffee chain operating in Scandinavia is Espresso House, which has around 350 stores in Sweden, Norway and Denmark. Other large chains include Joe & The Juice (Denmark) and Wayne's Coffee (Sweden). Examples of specialty coffee shops in Scandinavia include Drop Coffee Roasters (Sweden), Sonny (Denmark), and Fuglen (Norway). These roasters cater to niche markets and follow the principles of direct trade based on solid long-term relationships, transparency, and high-quality products. The growing demand for specialty coffees follows the growing consumer interest in how coffee is prepared, as well as where and how the coffee was grown. The upward trend in out-of-home consumption in Scandinavia offers opportunities for exporters of high-quality coffee as coffee shops introduce more sophisticated and higher-value varieties.

### 10.1.2.3 Organic market



Figure 10.12: Turnover of organic coffee retail shops in Denmark, 2010-2020, source Statista

Scandinavian countries lead the way in terms of the sale and consumption of organic food in Europe. Denmark and Sweden are among the top 10 European countries for highest spending on organic products in 2020. Denmark's annual per capita consumption of organic products reached € 383.58 in 2020, while Sweden recorded € 212.32. Norway is a little lower with 82.92 € per capita per year, but consumption has grown over the last 10 years, remaining well above the world average (the world average consumption per capita is around 11 euros).

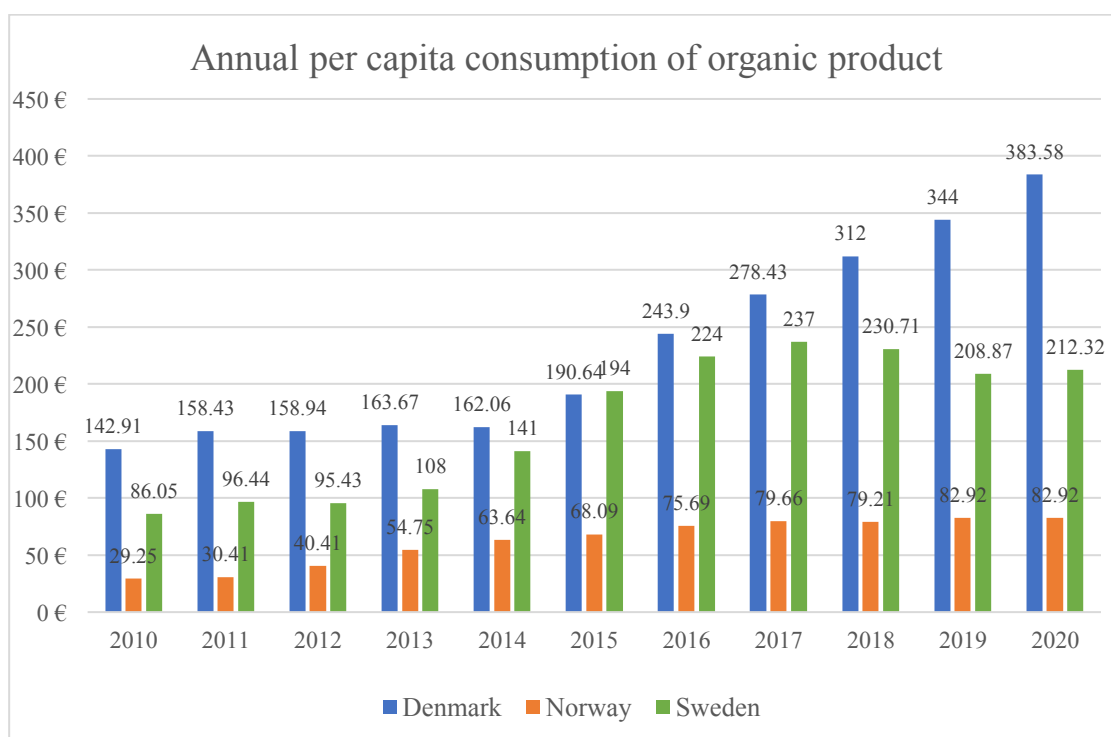


Figure 10.13: Annual per capita consumption of organic product in euros, 2010-2020, own data processing from FiBL statistics

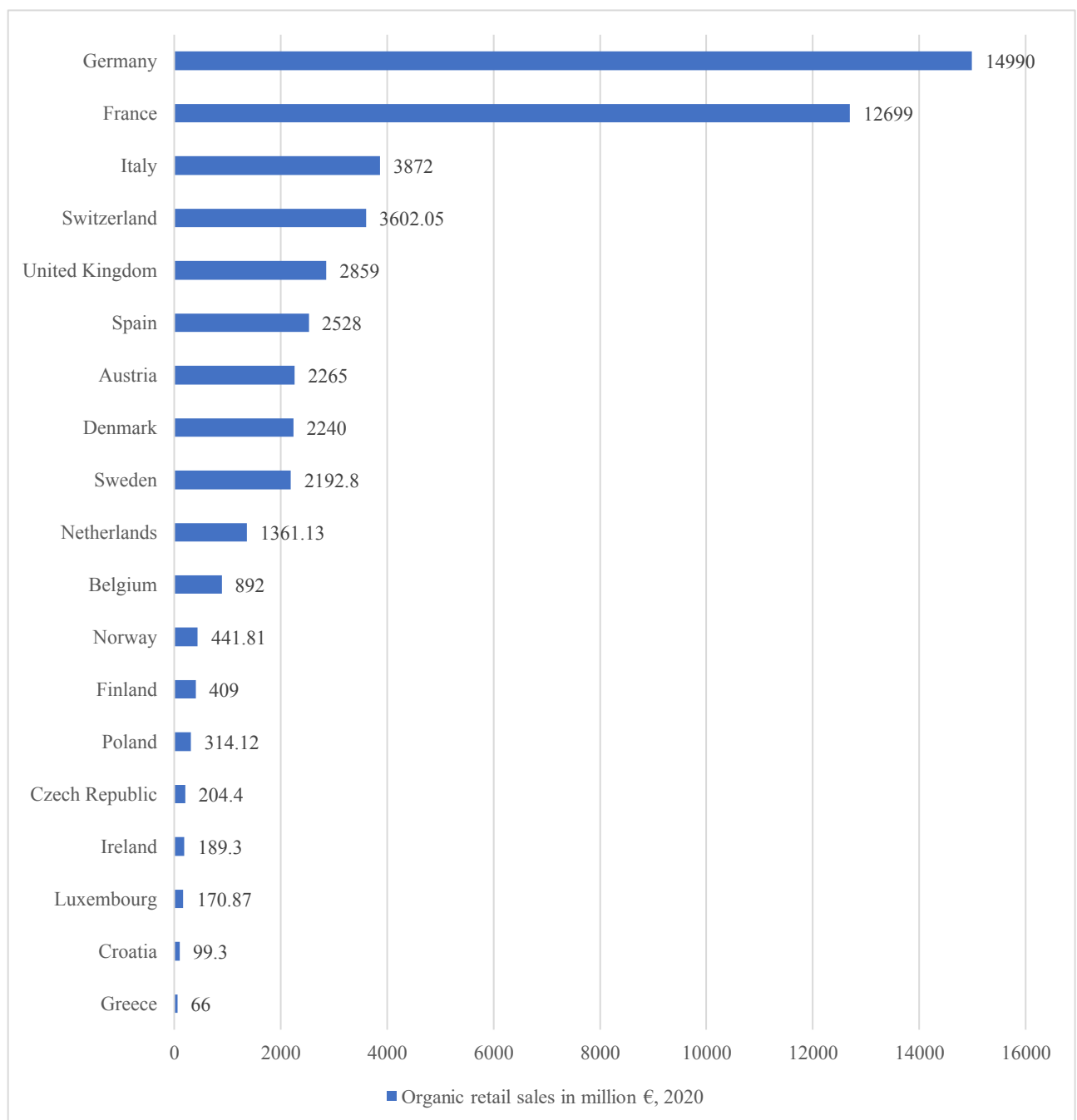


Figure 10.14: First 19 countries in Europe for organic retail sales, in million €, in 2020. Own data processing from FiBL statistics

The interest in organic coffee follows the general trend of a growing Scandinavian market for organic products. In 2017, coffee was the fastest growing category in organic beverages in Denmark. Swedish consumers also increasingly prefer organic coffee. Scandinavian coffee roasters and brands consistently include organic products in their assortment.



One of the world's largest importers of organic and Fairtrade certified coffee is the large Swedish coffee roaster Löfbergs. Another major brand that focuses heavily on organic and sustainable coffee in Scandinavia is Arvid Nordquist.

#### ***10.1.2.4 Sustainability of coffee***

Coffee with sustainability certifications also shows continuous growth in Scandinavian countries, thanks above all to the growing consumer demand for foods with positive social and environmental impacts. In 2018, 62% of Norwegian consumers said sustainability is a guiding theme in their purchasing decisions, 73% in Sweden and 72% in Denmark.

Denmark is among the fastest growing markets for Fairtrade certified coffee, with a growth rate of 25% between 2016 and 2017, followed by Ireland (36%) and Finland (35%). Total Fairtrade retail sales in Denmark were € 138 million in 2018, marking a 5.4% revenue increase between 2017 and 2018. In Sweden, the total fair-trade market grew by 10% between 2017 and 2018, reaching a retail turnover of 386 million euros in 2018. Certified fair-trade coffee accounted for 11.3% of the total Swedish coffee market in 2018. In Norway, overall fair-trade retail sales reached 121 million euros in 2017, recording a growth rate of 22% between 2016 and 2017.

Rainforest Alliance-UTZ is also present in the Scandinavian coffee market. Many cafes and brands in Scandinavia are Rainforest Alliance certified, including Zoégas, Gevalia and Wayne's Coffee, Sweden for example. Since 2019, 100% of the retail coffee products of leading Swedish Löfbergs roasters have been Rainforest Alliance certified.

Roasters Peter Larsen Kaffe and Risteriet Coffee and retailer Irma are some of the Rainforest Alliance certified players in Denmark. In Norway, one of the country's most famous coffee brands, Evergood, and Joh Johansson Kaffe are Rainforest Alliance certified.

#### ***10.1.2.5 AB Anders Löfberg***



AB Anders Löfberg is one of the largest family-run coffee roasters in the Nordic countries. The production is equivalent to more than 10 million cups of coffee per day. The head office is in Karlstad, Sweden, and other offices are in Norway, Denmark, and Latvia, covering a dozen markets in Northern Europe.

The company was founded in 1906 by the brothers Anders, John, and Josef Löfberg.

In recent years, the Löfbergs have strengthened their position in the market, placing an emphasis on social responsibility and working for a better environment. Löfbergs is one of the largest European importers of organic and fair-trade coffee, as well as being the leading Swedish supplier of coffee to restaurants, bars, and businesses. The company is wholly owned by the Löfberg family. The coffee is sold under the Löfbergs, Peter Larsen Kaffe, Melna, Crema, Percol and Green Cup brands. Half of the sales are retail, and a quarter are in bars and restaurants (Out of Home). The rest is to external customers who sell or serve coffee under their own brands. In Sweden they also have the Kobbs brand, which specializes in the sale of tea.

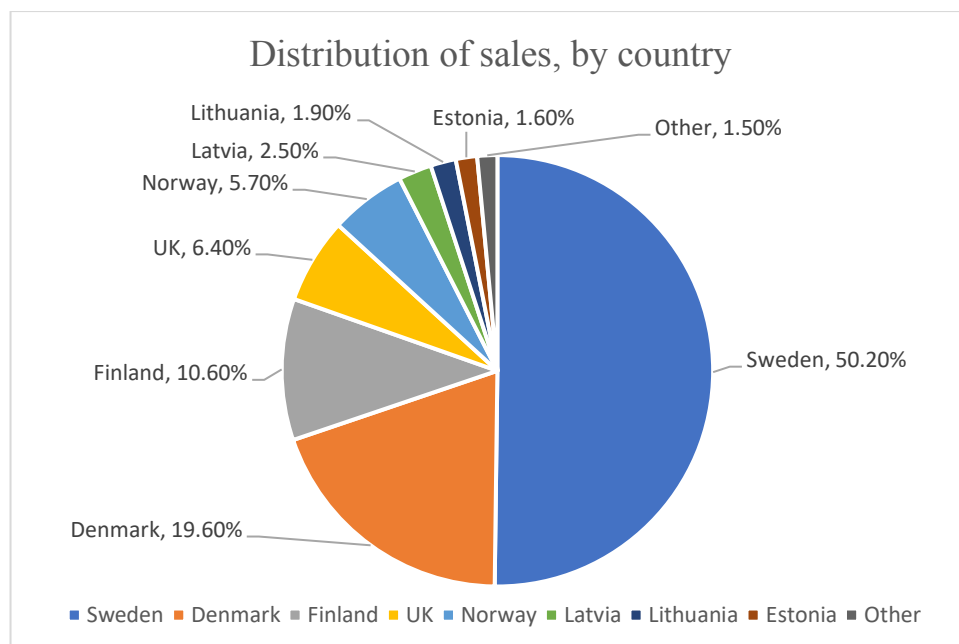


Figure 10.15: Distribution of sales of Anders Löfberg 2020/21, by country, source: Statista

In the financial year 2020/2021, Swedish coffee roaster Anders Löfberg generated most of its sales revenues in Sweden, with a share of 50.2%. 19.6% of sales were recorded for the neighboring country Denmark. Anders Löfberg's coffee has also been sold in Norway, Finland and the Baltic states, as well as the UK. In the same year 2020/2021, most coffee beans purchased for coffee production of Anders Löfberg coffee came from South America (68%).

Central America, Africa and Asia were other purchasing areas for coffee beans used to produce Anders Löfberg's coffee.

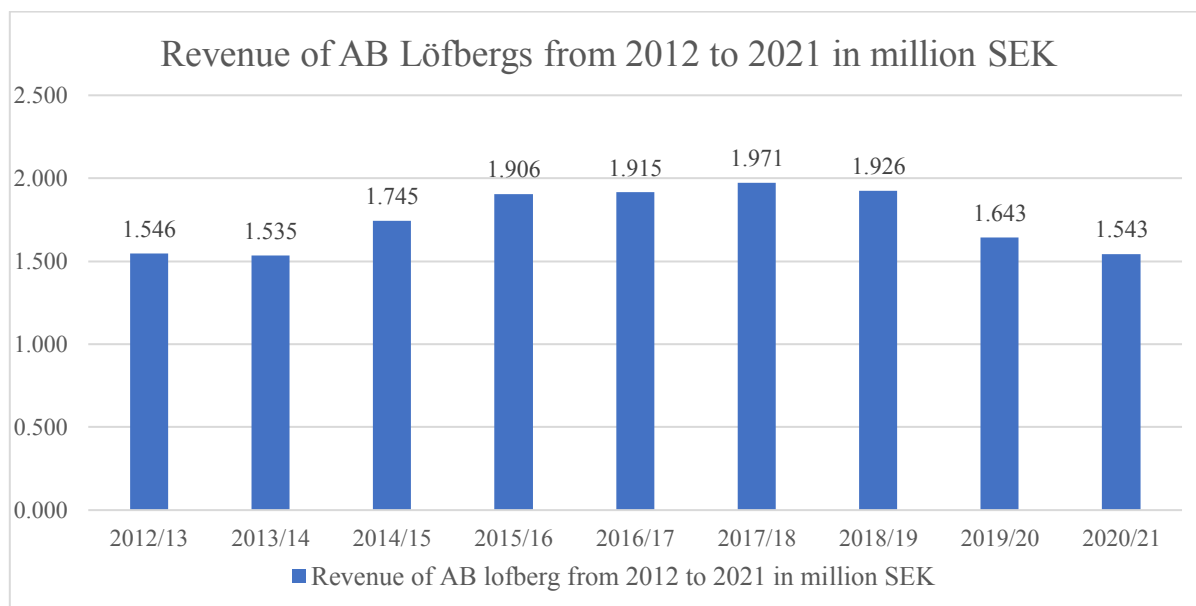


Figure 10.16: Revenue of AB Löfbergs, 2012-2021, source Statista

	2021	2020	2019	2018	2017	2016	2015	2014	2013	2012
ROE	57,12	-20,33	0,51	111,24	92,12	144,71	14,20	11,74	2,04	-9,64
ROCE	57,62	-17,29	2,29	111,59	94,63	113,15	14,13	11,80	4,18	-3,75
ROA	20,73	-3,98	0,10	26,81	18,26	28,77	3,17	2,63	0,35	-1,57
Profit Margin	3,09	-0,50	0,08	3,02	2,39	4,01	0,43	0,40	0,11	-0,26
EBTDA	3,74	0,54	0,78	3,45	2,86	n.d.	0,92	0,71	0,35	-0,12
EBIT	3,02	-0,55	0,04	2,95	2,41	4,01	0,52	0,44	0,15	-0,28
Current ratio	1,43	1,06	1,03	1,13	1,06	1,14	1,14	1,12	1,19	1,27

Table 10.4: Profitability indexes and current ratio of Löfberg from 2012 to 2020, source: Orbis-bvdinfo.com

	2021	2020	2019	2018	2017	2016	2015
<b>Sales Revenues</b>	110,220,848	101,826,928	124,038,227	132,171,217	144,916,244	132,610,178	128,990,627
<b>EBIT</b>	3,327,182	-564,127	48,372	3,901,454	3,488,653	5,318,011	676,680
<b>Net income</b>	3,230,686	-542,360	16,591	3,890,859	3,399,510	5,268,887	534,617

Table 10.5: Historical data of Löfberg's sales revenues, EBIT and net income in USD. source: orbis-bvd.com

In figure 10.16 there are revenue of Anders Löfberg from 2012/13 to 2020/21 in Swedish kronor. Profitability indexes are slightly below the industry average, except for ROE and ROA which are very high. This could be a sign of good performance, or negative net income or assets giving falsely high ROE.

## 10.2 Germany

Coffee is the most consumed drink in Germany, in fact it is the EU country that imports the most coffee. Coffee roasted or ground by a filter machine, as well as espresso, are among the most popular coffee drinks in Germany.

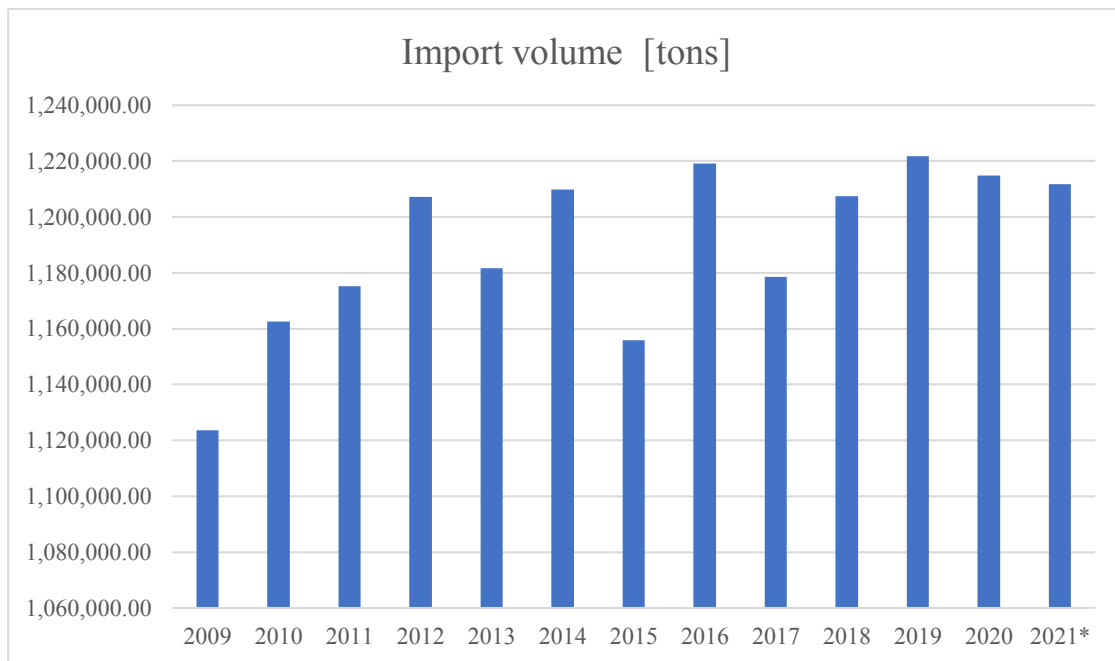


Figure 10.18: Import volume of coffee in tons to Germany, from 2009 to 2021, source: Statista.com

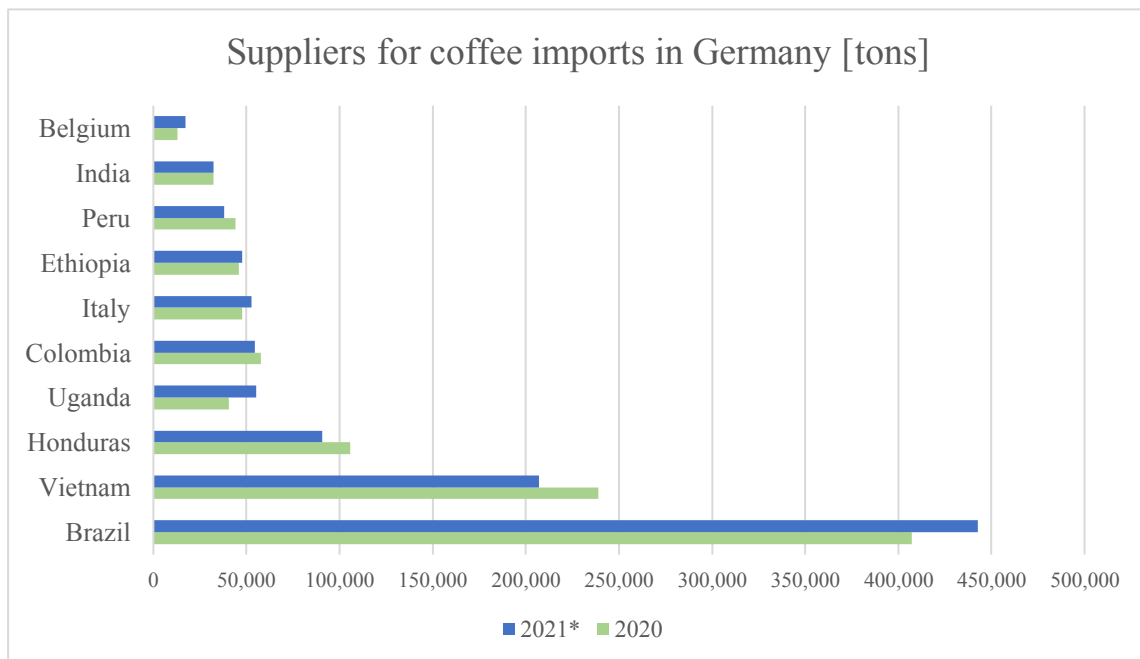


Figure 10.17: Ranking of suppliers for coffee imports to Germany by import volume (in tons), source: Statista.com

Germany leads with its imports in 2021 totaling 1.2 million tons. Mainly coffee in Germany comes from Brazil, Vietnam, and Honduras. (Figure 10.18)

From a survey conducted by GfK media communication Research and published by VuMA, the most popular roasted and ground coffee brands in 2018 are highlighted based on the consumption of the last four weeks of the interviewees. The 8 favorites are listed in the table 10.4. Among the most popular brands we find Jacobs Krönung, the first choice for lovers of roasted and ground coffee, while Senseo (from JDE group) was the leader among fans of coffee pods.

Jacobs Krönung
Dallmayr Prodomo
Tchibo Beste Bohne
Melitta Auslese
Tchibo Feine Milde
Eduscho Gala
Lavazza
Movenpick

Table 10.6: Most popular brand of roasted and ground coffee in 2018, source: survey by VuMa

The growing consumer focus on how coffee is produced, as well as the desire to be informed and to contribute to fair production and employment conditions in the industry, have led to an encouraging increase in sales of fair-trade coffee in Germany.

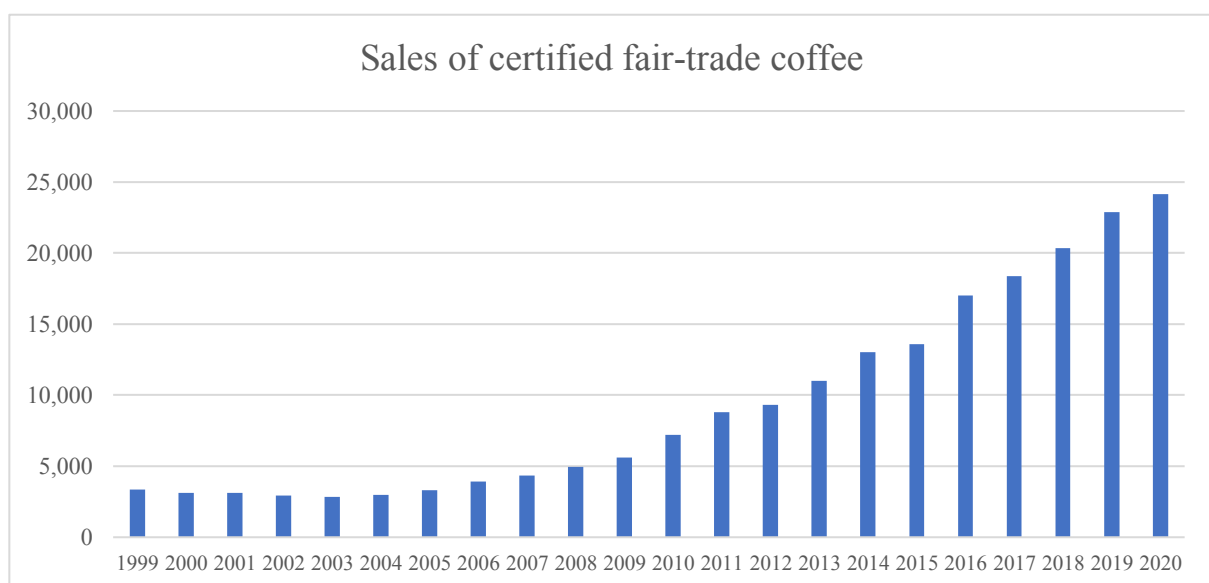


Figure 10.19: Sales volume of certified fair-trade coffee in Germany from 1999 to 2020, source: Statista

For both the roasted coffee market and the single-serving coffee market, the leaders in Germany are two American companies, Jacobs Krönung and Senseo respectively. As for the local roasters, the most famous are Deutsche EXT Kaffee and Tchibo.

### 10.2.1 Deutsche EXT Kaffee ( DEK )



Table 10.7: Profitability indexes of DEK, from 2011 to 2020, source: Orbis-bvdinfo.com

Deutsche EXT Kaffee (DEK) is a German manufacturer and distributor of instant coffee, instant coffee blends and coffee-like beverages based in Hamburg. The company was founded in 1955, when coffee roasters and importers Max Herz, Walther Jacobs, Rolf Schopf and Bernhard Rothfos teamed up to enable their plants to jointly manage the complex and costly coffee extraction process. Jan Bernd Rothfos took over in 1956 and founded the Kord group of companies in 1981 to coordinate European operations, including DEK. In 2007 the Kord group was renamed the Cafea group. The product range includes coffee mainly soluble coffees in all forms, but also soluble coffee drinks such as cappuccino, milk and iced coffee and coffee substitutes such as coffee beans in various compositions. (Wikipedia.com, 2021)

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
<b>SALES REVENUE</b>	510,715	489,069	531,713	590,478	473,277	513,039	528,945	637,529	626,687	524,086
<b>EBIT</b>	3,280	9,614	13,153	14,975	18,022	19,504	21,137	14,250	10,959	10,808
<b>NET INCOME</b>	2,006	7,384	9,046	9,082	8,603	12,254	17,303	9,927	7,764	8,195

Table 10.8: Financials in thousand USD of DEK, from 2011 to 2020, source: Orbis-bvdinfo.com

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
ROE (%)	1,26	5,12	6,48	6,64	7,67	11,45	16,38	9,89	8,97	10,61
ROCE (%)	1,27	4,78	5,98	6,25	7,03	10,68	16,09	10,80	10,13	12,10
ROA (%)	0,95	3,95	4,82	4,28	4,90	7,43	8,41	4,56	3,22	3,81
Profit margin (%)	0,74	2,06	2,59	2,65	3,87	3,85	4,13	2,32	1,87	2,04

EBITDA (%)	1,11	2,51	3,14	3,06	4,34	4,39	4,42	2,60	2,10	2,53
EBIT (%)	0,63	1,93	2,45	2,50	3,76	3,75	3,88	2,21	1,73	2,03
Current ratio (%)	4,817	5,55	4,841	3,043	3,327	3,191	2,077	1,84	1,615	1,594

Table 10.9: Profitability indexes and current ratio of DEK, 2011 to 2020. source: orbis-bvdinfo.com

The data obtained shows that the efficiency of the company is decreasing, for example by the ROCE, which is very low, even compared to the sector average. ROA also drops from average values in the 2018-2019 two-year period to 0.95 in 2020: the company is using the available resources inefficiently. It is a capital-intensive company that will need a lot of assets to make a profit. Also, other indexes are also not high. For financials, the industry is approaching post-pandemic situation; the data on the cost of goods sold are not available, but we still find a correspondence in the increase in net profit of 60%: 2 million USD in 2020.

### 10.2.2 Tchibo



Figure 10.20

Tchibo was founded in 1949 in Hamburg by Carl Tchilling-Hiryan and Max Herz and still maintains its headquarters north of the city. The name Tchibo is short for Tchilling and Bohnen which means coffee bean. In the early years, Tchibo focused on selling roasted coffee by mail, produced in the company-owned roastery in the Hoheluft district of Hamburg.

In the 1990s, Tchibo began its expansion outside of Germany, opening stores in Switzerland, Austria, Great Britain, the Netherlands, Poland, the Czech Republic and Turkey.

In 2007 the company expands to new fronts: now it sells clothing, household items, electronics and small appliances and recently expanded its product offering, selling services such as mobile telephony, travel, insurance, and "green" electricity. In January 2022, the German company buys the Caffè Molinari roasting plant in Modena. With over 1000 stores, Tchibo is one of the largest coffee chains and its coffee is sold in many outlets around Europe.

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
<b>SALES REVENUES</b>	72,326	64,141	64,511	78,110	63,841	71,375	72,649	80,044	69,230	64,816
<b>COGS</b>	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
<b>EBIT</b>	1,083	934	1,021	1,158	n.d.	n.d.	n.d.	1,277	1,437	33
<b>NET INCOME</b>	1,084	934	1,021	1,153	n.d.	n.d.	n.d.	1,298	1,449	137

Table 10.10 Tchibo financials in thousand USD, 2011-2020, source: Orbis-bvinfo.com

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
ROE (%)	7,12	7,22	8,35	9,82	n.d.	n.d.	n.d.	15,86	21,98	2,71
ROCE (%)	3,67	3,69	n.d.	3,89	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
ROA (%)	3,09	3,08	3,31	2,80	n.d.	n.d.	n.d.	3,23	1,25	0,39
Profit Margin (%)	1,50	1,45	1,58	1,47	n.d.	n.d.	n.d.	1,57	2,05	0,21
EBTDA (%)	2,35	2,06	2,14	2,11	n.d.	n.d.	n.d.	2,09	2,35	0,05
EBIT (%)	1,50	1,45	1,58	1,48	n.d.	n.d.	n.d.	1,54	2,03	0,05
Current Ratio (%)	6,13	5,85	8,12	3,55	0,00	0,01	0,01	2,58	1,25	2,10

Table 10.11: Profitability indexes and current ratio of Tchibo, 2011 to 2020. source: orbis-bvinfo.com

Unfortunately, not all the data is present as for COGS, but from such a general aspect it is seen from the sales revenues that the company recovered in 2020, reaching a turnover of 72.4 million USD (an increase of 12, 2% compared to 2019). The net income is also positive by + 16.0%, reaching 1.08 million USD in the same year. Looking at the indices, they are low relative to the sector average (table 10.1). This can mean multiple things, but it gives an idea of a company that is trying to bounce back to go back to the pre-pandemic years. The current ratio is above the average, this means that the financial situation is positive in the short term of the company: sufficient liquid resources are available to pay all suppliers.



### 10.3 Netherlands

The Netherlands plays an important role in the European coffee trade. They rank fifth in per capita coffee consumption, with 8.4 kg in 2020. They follow the trend of other Northern European countries, increasing the Dutch demand for sustainable and high-quality coffee over the last few years. Furthermore, the adoption of sustainable commercial and production practices is important to access the Dutch market: certified products have now become mainstream.

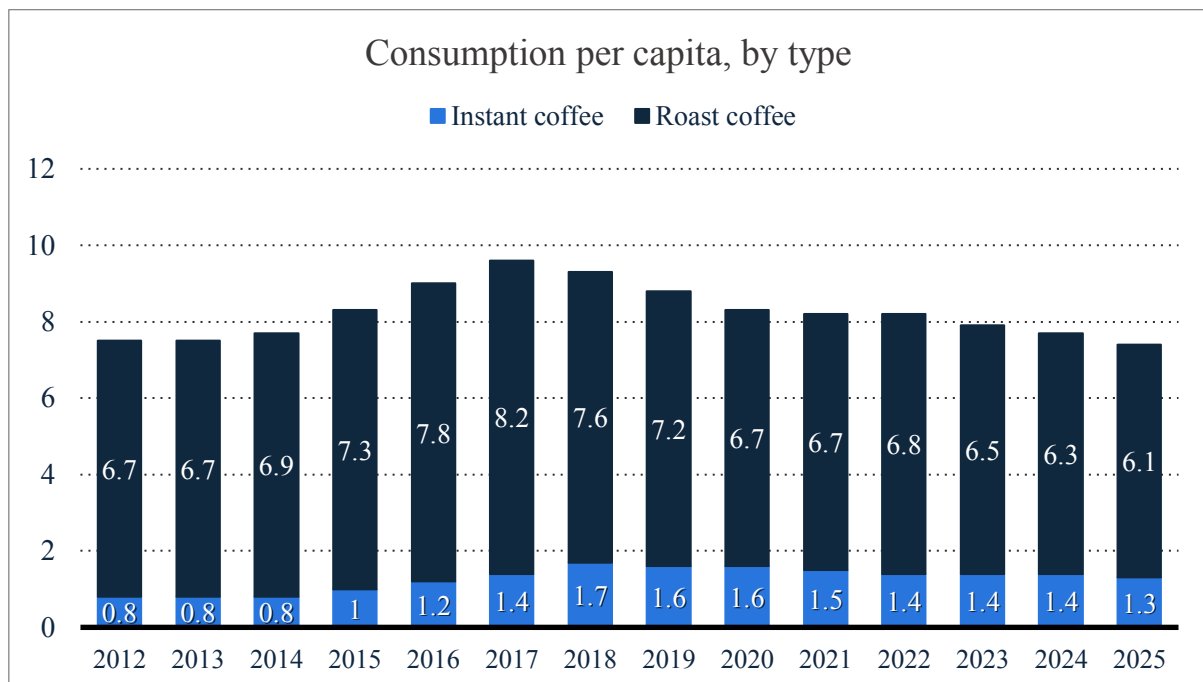


Figure 10.21: Netherlands' coffee market volume per capita in Kg 2012-2025 (forecasted), by segment, source: Statista

The Netherlands is an important trading center, which re-exports not only significant quantities of coffee but also various products. Furthermore, the Netherlands is one of the main re-exporters of roasted coffee in Europe, thus having a significant industrial demand for green coffee.

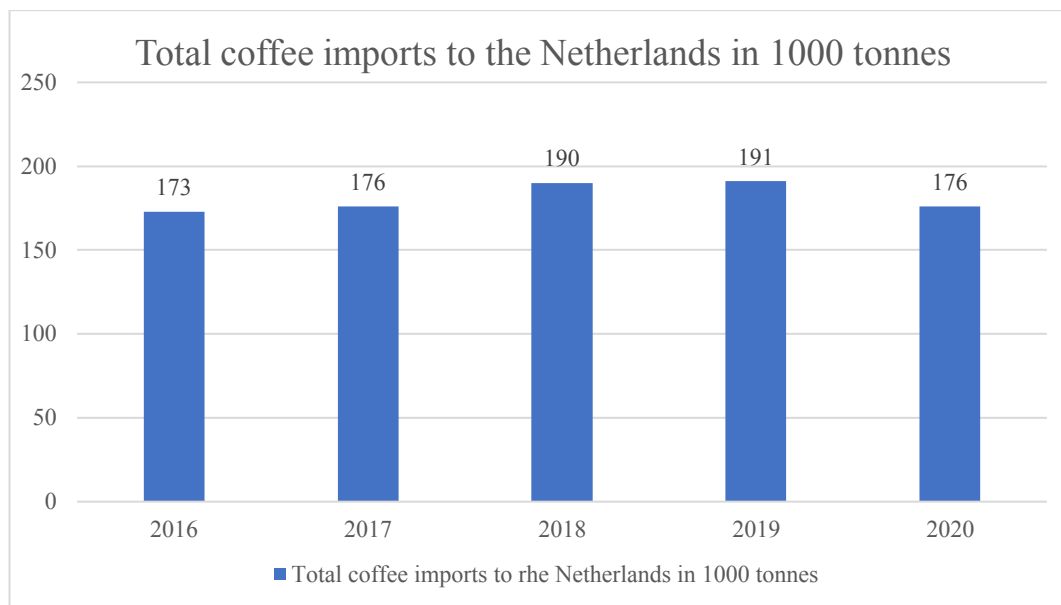


Figure 10.22, source: ITC tradeMap, 2021

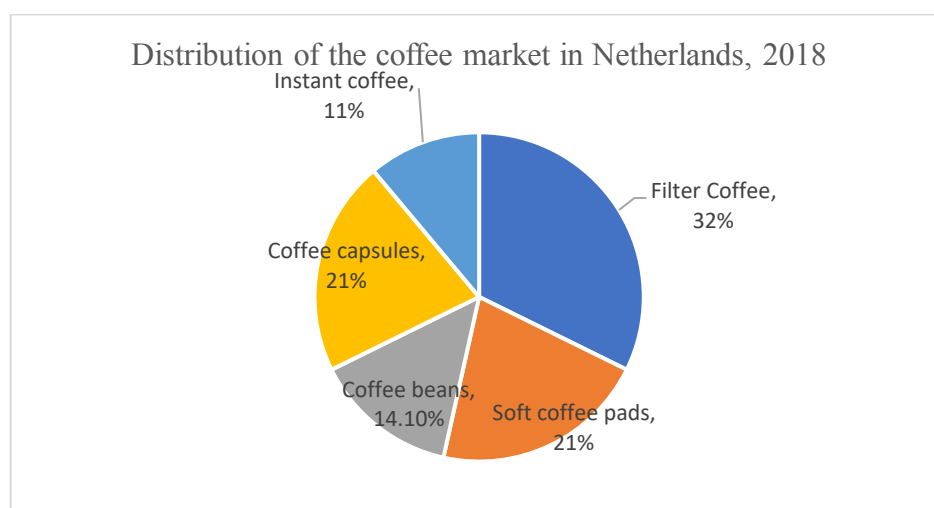


Figure 10.23

The Netherlands is the seventh largest importer of green coffee in Europe, importing 4.9% of total European imports, which corresponds to approximately 176,000 tons in 2020. Dutch green coffee imports remained stable between 2016 and 2020.

Unlike other European countries, direct imports from producing countries into the Netherlands make up a low percentage, as 64% of Dutch green coffee imports are supplied by other European countries: in 2020, 58% of total Dutch imports are being supplied by Belgium. The Belgian port of Antwerp is an important entry point for coffee into Europe, including the Netherlands. Germany accounted for 5% of Dutch green coffee imports. As for direct supplies from producing countries, the largest came from Brazil, with imports reaching 29,000 tonnes

in 2020, accounting for 16% of total Dutch imports. Imports from Brazil to the Netherlands increased by 11% between 2016 and 2020. Vietnam was the second largest direct supplier, with 9,500 tons in 2020. Dutch direct imports from Vietnam increased by 7.3% between 2016 and 2020.

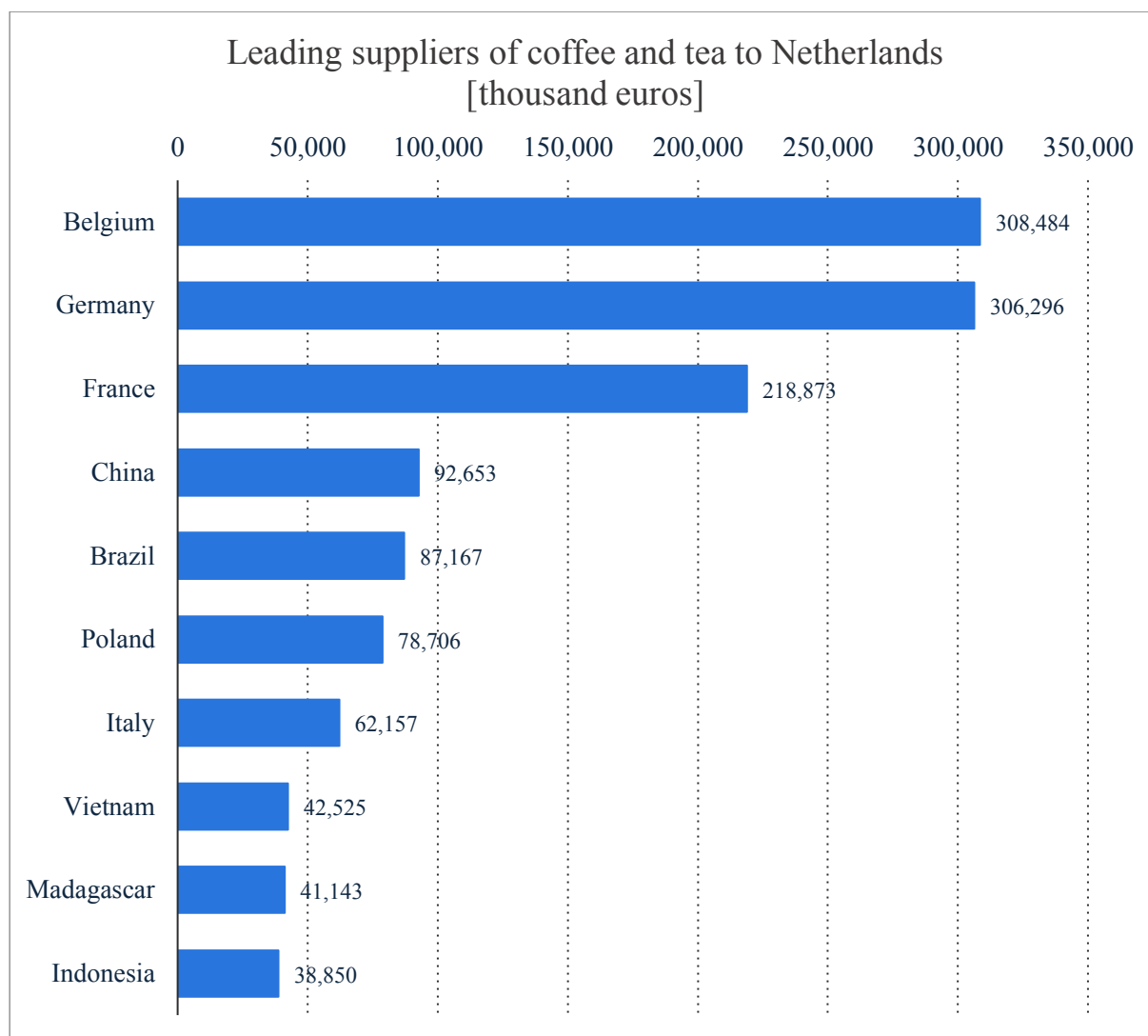


Figure 10.24: Leading suppliers of coffee and tea to the Netherlands in thousand euros, by import value, 2021, source: Statista

### 10.3.1.1 Import-Export

In 2020, the Netherlands was the third largest re-exporter of green coffee beans to Europe, with re-exports of over 24,000 tons. The first re-exporter is Belgium which re-exported around 243,000 tons, followed by Germany in second position, with 197,000 tons in 2020.

In 2020, the main destinations for re-exports of green coffee from the Netherlands were the United Kingdom, Portugal, and Ukraine, each of which imported 2,400 tons in 2020. Germany and Poland each imported 2,200 tons of green coffee from Netherlands and Italy 2,000 tons. Re-exports to the UK, Portugal and Poland increased between 2016 and 2020, while re-exports to Germany and Italy in the same period decreased by 21% and 18% respectively.

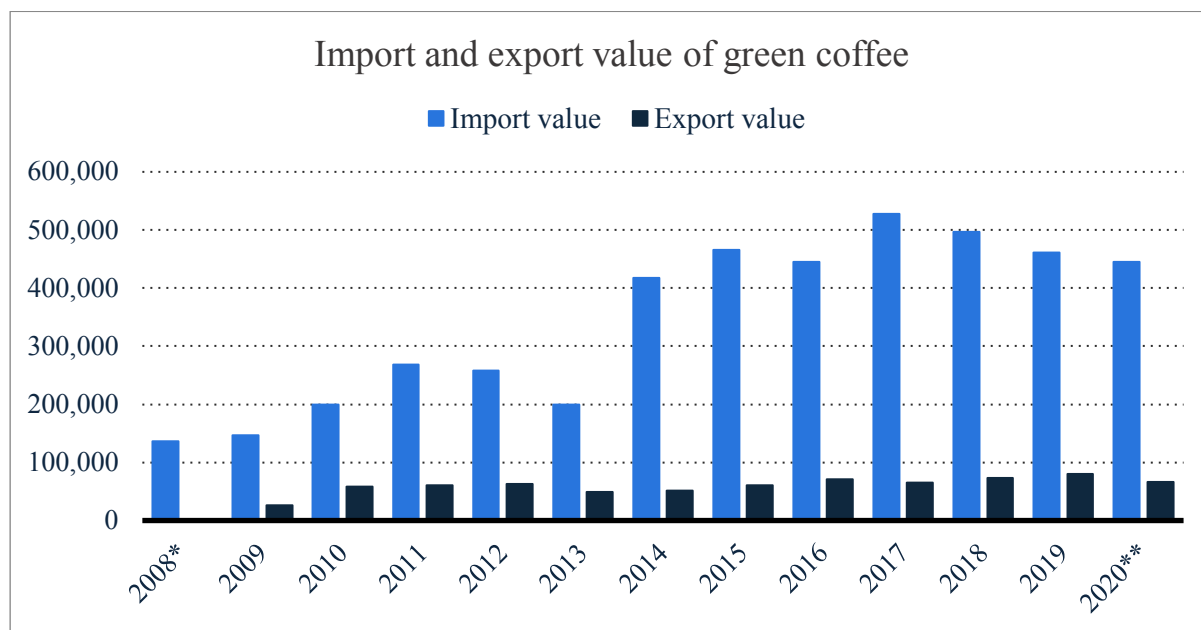


Figure 10.25: Value import and export green coffee in the Netherlands 2008-2020 in thousand euros, source: Statista

When it comes to roasted coffee, the Netherlands is one of the largest exporters in the world. In 2020, the Netherlands exported around 96,000 tons of roasted coffee, making it the third largest exporter of roasted coffee in the world. Only Italy and Germany export higher volumes. Roasted coffee exports from the Netherlands increased at an average annual rate of 8.7% between 2016 and 2020. France is the main destination country for Dutch roasted coffee exports, with imports amounting to 34,000 tons of roasted coffee. Roasted coffee in 2020. It follows Germany as the second and Belgium as the third importer of Dutch roasted coffee, with imports reaching 12,000 tons. From figure 8.24 it can be seen the value of the import and export of roasted coffee to and from the Netherlands from 2008 to 2020 (in thousand euros). It shows an increasing trend, and from 2017 the value of export is higher than the import value. In 2020, the export value is approximately 636 million euros.

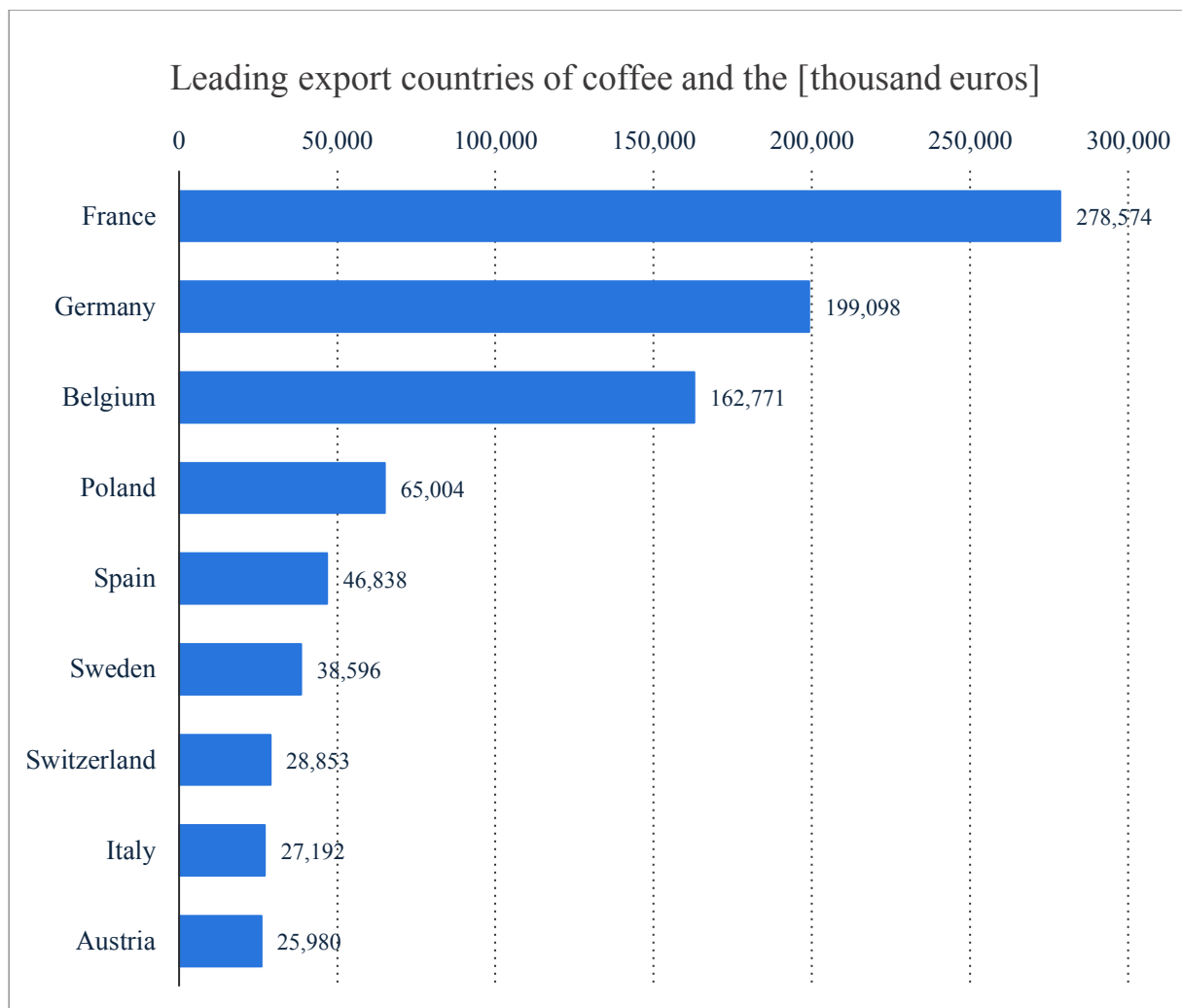


Figure 10.26: Leading export countries of coffee and tea in the Netherlands 2021, by export value in thousand euros, source: Statista

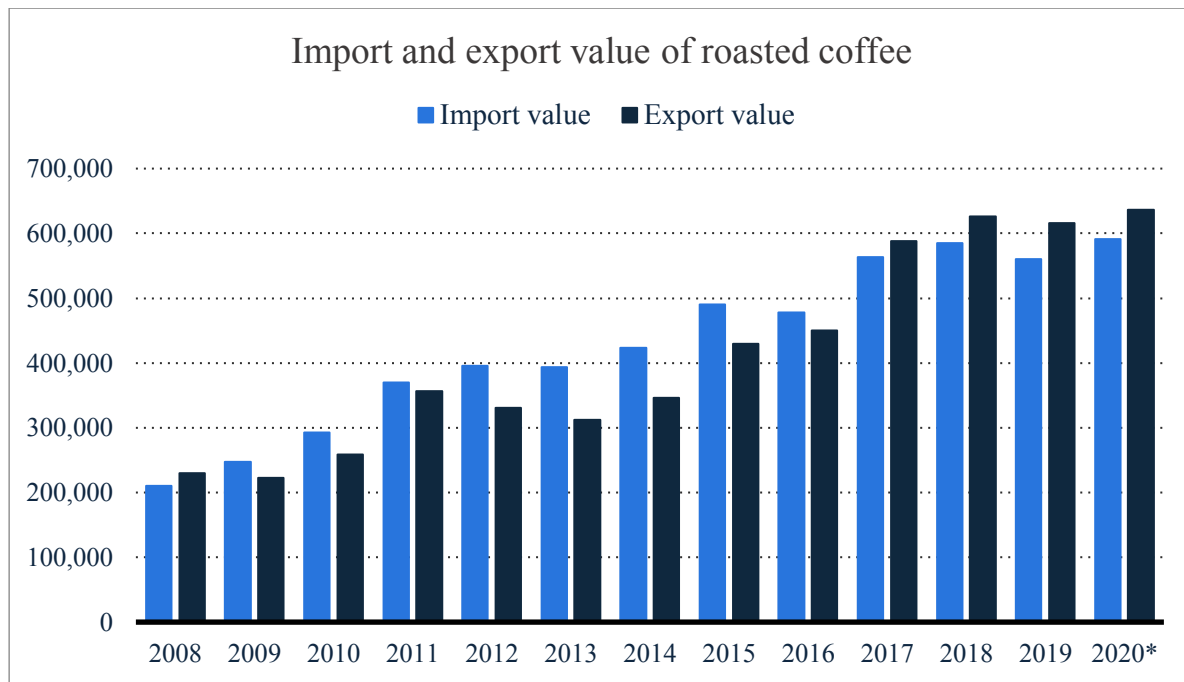


Figure 10.27: Value import and export of roasted coffee in the Netherlands in thousand euros, 2008-2020, source: Statista

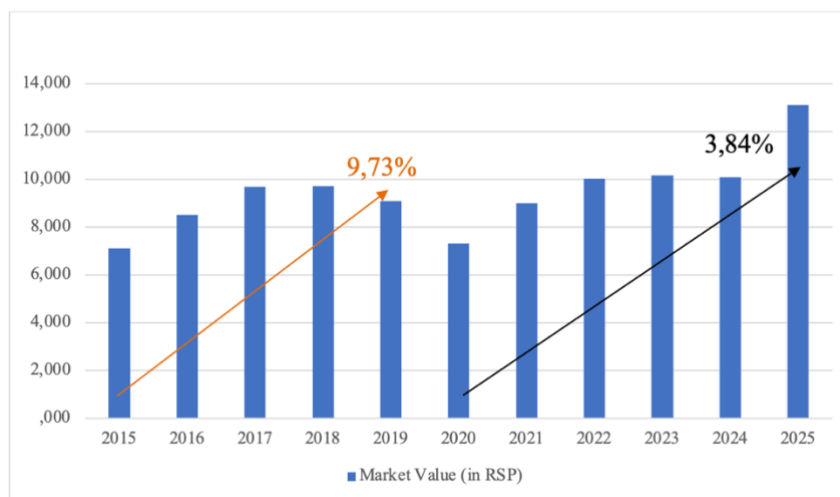


Figure 10.28: Market value and CAGR, 2015-2025, source Statista

The roasted coffee market in the Netherlands was \$ 7.11 billion (calculated in retail prices) in 2015. The Dutch coffee market is expected to reach \$ 13.12 billion by 2025, thus increasing to a CAGR of 3.84% per

year for the period 2020-2025. This is a decrease compared to the growth of about 9.73% per year recorded in 2015-2019.

### 10.3.1.2 Demand for certified high-quality coffee

Like the Scandinavian countries, consumers in the Netherlands are starting to enjoy specialty coffees more and more. Most of these specialty coffees are served in the out-of-home segment, where bars and micro roasters serve the growing specialty market. In the Netherlands, around 30% of coffee consumption takes place outside the home, in cafes, offices or as take-away food.

During the COVID-19 pandemic, consumers were increasingly looking for higher quality coffee to replicate the quality experienced when consuming away from home. This trend has remained even today, in fact although specialty coffee finds its largest market in the out-of-home segment, domestic consumption of specialty coffee in the Netherlands has also steadily increased over the last year. This phenomenon is also due to smart working: working from home will remain common even after the pandemic, and consumers are unlikely to return to lower quality coffee. Obviously, specialty coffee is a niche segment. As in other European countries, traditional coffees still occupy the largest market share. Well-known traditional coffee brands in the Netherlands are Douwe Egberts and L'Or, both of Jacobs Douwe Egberts. Over the years, sustainability has also become a more important purchasing decision for consumers. About 40% of coffee consumers in the Netherlands said they pay attention to sustainability claims when buying a product. The origin of the coffee, fair and safe production processes and sustainable packaging are all factors that can influence purchasing decisions. The share of coffee from sustainable sources in the Netherlands has increased significantly over the years. Sales of certified coffee products increased by approximately 13% in the two-year period between 2016 and 2018. About 60% of coffee products sold in the Netherlands were certified to standards such as Rainforest Alliance / UTZ, Fairtrade, Organic and / or 4C.

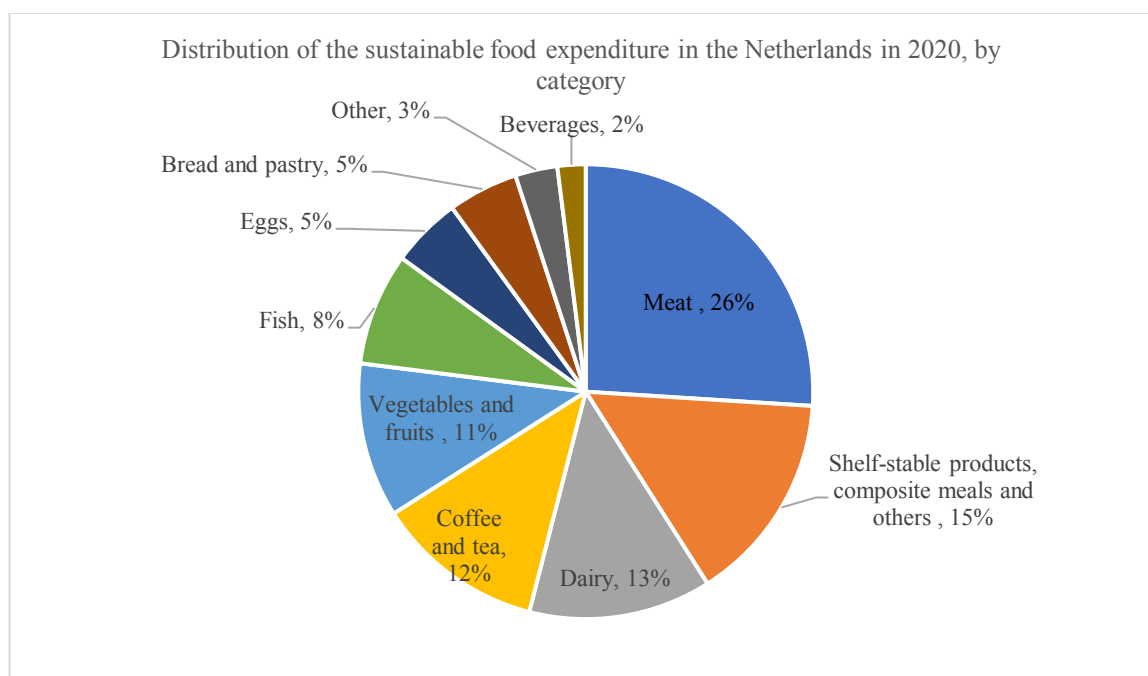


Figure 10.29: Distribution of sustainable food expenditure in the Netherlands, 2020, source: Statista

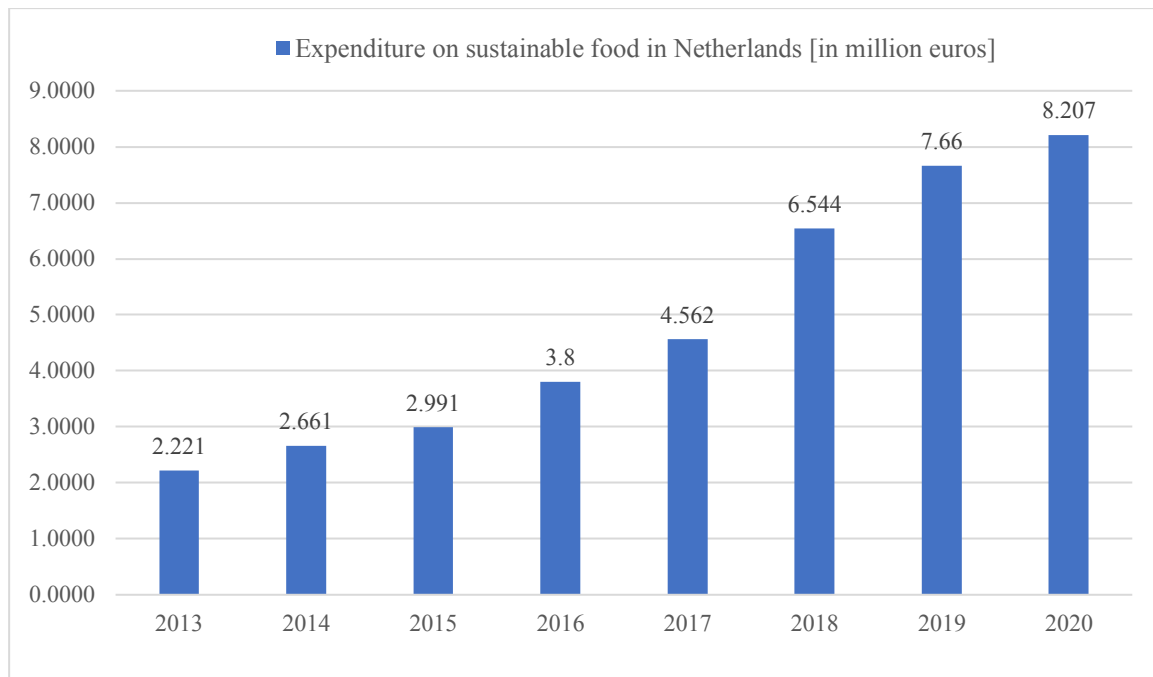


Figure 10.30: Expenditure on sustainable food in Netherlands, 2013-2020, source: Statista

### 10.3.2 Jacobs Douwe Egberts



Figure 10.31: JDE Peet's logo

JDE Peet's is a Dutch company that owns several beverage brands (mainly coffee, tea, and hot chocolate). It was formed in 2015 following the merger of Mondelez International's coffee division with Douwe Egberts as Jacobs Douwe Egberts. JDE Peet's stock is listed on the Euronext stock exchange in Amsterdam. The company has its origins in De Witte Os, a generic grocery store that Egbert Douwes founded in 1753 in Netherlands. It developed into a coffee, tea and tobacco company. In 1925 he had changed his name to Douwe Egberts. In 1948, the company began selling its products in Belgium, followed by France, Spain and Denmark. In 2013 Douwe Egberts expanded by buying Norway's Kaffehuset Friele coffee manufacturer, and in 2014 planned a merge with Mondelez International, that was approved by the European



Commissioner for Competition Margrethe Vestager on 5 May 2015 but under several conditions: the brands Merrild and Carte Noire should have been sold (and now are owned by Luigi Lavazza S.p.A.) and that the Austrian brand Senseo should have been licensed by other competitors. In 2020 the company merged with Peet's Coffee to form JDE Peet's and was listed in May 2020 in Amsterdam. The company owns 43 brands, among which Café HAG.

	2021	2020	2019	2018	2017	2016
<b>SALES REVENUES</b>	7,929	8,161	7,802	6,750	7,630	5,488
<b>COGS</b>	3,700	3,817	3,628	3,574	3,922	3,285
<b>EBIT</b>	1,254	1,144	1,171	1,040	847	638
<b>NET INCOME</b>	866	377	476	541	381	86

Figure 10.32: JDE financials in million USD, 2016-2021, source: Orbis-bvinfo.com

	2021	2020	2019	2018	2017	2016
ROE (%)	6,85	2,98	6,29	7,10	4,39	0,85
ROCE (%)	5,32	3,08	3,98	4,46	3,49	n.d.
ROA (%)	3,54	1,49	3,33	3,57	2,12	0,41
Profit Margin (%)	14,03	10,33	12,11	13,22	9,55	4,17
EBITDA (%)	n.d.	n.d.	n.d.	n.d.	n.d.	n.d.
EBIT (%)	15,83	14,03	17,56	15,52	12,39	11,62
Current Ratio (%)	0,58	0,55	0,71	0,71	0,81	0,85

Table 10.12: Profitability indexes and current ratio of JDE, 2016 to 2021. source: orbis-bvinfo.com

From the 2020 financial data available on the Orbis database, it is possible to note a general growth in both revenues and profit in the period between 2014 and 2019, a trend that however reverses in correspondence with the two-year period 2018-2019: in fact, we find a slight decrease in these two values, implied by the pandemic period due to COVID-19.

In 2015 we see a sharp decline in net profit, which falls negative. It is not possible to assess the causes with certainty since the annual report on that year is not available and the financial data

released are very scarce, but one hypothesis is that the merger operation that took place in that year weighed heavily on the income statement of the company. Profitability ratios follow the same trend as income, since there are no large variations in the composition of the balance sheet. They are not high, they are below the industry average, while the profit margin and EBIT are above the average. EBITDA is only available for the first year, so it's not a significant figure. The current ratio is below average, but from this figure the firm cannot always meet short-term liabilities with current assets.

## **10.4 Italy**

The history that binds Italians to coffee is long and has deep roots in the fabric of the Bel Paese's culture. A drink that is part of a social ritual to such an extent that it is a candidate for recognition as an intangible asset at UNESCO. This drink that arrives on the European continent after the discovery of America has had fortune on the Italian peninsula. This is where it was invented as the drink that all Italians know well today: espresso. A "short" version compared to American long coffee. In the peninsula the consumption of coffee is very high, in fact Italy is in thirteenth position for coffee consumption per capita, with an annual consumption of 5.9 kg. Almost all Italian citizens have consumed at least once in their life the espresso, and most drink it regularly.

### ***10.4.1.1 Consumption***

All of Italy consumes large quantities of coffee, however there are regions where this hot and dark drink has become a true religion. Many studies and analyzes have shown that the region where coffee consumption is highest is Campania. Following we have Lazio and Sicily.<sup>6</sup>

A study conducted by Coffee Monitor, through a survey conducted on a sample of over 1,000 consumers, provides numerous suggestions on how to choose and consume coffee.

habitual consumption of the drink emerges (95% of the target audience), with the espresso chosen by 93% of consumers. Residual is the percentage of those who prefer American coffee, barley, or other types of coffee (7%).

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<sup>6</sup> Source: Beverfood.com

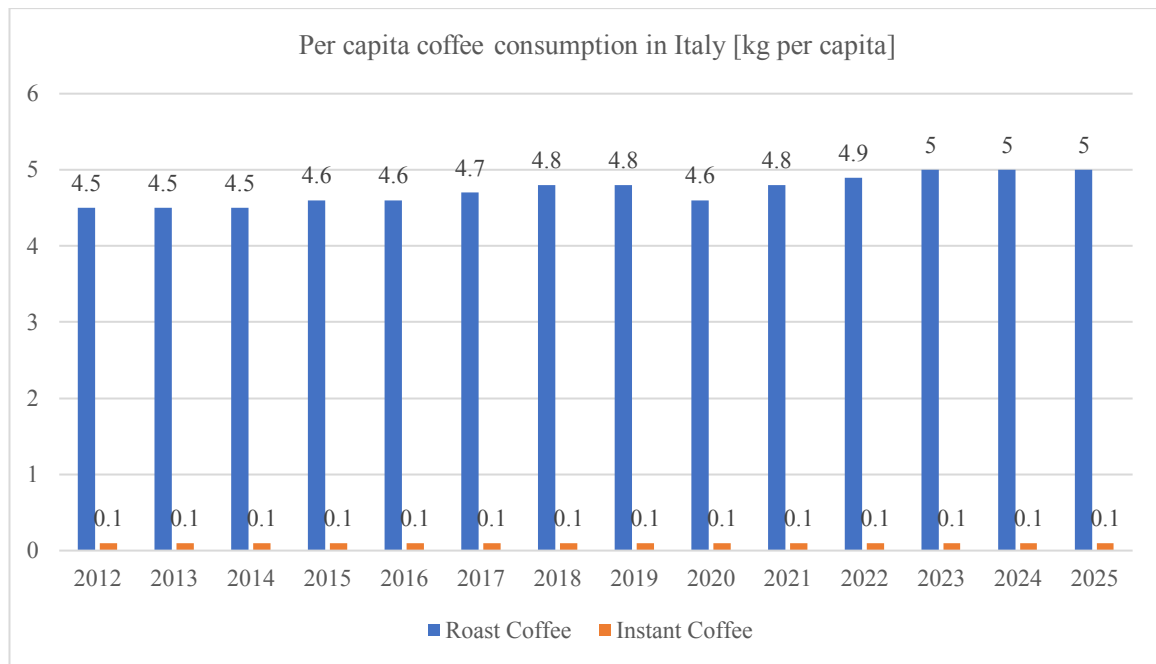


Figure 10.33: Per capita consumption volume forecast of coffee in Italy in kg, 2012- 2025, source: Statista

Figure 8.28 shows that in the period from 2012 to 2021, instant coffee is not very successful: each year its per capita consumption is 0.1 kg, and consumption should remain stable until 2025; roasted coffee, on the other hand, is the most consumed type of coffee in Italy. The per capita consumption of coffee has been almost stable over the years and on average, from 2012 to 2021, people consumed 4.6 kg of roasted coffee every year. The trend indicates that consumption is increasing slightly, and research predicts an increase in consumption of up to 5 kg per capita over the next four years. There is only a slight decrease in per capita consumption in 2020. Those who consume espresso mainly drink 1 or 2 cups a day (58%) and prefer the morning as a moment of consumption. 92% of those who drink espresso drink it at home, preferring ground coffee (53%) and in pods or capsules (37%); but among the most popular places there are also bars (72% of the target audience), in addition to the workplace (48%), where the use of coffee pods or capsules is preferred. Finally, the survey provides an estimate of the annual expenditure on coffee which, among espresso consumers, is close to 260 euros per capita.

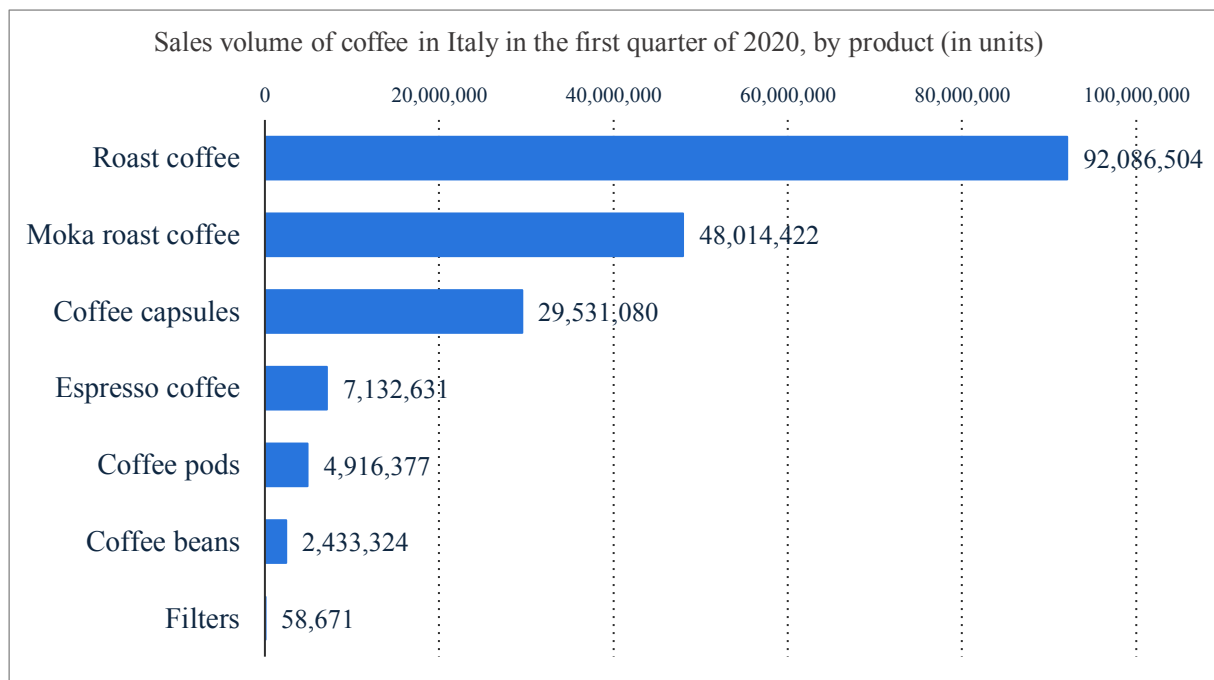


Figure 10.34: Sales volume of coffee in Italy, first quarter 2020, by product, source: Statista

Out of total sales of coffee-based products, roasted coffee accounts for the lion's share of coffee sales in Italy, with a volume of approximately 92 million units sold and an amount equal to 50.01% of total sales. Roasted Moka coffee represents 26.08% of total sales, coffee in capsules 16.04%, coffee pods 2.67% and coffee beans 1.32%; the latter represents a "niche" market for true coffee connoisseurs looking for the quality and aroma of freshly roasted coffee at home. Before the pandemic, the coffee bean market segment recorded an increase in sales in both online and physical distribution channels. The reason coffee beans are not very successful may lie in the price per pack. The most expensive types of coffee are capsules, pods and instant coffee. But as regards the price per pack, all types of coffee are around an average price per pack, except for coffee beans which have a price almost double the average, also because the quantity contained in each pack it is about 1kg. In any case, the Italian leader Lavazza recorded a positive trend in sales of coffee beans both in 2019 and in 2020. Obviously, the demand for this product is strongly correlated to the coffee machines nicknamed "bean-to-cups" which compared to the others home instant coffee makers is much higher. This can be considered a "barrier to entry" for customers in this segment.

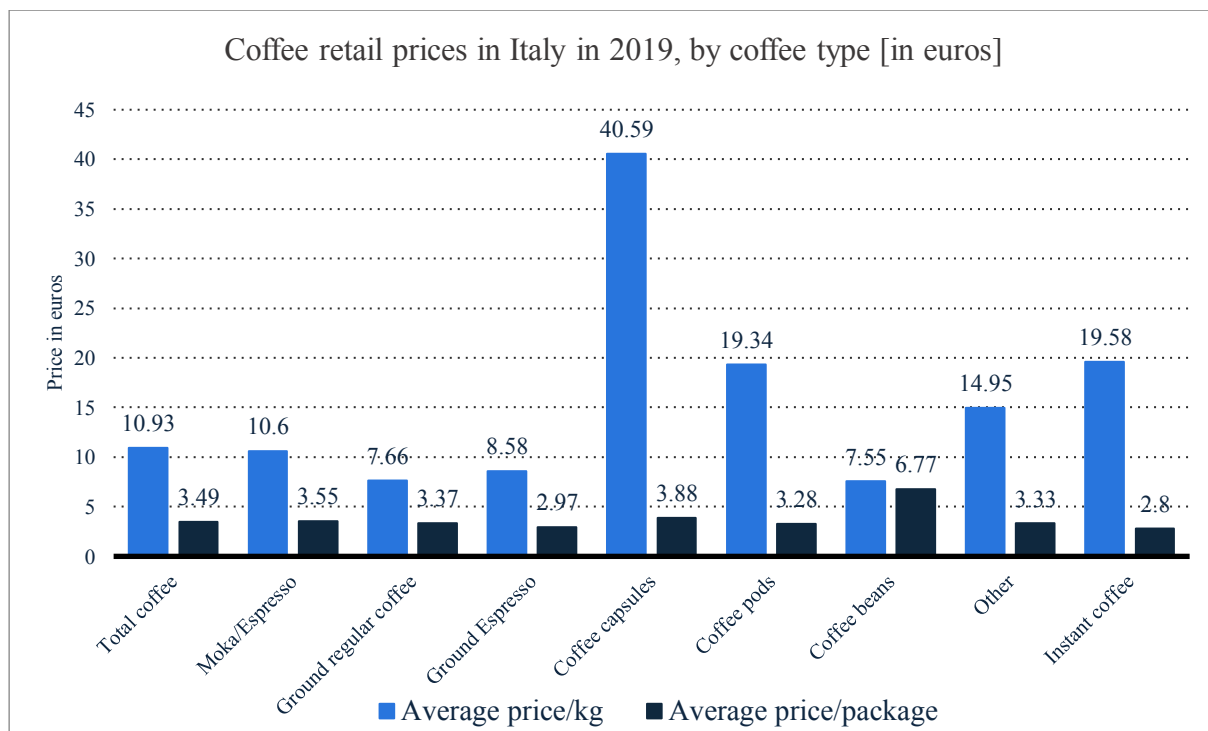


Figure 10.35 Retail prices in Italy, 2019, source: Statista

#### 10.4.1.2 Import-Export

Italy is the second-largest importer of green coffee beans in Europe, after Germany and in terms of exported coffee in Europe Italy is the second country, only behind Germany. Considering different types of coffee, namely green coffee, decaffeinated, coffee preparations and soluble coffee, 10,659,405 bags of green coffee were imported in 2018, for an equivalent amount of 639.6 million kg.<sup>7</sup> Italy imports green coffee from different Countries, mainly Brazil for the “Arabica” quality and Vietnam for the “Robusta” quality. Other countries that supply coffee to Italy are Colombia, Ethiopia, Honduras, India, Indonesia, and Uganda. An estimated 97% of all Italian coffee imports are sourced directly from producing countries. Most green coffee beans enter Italy via the Port of Genoa or via the Port of Trieste.

<sup>7</sup> Source: Beverfood.com, 2021

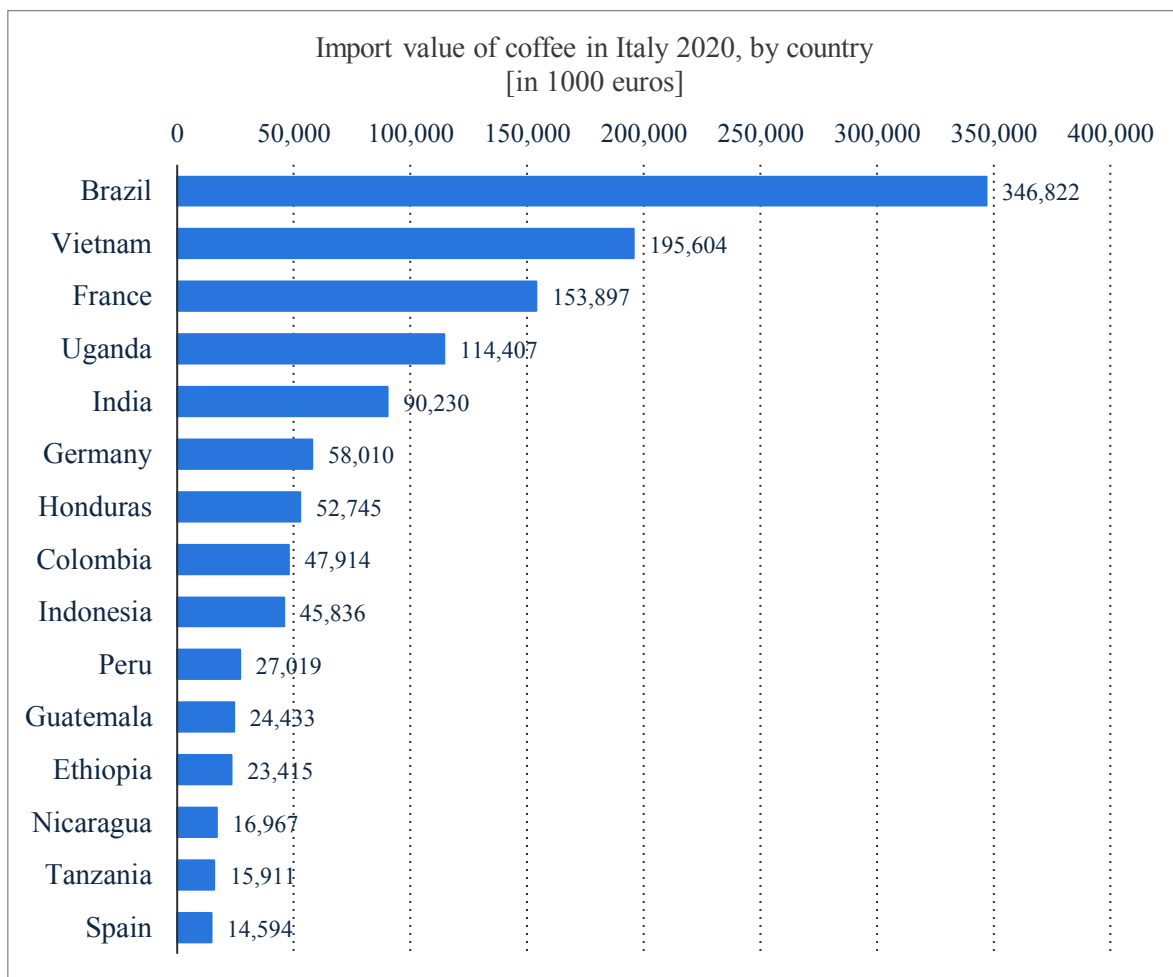


Figure 10.36: Import value of coffee in Italy in 2020, by country of origin, source: Statista

Italy's large roasting industry consumes 98% of the country's green coffee imports, the other 2% being re-exported. Italy is Europe's second-largest roasted coffee exporter at 221 thousand tonnes in 2018, making up 22% of the entire European market. Only Germany is a larger exporter, with a 23% market share. Italy's main export destinations are Germany (20% of export shares), France (9.5%) and the United Kingdom (5.9%).<sup>8</sup> Outside the European Community, the destinations are Switzerland, Australia, USA, Russia, and Canada.

The growth of the coffee market in Italy is driven by exports. In 2018, exports of roasted coffee from Italy represented 4,681,996 bags of green coffee equivalent (about 280 million kg), an increase of 5% compared to 2017, while the value of Italian coffee exports is estimated at around 1, 5 billion euros. Exports of Italian coffee consist mainly of roasted and ground coffee, mainly to meet the increased international demand for Italian espresso.

<sup>8</sup> Source: cbi.eu, 2020

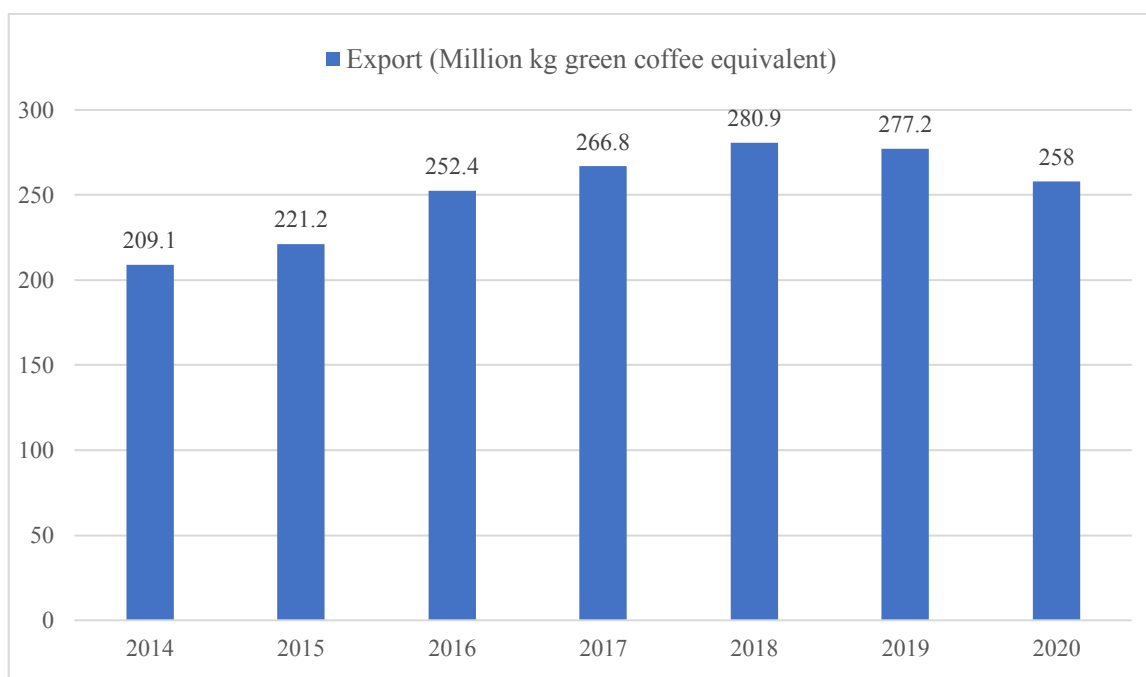


Figure 10.37: Export of coffee from Italy, 2014-2020, source: Beverfood

The major companies in Italian are listed in the table. The leader in Italy is Luigi Lavazza S.p.A., followed by Illycaffè S.p.A., Caffè Borbone and Kimbo, in order of turnover.

Company	Turnover of the last year available in thousand euros
Luigi Lavazza S.p.A.	2,089,541.00
Illycaffè S.p.A.	458,427.00
Caffè Borbone S.r.L.	219,776.00
Kimbo S.p.A.	158,796.00

Table 10.13: top 4 coffee roasters in Italy by revenue, source: Orbis-bvinfo.com

### 10.4.2 Luigi Lavazza S.p.A.



The founder was Luigi Lavazza, who, having moved to Turin, took over Paissa & Olivero, a small grocery store in the heart of Turin. The birth of Lavazza is commonly traced back to 1895. While the competitors are limited to selling coffee in a single variety, Lavazza introduces the blends, and overcoming the difficulties of the Great War, Luigi Lavazza, his wife Emilia and their children Mario, Pericle and Giuseppe form the de facto company Luigi Lavazza, which in the November 1927 will become a joint stock company.

In 2016 he is an official partner of the Baku Chess Olympics. Also in 2016, it acquired the French Carte Noire from the Jacobs Douwe Egberts group for 700 million euros and the Danish Merrild. In 2017, continuing the strategy of strengthening in all coffee segments in the reference market, it took over Kicking Horse Coffee in Canada, ESP (Espresso Service Proximité) in France and the Italian Nims. In July 2018 it acquires Blue Pod Coffee in Australia and in October the American Mars Drinks.<sup>9</sup>

	2014	2015	2016	2017	2018	2019	2020
<b>SALES REVENUES</b>	1,344,11	1,472,649	1,895,665	2,014,754	1,870,003	2,199,69	2,085,258
<b>COGS</b>	537,453	649,698	807,942	866,814	839,691	908,74	881,691
<b>EBIT</b>	156,292	71,681	61,719	66,948	119,843	166,156	122,209
<b>NET INCOME</b>	126,663	802,075	82,16	44,659	87,932	127,382	72,974

Table 10.14: Lavazza financials in million euros, 2014-2019, source: Orbis-bvinfo.com

	2020	2019	2018	2017	2016
ROE (%)	3,10	5,32	3,88	2,07	3,83
ROCE (%)	2,91	4,23	3,02	1,91	3,30
ROA (%)	1,93	3,20	2,26	1,38	2,62
Profit Margin (%)	4,91	7,54	6,71	2,96	3,22
EBTDA	13,08	13,48	11,12	9,31	8,78
EBIT	5,85	7,54	6,40	3,22	3,20

<sup>9</sup> Wikipedia.org, 2021



Current ratio (%)	2,27	2,41	2,46	3,23	3,85
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Table 10.15: Profitability indexes and current ratio of Luigi Lavazza, 2016 to 2019. source: *orbis-bvdinfo.com*

The tables 10.14 and 10.15 shown the profitability indexes and the current Lavazza ratio from 2013 to 2020. In 2015 the company recorded revenues of 1.4 billion euros, while the following year, revenues reached 1.9 billion with a profit of 82.2 million. In 2017, revenues reached 2 billion with an increase of 6.3%, the EBITDA was at 200.8 million (+ 12.5%), the EBIT at 67 million (+ 8.5%), the profit is 44.7 million. Exports account for 63%.

ROA is lower than the sector average, except for 2015 when there is a peak, because there was an increase in net profit as in that year it used more stocks than in other years. ROE, ROCE, and EBIT% are below the industry average, while EBITDA% is above average.

#### **10.4.2.1 Traditional market?**

The history of coffee in Italy dates to the 16th century when Venice became one of the first European ports to import coffee beans. Since then, the country has enjoyed a rich history of developing new production techniques, such as espresso. It's impossible to ignore Italy's innovations in this space, but like all innovation growth curves, disruptions will occur at some point. The innovative "third wave" corresponds to the period we are experiencing. This wave emphasizes quality coffees, roasting and production techniques, and the origin of the beans. Coffee shops around the world have embraced this trend and it has led to a wave of new educated customers who experience coffee as mild wine or tea with a spectrum of flavors to match. Italy seems to be at the beginning of this trend, compared to other European countries, especially northern Europe as seen in the previous paragraphs. In 2018, Italy had around a hundred specialized cafes. It is a very small market, especially if we consider that the overall market for bars in Italy has almost 150,000 shops. Despite being a very small niche market, it could offer interesting opportunities for high quality coffees, with special origins and with unique stories. Examples of specialty coffee roasters in Italy include Nero Scuro, Pierre Cafè, and Cafezal Specialty Coffee. The country could soon see an increase in demand for these specialty coffees, and if it is not ready to meet the demand, they will be able to make room for ready foreign brands that are already ready to satisfy this market.

## 10.5 France

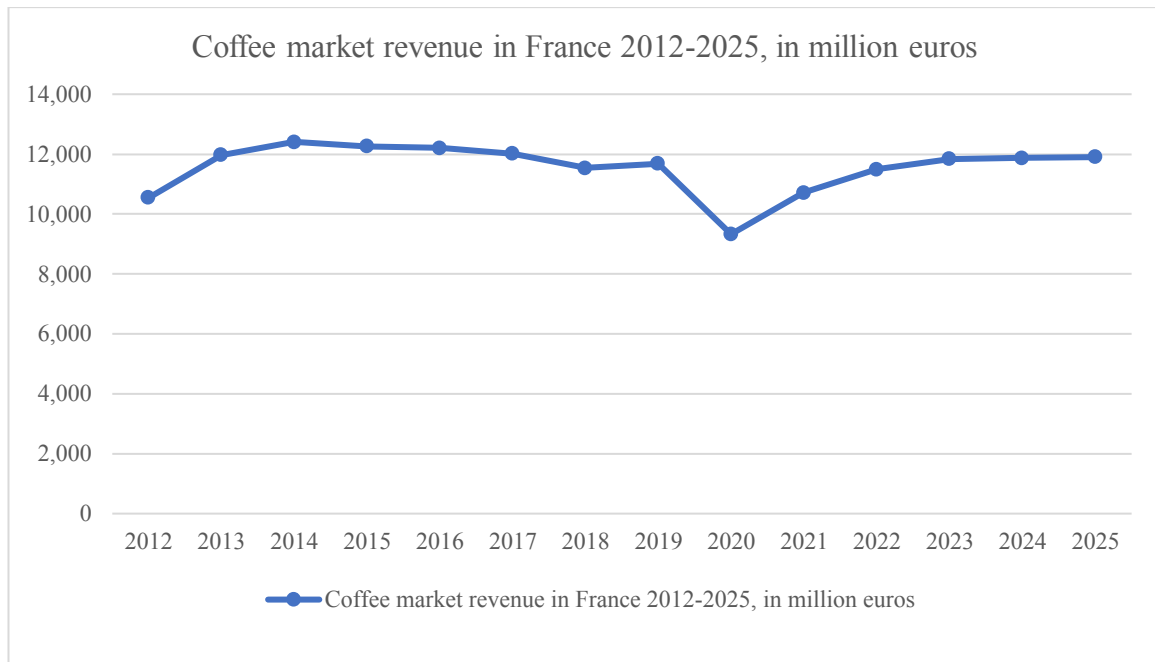


Figure 10.38

France is a large and mature coffee market with a long tradition of coffee consumption. Worldwide, it is in eighteenth position for per capita coffee consumption, with 5.4 kg per year. The country occupies an important position in European imports of green coffee, importing about 6% globally. It also has an established coffee roasting industry. The main trends of this market are the European ones: sustainability and certification. In fact, given the wide availability of certified coffee in France, certification is a fundamental requirement for the entry of coffee exporters. As in Italy, the specialty coffee market is also setting foot in France, which, as we have seen, also offers interesting opportunities to exporters offering quality coffee.

The revenues of this market have always been stable over the years, suffering a sharp decline between 2019 and 2020, obviously due to the COVID-19 pandemic. In figure 10.38, however, there is an increasing trend in revenues from 2021 onwards, with an estimated value in 2025 of 11.906 million euros

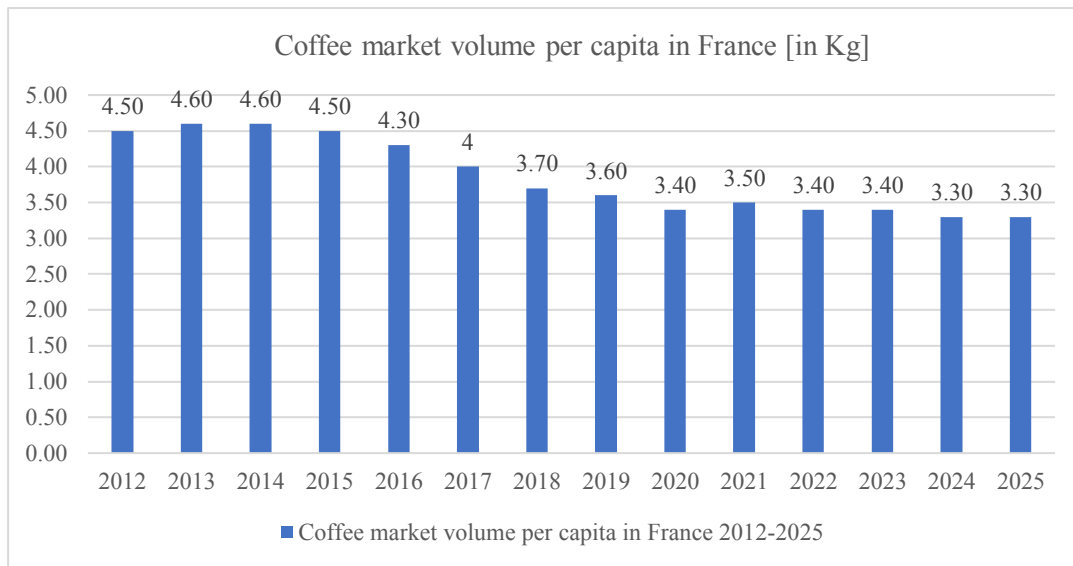


Figure 10.39: Average volume per capita of the coffee market in France from 2012 to 2025 (in kilograms), source Statista

#### 10.5.1.1 Import & Export

Most of the coffee imported into France comes from producing countries. But, in addition to being a large importer, France is also an important roaster: there are both large international roasters (for example Nestlé), and small and medium-sized roasting companies, so the exports of roasted coffee are high and have increased in the over the years.

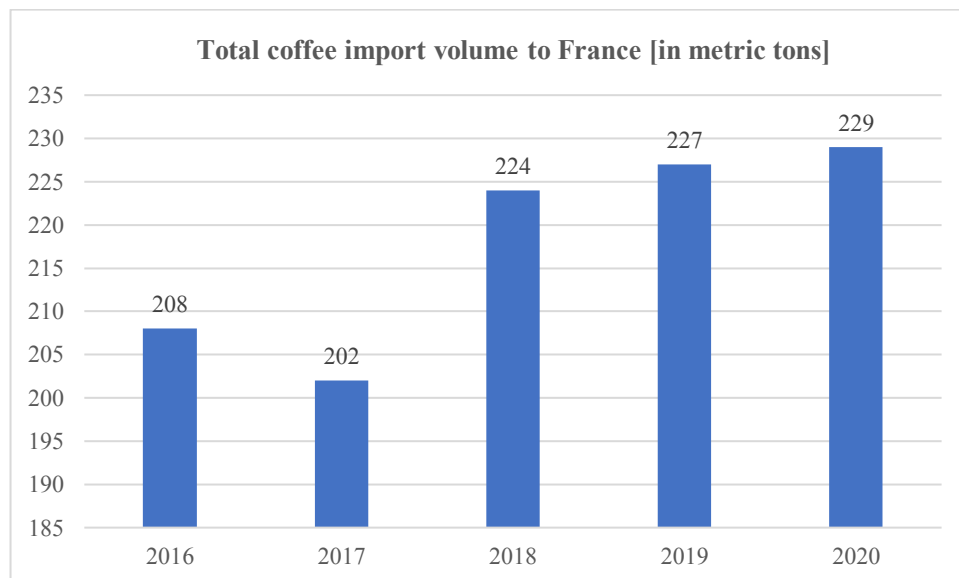


Figure 10.40: Volume of coffee imported by France from 2016 to 2020 (in 1,000s metric tons), source: Statista

Imports of green coffee in France have grown in recent years, increasing at an average annual rate of 6.4% from 2016 to 2020. In 2020, green coffee imports in France amounted to 229,000 tons, approximately 6.4 % of total European imports. The port of Le Havre is the main entry point for green coffee in France. About 77% of total green coffee imports are imported directly from coffee producing countries. The largest suppliers in France are Brazil, Vietnam, and Honduras, with green coffee volumes of 56,000 tons, 30,000 tons and 22,000 tons respectively. Most of the French imports are used by the internal roasting industry. But re-exports of both green and roasted coffee have also grown in recent years. Between 2016 and 2020 the re-export volumes of green coffee recorded a growth of 3.4% per year, while representing only 1% of European re-exports, in fact France ranks eighth in Europe among the re-exporters of the raw material. Most of France's green coffee exports went to neighboring countries Belgium and Spain, which imported 1,200 tons and 1,100 tons respectively.

As for roasted coffee, France is the sixth exporter to Europe. Exports of roasted coffee between 2016 and 2020 also increased, at an average annual rate of around 20%. In 2020, exports of roasted coffee amounted to 56,000 tons. The largest importers of roasted coffee from France were Germany, Spain, and the Netherlands, each of which imported between 7,000 and 8,000 tons.

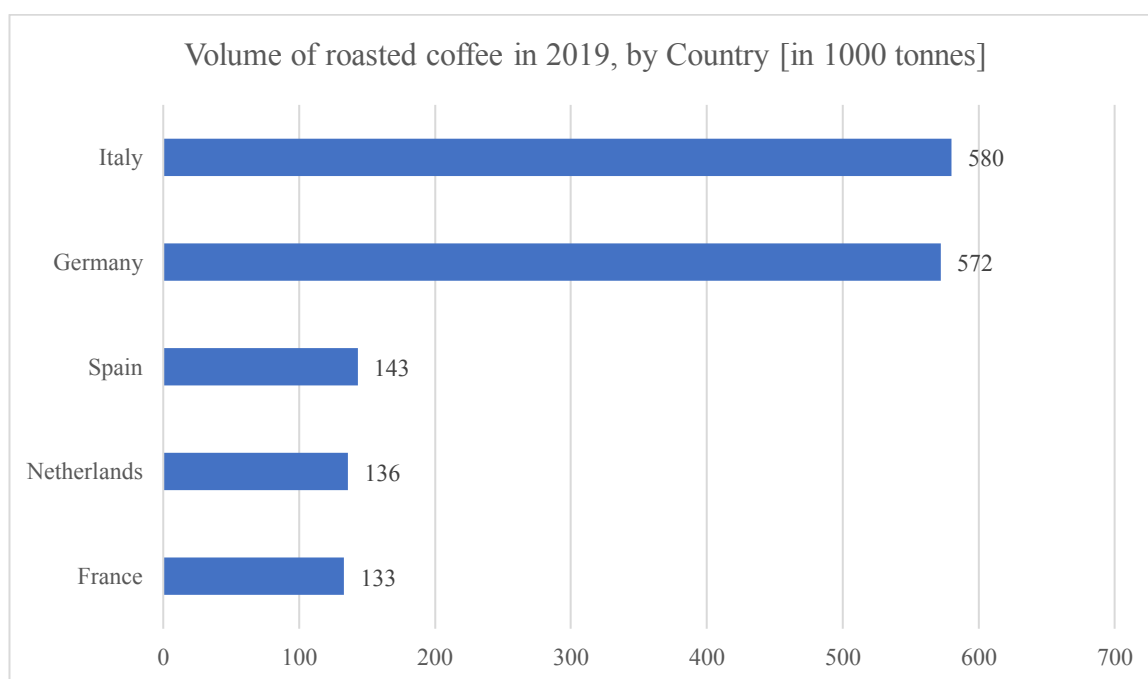


Figure 10.41 source Prodcorn

According to Prodcorn data from 2019, France was the fifth European country for coffee roasting, with a total of 133,000 tons of roasted coffee. This demonstrates that the country has

an important roasting industry. The major French roasters are large multinationals such as Nestlé France, Jacobs Douwe Egberts, Lavazza and Segafredo Zanetti.

### 10.5.1.2 Out of home consumption

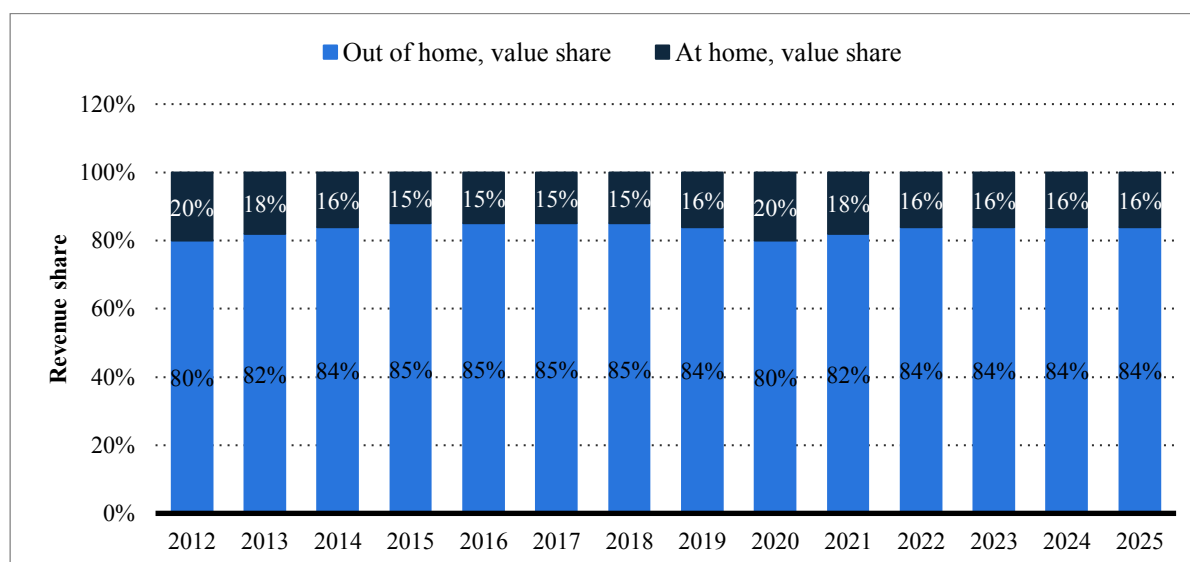


Figure 10.42: Out of home and at home value share, 2012-2025 forecasted, source: Statista

Consumption of coffee outside the home is rooted in French culture. According to Statista, the French are in third place for consumption of coffee outside, preceded only by Germany and Spain. In fact, before the COVID-19 pandemic, around 35% of consumers said they visited a bar at least 4-5 times a week. During the pandemic these numbers decreased significantly due to restrictions and other social distancing measures, but despite the general loss of revenue, the value share remained almost unchanged in 2020. The largest cafes in the French market are McCafé, Starbucks and Columbus Café & Co. In the post-pandemic situation, the share of consumers buying takeaway coffee increased from 22% to 34% in 2020 but given the strong out-of-home culture in France, coffee consumption is expected to in bars, restaurants, and shops, it will return to pre-pandemic levels in the long term.

The European demand for single-serving coffees, such as pods and capsules, has been growing strongly in the last 10 years. France is one of the leading countries in the consumption of coffee in pods and capsules. In 2019, coffee pods accounted for more than 50% of the total value of the coffee market in France. The market leader in the coffee pod segment in France is Nespresso, part of Nestlé. The growth of coffee capsules and pods in France has come at the expense of ground coffee and instant coffee. The market share of ground coffee sales decreased by -3.7% between 2017 and 2019 and for instant coffee it was -1.5% in the same period. Whole

coffee beans, on the other hand, are steadily gaining popularity in France and should continue this growth. More and more French consumers have coffee machines with grinders at home. In 2019, around 7.3% of French households used whole beans, an increase of nearly 400,000 households since 2016.<sup>10</sup>

Like other European countries, in recent years, France has also approached the sustainability of coffee and fair trade. Sustainability brands such as Fairtrade, Rainforest Alliance / UTZ and organic have gained a lot of importance in France. Fair trade is a very popular label with French consumers. According to the latest data from 2018, fair trade sales increased by 22% in 2018 alone, largely due to supermarkets, which offer a growing assortment of fair trade products. Some retailers have also committed to certifying their private label products with Fairtrade, such as dealer Carrefour. Certified organic coffees are also gaining popularity on the French market. In 2019, around 3% of total coffee sales were organic. This relatively low number underlines the growth potential of organic coffee, as tea and infusions hold much higher organic shares.

#### **10.5.1.3 Nestlé**



*Figure 10.43*

Nestlé S.A. o Société des Produits Nestlé S.A. is the largest multinational in the world active in the food sector, based in Vevey, Switzerland. It produces and distributes a large variety of items, from mineral water to baby food, from frozen to dairy products. Around 1860, the pharmacist Henri Nestlé developed a food for infants who could not be fed at the breast due to intolerances. The product saved a child's life, and Farine Lactée Henri Nestlé was soon sold throughout Europe. Nestlé was formally founded in 1866.

In 1905, Nestlé merged with the Anglo-Swiss Condensed Milk Company. The company quickly grew to own factories in the US, UK, Germany, and Spain. During the First World War, demand for dairy products increased, and Nestlé's production doubled before the end of the conflict. After the war ended, the dairy market returned to normalization and most consumers

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<sup>10</sup> Bfmbusiness/economie/consummation, 2020

returned to fresh milk. Nestlé responded to this change in context by changing its business line, starting to expand into the chocolate production sector, which is still the second most important business of the company. At the start of World War II, the company's profits dropped sharply (from \$ 20 million in 1938 to \$ 6 million in 1939). New factories were built in many developing countries, especially Latin America. The war itself led to the invention of a new, hugely successful product, Nescafé, which was initially used by the United States army. Also, thanks to this product, the company's profits returned to rise during the conflict. The end of the Second World War was the beginning of a dynamic phase. The company's growth was accelerated, and numerous acquisitions were completed. In 1947 Nestlé merged with Maggi (manufacturer of condiments and soups). Crosse & Blackwell followed in 1950, Glaces Gervais (1960), Findus (1963), Libby's (1971) and Stouffer's (1973). A shareholding was also created with L'Oréal (1974), with further diversification of production. In 1977 Nestlé continued to expand outside the food business by acquiring Alcon Laboratories. In 1984, a giant of the US food industry, Carnation, was acquired. In March 1988, Nestlé took over the Italian food company Buitoni with its Buitoni and Perugina brands. Also in 1988, following the acquisition of the English confectionery group Rowntree Mackintosh (a company that holds various brands in international markets including Kit Kat, Smarties, Lion, Polo, Fruit Joy, Quality Street), Nestlé became the second largest producer in the world. of the snacks behind Mars Inc. Nella prima metà degli anni novanta, la nascita del mercato globale fornì alla Nestlé nuovi importanti mercati nei quali espandersi. Nel 1993, grazie all'acquisizione in Italia di Italgel dalla SME (marchi Motta, Antica Gelateria del Corso, Valle degli Orti e Surgela), Nestlé consolidò la propria presenza nel ramo del "freddo" in Europa. Negli anni successivi avvennero nuove importanti acquisizioni: Sanpellegrino (1997), Spillers Petfoods (1998), Ralston Purina (2002), Dreyer's (2002) e Chef America (2002). Nel 2005 Nestlé perse posizioni nel mercato degli alimenti per l'infanzia dopo il ritiro di alcuni tipi di latte in polvere, e procedette all'acquisizione di Gerber Products Company nel 2007 e la divisione alimentare della multinazionale Pfizer nel 2012 con l'intento di riconquistare una posizione di leader nei mercati emergenti. Nel 2018, Nestlé dismise le sue attività nel settore dolciario nel mercato degli Stati Uniti, cedendo a Ferrero la proprietà di oltre 20 marchi tra cui Crunch, Butterfinger, BabyRuth, 100Grands, Raisinets, Wonka, SweetTarts, Laffy Taffy e Nerds. in the field of coffee, the most famous brands are: Nescafé, Nescafé Dolce Gusto e Nespresso.<sup>11</sup>

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<sup>11</sup> Wikipedia.org

	2020	2019	2018	2017	2016	2015	2014	2013
ROE (%)	26,30	23,85	17,35	11,50	12,93	14,17	20,11	15,62
ROCE (%)	15,68	16,02	11,86	8,42	9,82	10,80	15,14	12,41
ROA (%)	9,86	9,86	7,40	5,37	6,47	7,31	10,83	8,32
Profit Margin (%)	6,02	5,43	7,27	6,50	9,07	5,39	5,78	5,85
EBTDA (%)	5,96	5,73	6,99	7,01	5,03	5,61	5,46	6,25
EBIT (%)	4,52	4,26	5,37	5,48	3,58	4,24	4,11	5,04
Current ratio (%)	1,84	1,27	1,38	1,29	1,16	1,08	1,16	0,92

Table 10.16: Profitability indexes and current ratio of Nestlé, 2013 - 2020. source: orbis-bvdinfo.com

	2020	2019	2018	2017	2016	2015	2014	2013
<b>SALES REVENUE</b>	2,556,473	2,264,858	2,222,438	2,341,103	2,050,201	2,152,723	2,384,970	2,722,002
<b>EBIT</b>	121,172	99,922	122,135	131,547	74,642	93,121	99,449	139,809
<b>NET INCOME</b>	560,573	65,703	47,583	79,688	95,116	-55,024	79,570	88,045

Table 10.17: Nestlé financials in million euros, 2013-2020, source: Orbis-bvinfo.com

Since 2011, the company has managed a strong current ratio, which implies its strong position to meet unpredictable liquidity demands. The highest was reached precisely in 2020, which represented that the Nestlé company was able to meet most of its obligations in the short term. Over the past decade, despite fluctuations in its balance sheet and the economy in general, Nestlé Company has achieved efficiency in all its operations. The profitability ratios show how the company has progressed. The company didn't make much profit in 2015 as it was spending more on its spending profile, had huge investments in inventory, increasing the cost of sales due to low demand for its products. However, in 2017 and 2018 they performed better and improved the management of their finances, shortening the debtor collection period and managed the investment in total sales-related assets and has reacted well to the effects of the pandemic in recent years.



## 10.6 United Kingdom

The British are famous as tea lovers. However, in recent years, tea consumption has fallen sharply: as can be seen in the figure 8.42 from 2011 to 2020 there was a substantial decrease. In 2011, 96 million kilos of tea were consumed per year by the citizens of Great Britain. 96 million kilos remained in 2012 as well, but this figure was never reached again in the following years. In 2013 there was a substantial drop of 7 million kilos and the British consumed only 89 million kilos of tea that year.

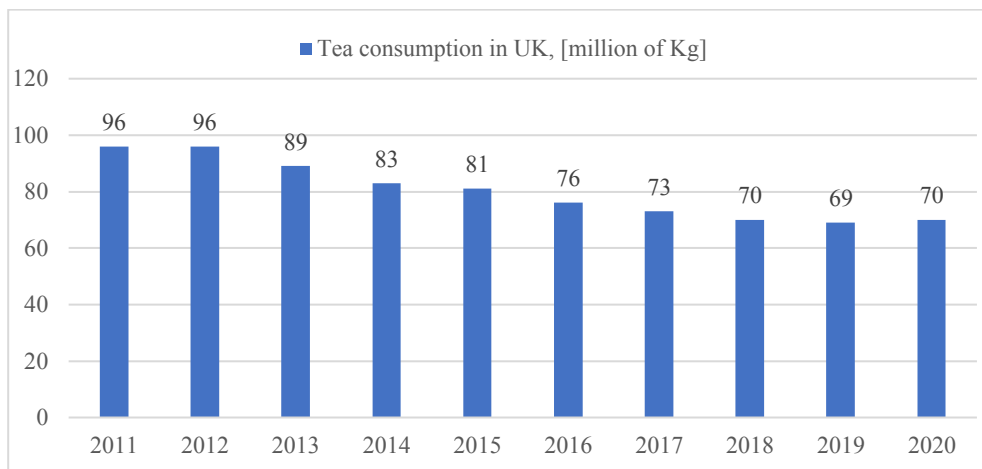


Figure 10.44: Tea consumption in UK, 2011-2020, in million kgs, source: Truenumbers

Forecasts estimate that this "tea crisis" will not end, to make room for coffee, mostly the soluble one. In fact, UK consumers overwhelmingly prefer to drink instant coffee rather than standard fresh ground coffee or pods of fresh ground coffee. This also gives the fact that as tea drinkers, most UK residents own a kettle to boil water for tea, and the same kettle can be used to make instant coffee, instead of investing in one. electric coffee machine for making the occasional cup of coffee. The UK offers a clear example of how coffee producers can succeed in the world's largest tea consumption markets such as India, Pakistan and Turkey through instant coffee. Compared to most other European countries, Brits drink relatively large amounts of instant coffee. Around 80% of British households buy instant coffee, particularly older generations, for an amount of over 38,000 tonnes in 2018. That year, the instant coffee volume share reached 41% of the entire market. British. For comparison, the market share of the average volume of instant coffee in Europe is 17%.<sup>12</sup>

<sup>12</sup> European Coffee Federation Report, 2018

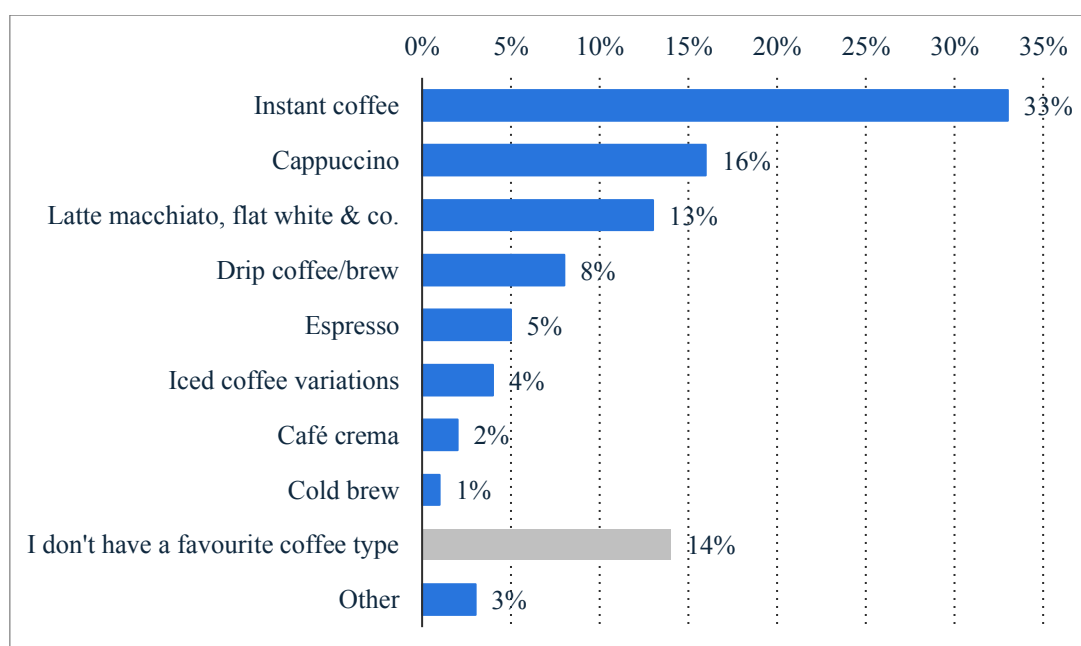


Figure 10.45: Most popular kinds of coffee in the UK 2019, source: Statista

NOTES: July 23rd to July 28th, 2019; 18 years and older; 778 respondents; UK residential general population, respondents who drink coffee

On the other hand, single-serving pods are also gaining popularity in the British coffee market. In 2018, coffee pods made up 13% of the entire UK coffee market, up 3% from 2016 and there is still ample room for growth in UK coffee pods.

The growth in sales of coffee pods is largely driven by young people in the age group of 25 and 40. The ease of use of these products, the strong marketing and the wide variety of tastes have contributed to the sales growth of this segment.

The disadvantage of coffee pods, as previously mentioned, is the negative environmental impact. Environmental concern is one of the main trends driving the British coffee industry, several UK-based coffee companies have introduced recyclable and compostable solutions and alternatives.

As of January 31, 2020, the United Kingdom is no longer a member of the European Union. The implications of Brexit on the British coffee industry remain uncertain. The possible impact on the value of the pound is the most pressing issue for the British coffee industry, as it could affect the disposable income of British coffee consumers. This could slow down the current rate of growth in out-of-home consumption and in the specialty coffee segment.

## 11. Out of home Consumption

After analyzing the major European roasters, the major players at the level of coffee shops will now be listed, therefore companies that are mainly based on the HORECA channel and not mainly dedicated to the consumption of coffee at home.

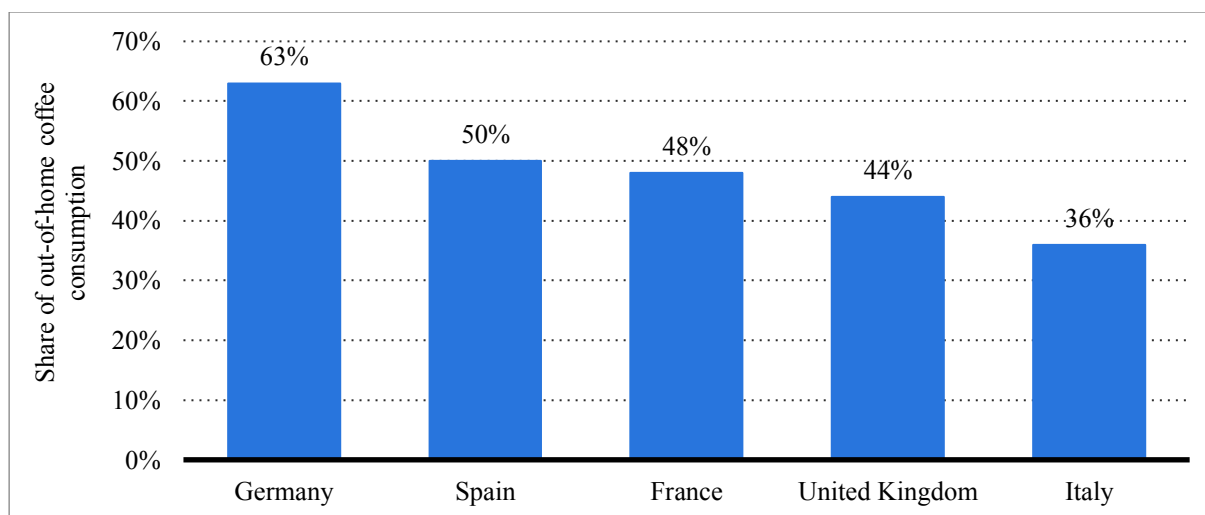


Figure 11.1: Share of out of home coffee consumption, by country, 2021, source: Statista

Away from home, Starbucks, Tim Hortons, Panera Bread, Costa Coffee, Peet's Coffee, Dunkin' Donuts and Caribou Coffee are the biggest players. A major company in the home and away-from-home coffee sector is Luxembourg-based JAB Holding, which has built a sizeable portfolio of retail and café brands and owns at least part of both Jacobs Douwe Egberts and Keurig Dr Pepper, Peet's Coffee and Caribou Coffee, among others. In many countries, such as the Netherlands, people seem more ready to have coffee at home. Despite this, coffee chains are still popular with consumers who want to enjoy coffee on the go: Costa, Starbucks and McCafé respectively have over two thousand units across Europe.

### 11.1 Covid-19 impact

With the Covid-19 pandemic, numerous activities related to the out-of-home market have been affected by a reduction in the number of customers, due to more restrictive regulations in terms of spaces and opening hours, with a consequent loss of turnover. After a brief recovery during the summer months, the situation worsened again. From a global perspective, the effects of the health and economic crisis could continue for another year in some areas of the world, due to

the different phases of evolution of the pandemic and the different measures adopted by governments to limit its impact. As for coffee consumption, while the pandemic caused the collapse of the market outside the home, on the other hand, there has been an increase in the consumption of coffee inside the home. As mentioned in the previous paragraphs, the growing attention of the consumer towards the quality and the demand for selected blends is interesting, with the aim of reproducing the same quality of coffee as coffee shops. Europe represents the largest area in terms of coffee consumption away from home, followed by North America and Asia. In 2019, before the pandemic, coffee consumption in Europe recorded a growth in value of 2.1%, compared to 3.8% in North America and 7% in Asia.

In 2021 there was growth, mainly due to the recovery of businesses in the second half of the year, but to return to pre-crisis levels, it will take at least another year.

The most significant losses are linked to the consumption of coffee in the office (-61.8%) due to the smart working policies widely adopted in many European countries, while HORECA consumption should decrease by 48.3%

In some northern European countries, smaller losses were recorded, also thanks to the less restrictive initial policies adopted by local governments, while the most significant losses are recorded in Eastern European countries.

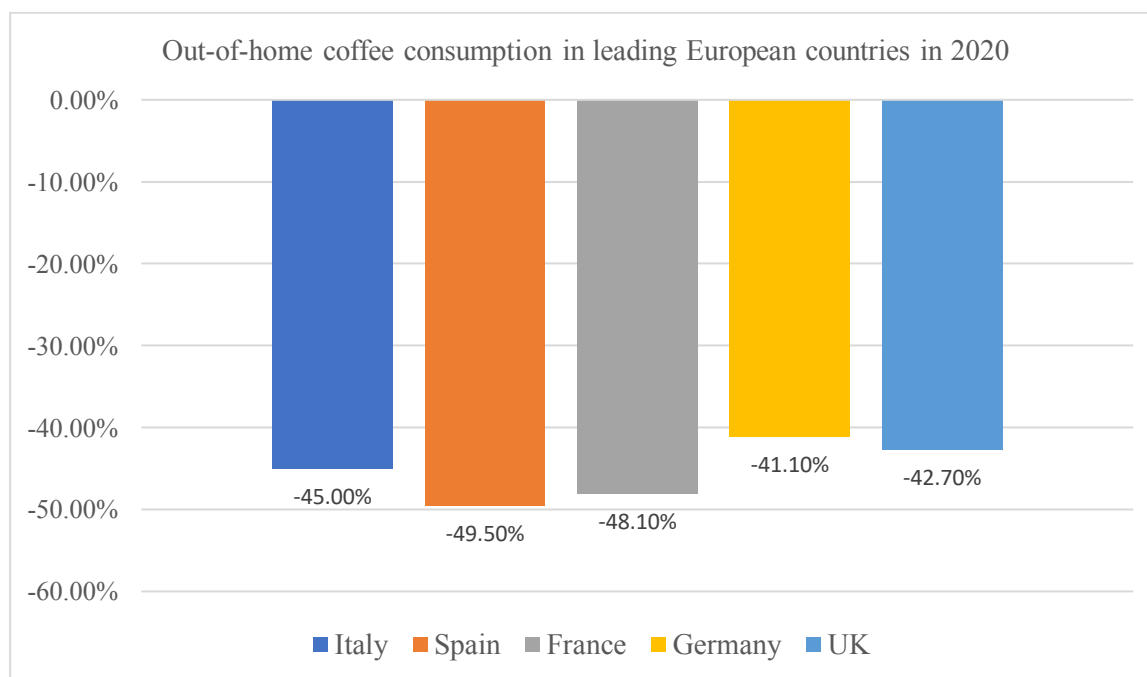


Figure 11.2 Out of home coffee consumption in leading countries in Europe, 2020, source COFFEEBI

At the end of 2020, an average decrease in value of 45% in the consumption of coffee outside the home was recorded in Italy. Compared to other large countries, the initial very restrictive policies which led to the total suspension of activities for several months, and which therefore

had a greater impact on HORECA, while the decrease in office consumption will be slightly more contained than in the European average.

In Spain, the drop in coffee sales reached almost 50%, while in France the laxer initial policies regarding closures and opening hours slowed the drop in consumption within HORECA. But even in this case, the drop in consumption in the office will have the greatest impact on the annual performance of the out-of-home market (-48.1%), due to smart working.

In Germany, out-of-home coffee consumption increased in value by 2.5% in 2019, with an even greater increase in the office segment. While in 2020 the reduction in consumption was approximately 41% in value. The loss is greater in the office segment, due to the strict home work policies adopted, while HORECA was affected by the restrictive regional regulations and also by the increase in takeaway coffee sales.

The out-of-home coffee market in the UK continued to grow until 2019 (+ 2.9% in value) despite the uncertainty of "Brexit". In 2020, the restrictions resulted in a 42.7% reduction in coffee consumption away from home. As in other European countries, the largest losses are recorded in offices, while the decline in sales in the HORECA sector is partly mitigated by the widespread use of take-away coffee and the increase in delivery services.

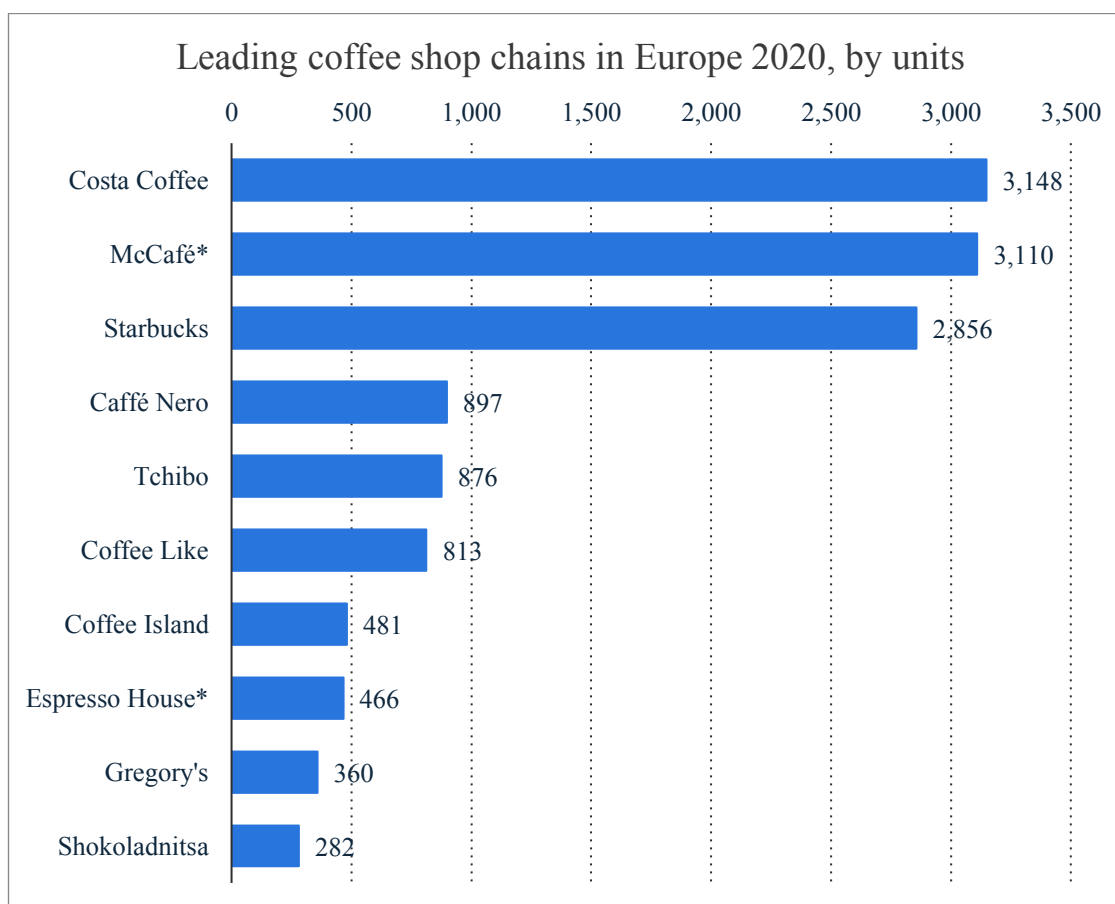


Figure 11.3: Leading coffee shop chains in Europe, 2020, source: Statista

Costa Coffee was ranked as Europe's leading coffee chain in 2020. The British coffee shop chain accounted for a total of 3,148 units across Europe. McCafé and Starbucks are in second and third place respectively.

These are the three main players in the European cafeteria market, but obviously the presence of each brand varies widely from country to country: Costa Coffee's main market is the United Kingdom, where most shops are based. As for Starbucks too, it is much more expanded in the UK. McCafé, on the other hand, is widespread throughout Europe, but has its largest market in Germany.

As we have said in the previous paragraphs, although there are many coffee-loving nations in Europe, the coffee culture varies from country to country. If the UK is a big market for coffee-focused stores that follow a Starbucks-style format, coffee shops are places loved by drink lovers, so also in Italy, Portugal and Turkey.

## **11.2 Costa Coffee**



*Figure 11.4*

Costa Coffee is a British coffee company based in Bedfordshire.

It was founded in 1971 by Sergio Costa of Italian origin. It is the second largest coffee chain in the world after Starbucks and the largest in the UK. The story of the company starts with a roastery in central London, to supply local restaurants and specialty shops with Italian roasted coffee. After a few years, his brother Bruno Costa also invests in the company and in 1978 he opens his first shop in London, but in 1979 two brothers separate and Sergi takes over Bruno's shares in the company.

In 1995 the company was acquired for 23 million pounds by Whitbread, a multinational listed on the London Stock Exchange and the largest coffee and hotel operator in the country, becoming a subsidiary thereof. From here begins a strong expansion: in that year there are 41 stores in the UK. In 1999 he also opened the first store abroad, in Dubai.

In 2009 Costa Coffee opened its thousandth café in Cardiff, in March 2010 it acquired Coffee Heaven for 36 million pounds with 79 stores spread across Central and Eastern Europe, it also opened in Australia and New Zealand.

In 2017 he moved the roasting company to Essex, with an investment of 38 million pounds, thus increasing the roasting capacity, from 11,000 to 45,000 tons of coffee beans per year. In 2017, it had 3,400 stores spread across 31 countries, 2,121 restaurants in the UK, over 6,000 Costa Express vending machines and another 1,280 overseas outlets, 395 of which in China.

In August 2018, the Coca Cola group takes over the chain of stores for € 4.4 billion.

Costa Coffee's vision is to provide the best hospitality to its customers through its restaurants, hotels and leisure clubs. The main problem for chain coffee shops is to create a unique experience that cannot be easily copied, but their motto is: "To serve the best coffee in true Italian style", which is also their competitive advantage: quality.

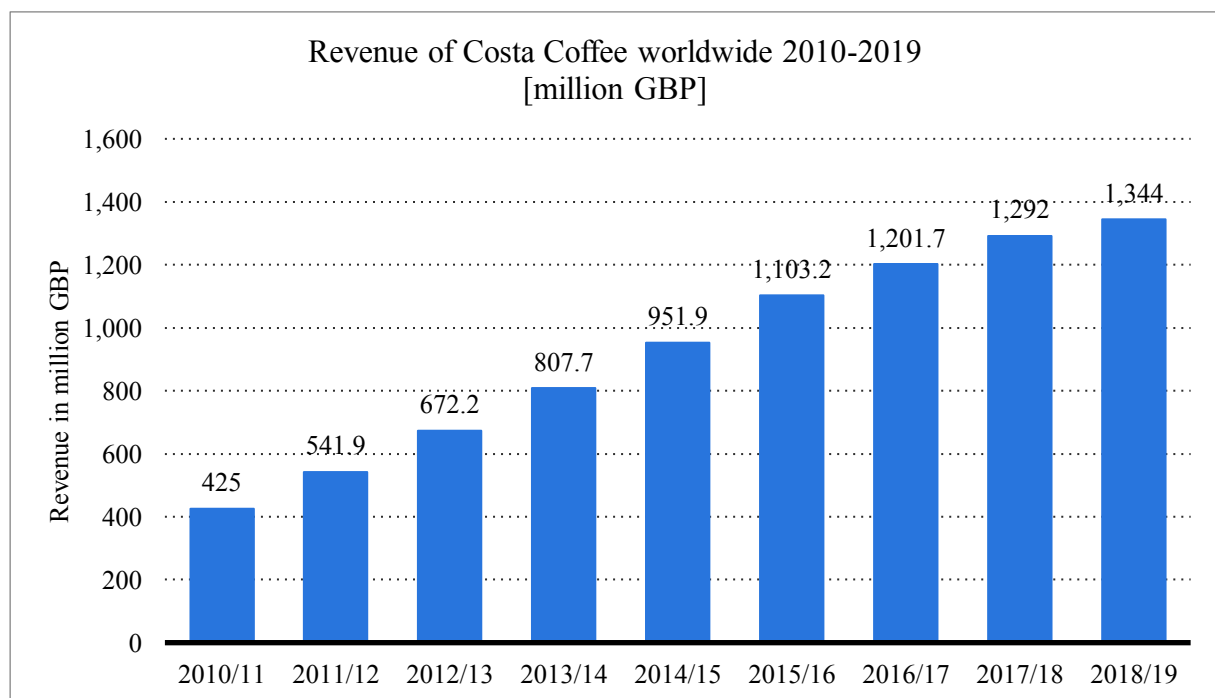


Figure 11.5: Revenue of Costa Coffee worldwide, 2010-2019, source Statista

### 11.2.1 Strengths

Costa coffee has created a solid circle of customers by "loyal" by providing them with quality products and by providing a pleasant atmosphere where customers can stop for a break. And the more time customers stay, the more sales go up. It is a very customer-centric brand, offering various types of coffee that is not easy to replicate, but also the product portfolio is well diversified and includes, among other things, chocolates, drinks, snacks, coffee, tea,

sandwiches, cakes, and pastries. To offer a quality service, the chain is very cautious in the sourcing and processing of coffee beans. The company sources its supplies from 100% certified Rainforest Alliance farms. All these little things contribute significantly to the quality of the company's service. Surely then with the acquisition by Coca-Cola in 2019, the brand has increased its influence on the market but above all its reputation. A strong parent brand by its side offers the company great opportunities in terms of growth, sales and profitability.

### **11.2.2 Weaknesses**

The main weakness is the concentration in a particular European area. Most of the brand's stores are located in the UK and other European countries, as well as a few overseas stores. From this analysis it seems that the company relies heavily on the developed market as its main source of income, which is not entirely wise as if the sale somehow decreases in those markets, which could "saturate", this will have a negative impact on the agency. Prices are also a further "barrier", in fact the brand sells its products at higher prices than smaller competing brands. Furthermore, from a nutritional point of view the products are not healthy as they are high in sugar: with the new trends in healthy diets, Costa coffees could lose the slice of customers attentive to their health.

### **11.2.3 Opportunities and Threats**

The company may consider offering the same quality products at lower prices to be more competitive. Another opportunity is that of expansion: Costa Coffee should expand its reference market by entering the global market. Globalization has amplified the likelihood of growth in developed countries and could take advantage of the growth rate of some countries.

The brand is expected to broaden its product portfolio by adding healthier products in the caffeine category, but also offer coffee-making equipment, coffee beans and other similar products.

The most important threats are given by competitors: some of the main ones are Caffè Nero and Starbucks. Their presence in the market makes it difficult for the company to maintain its position. Furthermore, the global economic recession has reduced the purchasing power of the normal working class, and having a limited income, they prefer cheaper products.



### 11.3 McCafé



*Figure 11.6*

McCafé is a café-style food and drink chain, owned by McDonald's, with annual sales of \$ 14.7 billion and highest industry profit margin of 12.4%.

It was conceptualized and launched in Melbourne, Australia in 1993.

Reports indicated that McCafé outlets generated 15% more revenue than a regular McDonald's and, in 2003, were the largest coffee shop brand in Australia and New Zealand.

The chain spread to 13 countries in 2002, with the first in the United States opening in Chicago. In 2004 McCafé opened in Costa Rica and France and the following year the concept was launched in Italy. In 2007, the chain expanded to Japan to increase sales, while also offering soups and sandwiches to reach new customers who preferred traditional coffee shops. Despite being a relatively small part of McDonald's overall strategy, there are around 1,300 McCafés worldwide. In August 2008, McDonald's expanded its McCafé concept into South Africa, where the McDonald's franchise is already a household name and one of the largest fast-food chains in the country. Then, opened in Madrid in 2008. (Wikipedia)

McDonald's has established a strong brand over the past few decades. Their store locations, which are often located in busy areas (e.g. highways, shopping areas) attract a large influx of customers who visit and eat in their stores. Proximity to larger groups of customers allows for more in-store visitors. McDonald's is also known for highly standardized processes where all stores follow the same techniques and use the same machinery. This not only makes new store openings faster and more efficient, but also enables McDonald's to provide the same customer experience to their customers across all of their stores globally.

### 11.3.1.1 German market

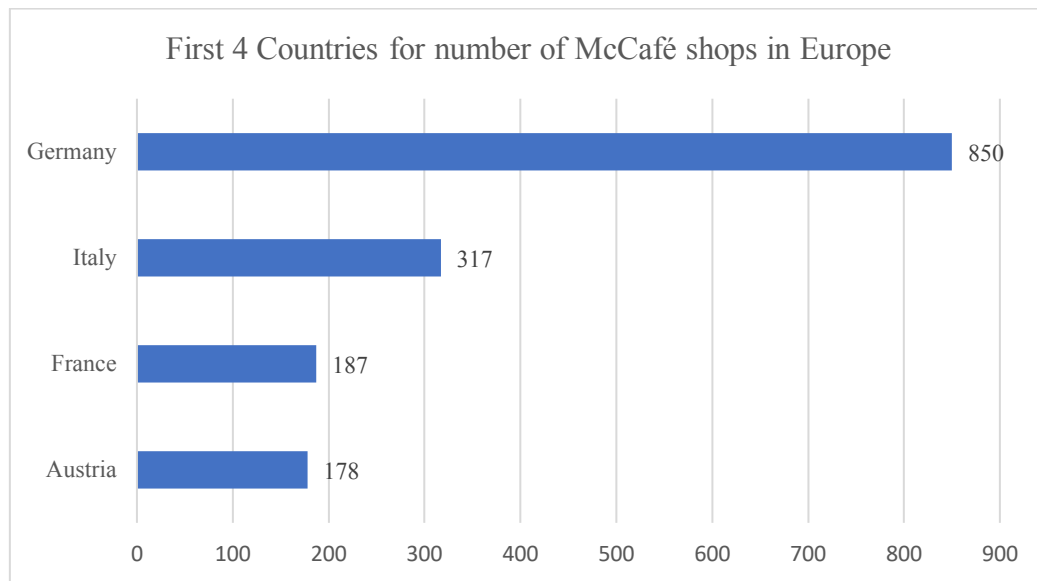


Figure 11.7: first countries for number of McCafè shops in Europe, source Statista

The chain has a broad presence across Europe, with stores in at least 26 European markets as of 2018. Germany is the largest market: the brand had 850 stores operating in Germany as of January 2018. In Italy, their second European market by size, there were 317 units in operation. McCafé also has a larger presence in Germany than coffee giant Starbucks. Since the first franchise opened in Munich in 1971, Germany has grown to become the largest McDonald's market segment in Europe. This growth was largely attributed to Denis Hennequin, the president of McDonald's Europe who was of French descent. Using more than half of his global funding worth more than \$ 1.1 billion, Hennequin moved operations from the popular US drive-through dining experience to a more seated experience Europeans were used to. His expansion initiatives have focused on meeting the needs of the local market. It is also a market strongly focused on healthy and sustainable catering. In 2020, the German organic food market achieved a turnover of 15 billion euros. This makes it the largest organic food market in Europe, followed by France (12 billion €) and Italy (3 billion€). This meant more collaborations between fast-food restaurants and organic suppliers (many of which were local in nature) to create healthier products. For McDonald's Germany, they have furthered their support for local suppliers by introducing more localized menu items, creating online videos and TV spots focusing on local farmers, and even changing their famous red and yellow logo to a green and yellow logo to appeal to customers health conscious (Wheeland, 2009). To attract the mass market, McDonald's Germany pursued price promotion initiatives where some menu items were offered

for 1 euro. To attract young, health-conscious customers, McDonald's also launched McB, McDonald's German version of an organic burger.

#### 11.4 Starbucks



*Figure 11.8*

Starbucks is a US coffee chain founded in Seattle in 1971. It is the largest chain of its kind in the world, with 28,720 stores in 78 countries, 12,000 of which are in the United States.

The first Starbucks store was opened by three guys who attended the University of San Francisco: Jerry Baldwin, an English teacher, Zev Siegl, a history teacher, and Gordon Bowker, a writer. The company was named after Moby Dick's first deck mate. During this period, the company only produced whole coffee beans, never producing the classic coffee to sell. The only coffees in the shop were free samples. During their first year of business, they bought the coffee beans exclusively from Peet's Coffee & Tea, only later starting to buy them directly from the growers. In 1989 the chain already had 46 distribution points in the United States. Starbucks stores exclusively sell their own brand of coffee (ground or bean), teas, beverages, pastries, utensils, and coffee machines, but the company's primary goal is to "provide a consumer experience", to offer its customers a unique service that they will not find in another brand's coffees.

In addition to the classic venue, Starbucks has developed a particular concept store, the "Roastery"; the first was opened in Seattle in 2013. The group also plans to open additional "Roasteries", but under the "Starbucks Reserve brand", with a logo different from that of traditional coffees. Starbucks currently has a presence in 67 countries. In Europe, Starbucks cafes are very popular, especially in large cities such as Paris, Madrid, Berlin or London. (Wikipedia)

As of the first quarter of 2021, Starbucks had 2,509 stores in Europe. The most number stores were located in the United Kingdom with 748 Starbucks stores. This was followed by Turkey

with 536 stores and France with 187 Starbucks stores. Comparatively, there were only 11 Starbucks stores in Italy as of that date.

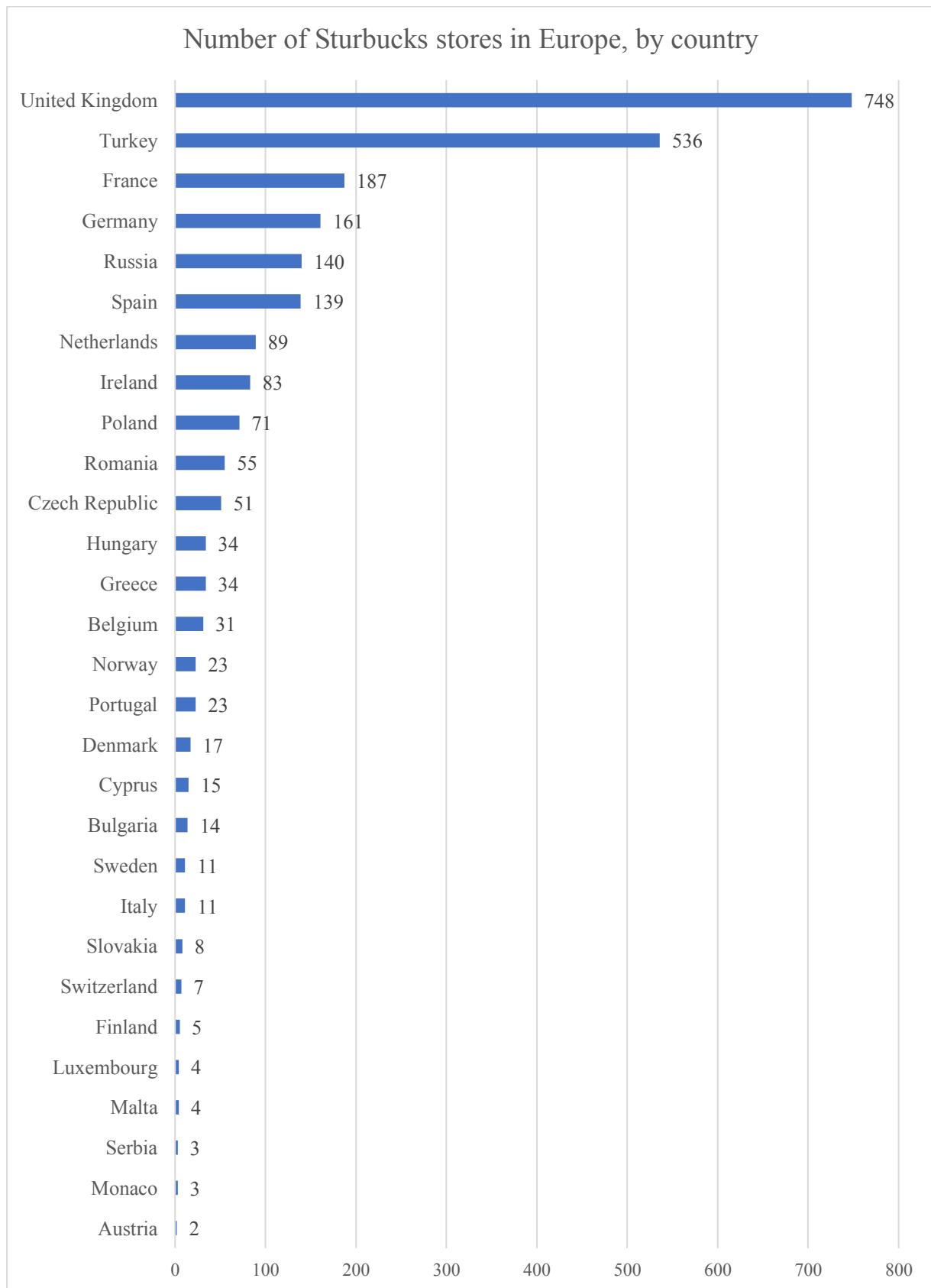


Figure 11.9: European countries with the largest number of Starbucks stores, 2021, source Statista

### **11.4.1 Starbucks faces the European Coffee Culture**

Almost a decade after venturing into Europe, Starbucks is still working to attract European customers. Despite a strong turnaround in the United States and steady growth in Asia, where Starbucks is still a novelty, the company struggled on the continent that gave birth to coffee and coffee culture. Indeed, to win over Europe's most coffee aficionados, Starbucks is embarking on a multimillion-dollar campaign aimed at renovating hundreds of stores to make them "more luxurious", to satisfy an entrenched coffee culture, and by adapting drinks and blends to satisfy fickle palates. regional. The habits and customs of the different European regions are a challenging. France and Italy, for example, there is no habit of drinking coffee "on the go" in paper cups. They tend to sit down when they sip their coffee, to enjoy this pleasure. In fact, despite the 63 stores opened in France, the company has never made a profit in this region. The British, on the other hand, are quite happy to drink coffee to go and are fans of the brand. In fact, Starbucks has focused heavily on this region, opening 748 stores. But even in parts of Europe where the company makes money, sales and profit growth are much lower than in the Americas of Asia, also due to high European rents and labor costs, which effect on profits more than in any other region in which Starbucks operates. Starbucks' vision is to establish Starbucks as the most recognized and respected brand in the world. This vision was set by the company with the idea of expansion in mind. The company hopes that its vision and mission will allow it to enter the Central and Eastern European market. Starbucks' mission is "To provide an uplifting experience that enriches people's daily lives (Strickland, 2002).

### **11.4.2 Customer Experience**

Although Starbucks is thought to have always written customer names on their drink orders, it only started in March of 2012. As part of the "First Name Initiative" in 2012, Starbucks baristas also began wearing name badges with their name on them to "humanize" their employees. This whole initiative was to create a better personal connection with their customers. The goal of the practice is to develop a name relationship with customers and make their beverage order more than just a transaction. The names on the mugs also help bartenders remember and order orders and prevent customers with similar orders from picking up the wrong one. Starbucks seeks to differentiate itself and stand out from the crowd of coffee shops by providing the best possible customer experience.

Through the name, the customer feels more valued and more part of a community and will return to Starbucks. In a Washington Post article titled "Career Coach: The Power of Using a Name," Joyce E and A. Russel state that:

*“A person’s name is the greatest connection to their own identity and individuality. Some might say it is the most important word in the world to that person. It is the one way we can easily get someone’s attention. It is a sign of courtesy and a way of recognizing them. When someone remembers our name after meeting us, we feel respected and more important. It makes a positive and lasting impression on us.”*

This is how the Starbucks baristas they know create a personal connection between the customer and the coffee shop that would otherwise not exist.

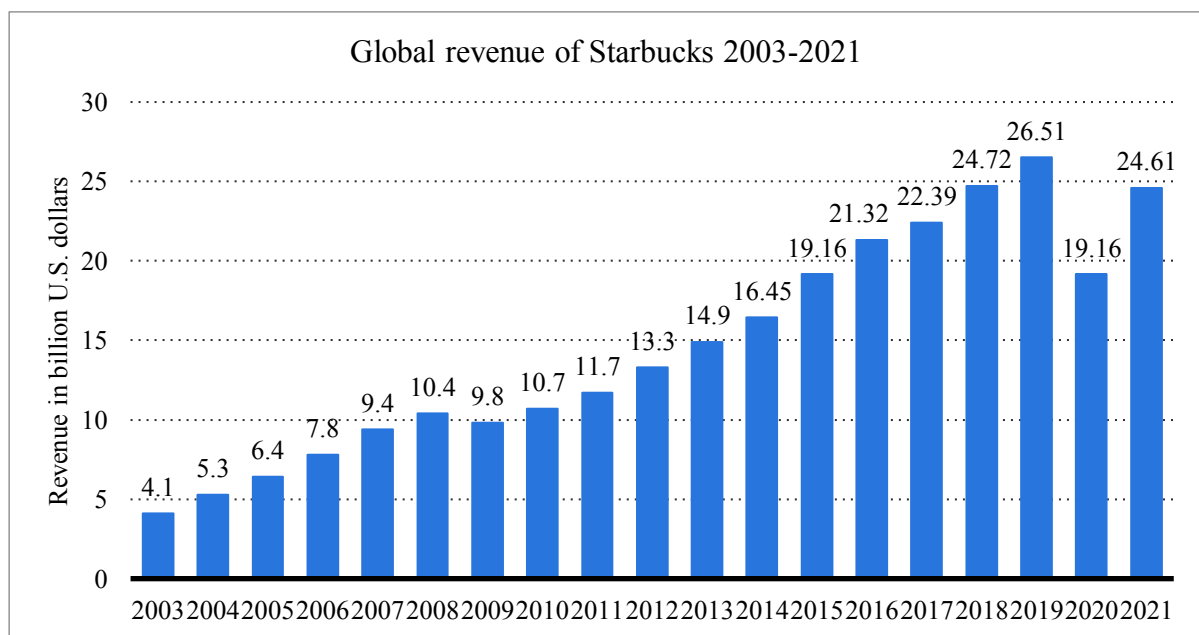


Figure 11.10: Net revenue of Starbucks worldwide from 2003 to 2021 (in billion U.S. dollars), source Statista

Profits have always been growing overall, we find a decrease between 2019-2020: obviously the vast majority of Starbucks' revenues come from stores, whose sales have decreased and even stopped due to the restrictive measures for the pandemic, consequently also net profit was affected.

## **12. Market Dynamics**

### **12.1 Pestel analysis**

The PESTEL (Political, Economic, Social, Technological, Environmental and Legal) analysis is a quantitative analysis. This methodology is based on some variables of the context that can outline the existing scenario in the environment in which a company operates, to identify variables that may be relevant in the corporate decision-making process, in the strategic and operational choices of the company. The PESTLE model should be considered as a part of the external analyzes for carrying out a strategic analysis and provides an overview of some of the different macro factors that the company needs to consider. It is a useful strategic tool for interpreting the growth or decline of the market, the position of firms, the potential and direction of operations. (Wikipedia)

#### **12.1.1 Political Factor**

The production of coffee beans or green coffee is localized in specific areas (Africa, South America, and Asia), the largest consumers are found in North America and Europe. Consequently, the coffee industry is heavily dependent on international trade to operate. Trade agreements between the geographical areas of production and consumption are fundamental and are what allow this sector to flourish and grow. Any accident within these sectors will seriously impact the coffee industry, increasing production costs.

In 2021, the EU tightened the placing of products on the market to curb deforestation and forest degradation around the world. In addition to coffee, the targeted products were soy, beef, palm oil, wood, and cocoa, but also by-products such as leather, chocolate and furniture.

This action was taken by the European Commission to bind companies to ensure that only products that have not caused deforestation and that are considered legal under the laws of the country of origin are marketed in the EU. The goods are assigned the geographic coordinates of the land where they were produced, and the Commission will operate a system to identify countries that present a low, medium or high risk of producing raw materials or products' not free from deforestation or not in compliance with the legislation of the producing country ". The obligations for operators and authorities will vary according to the risk level of the country or region of production.

### 12.1.2 Economic Factors

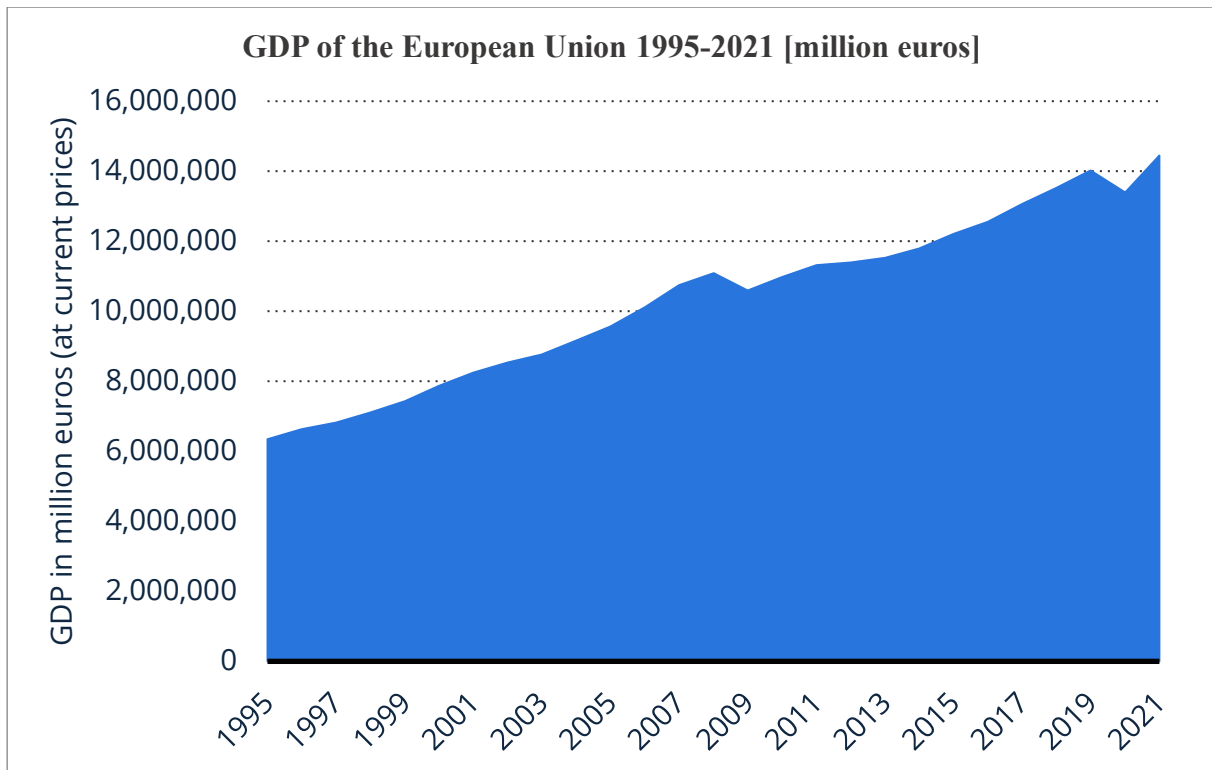


Figure 12.1: Gross domestic product of the European Union (EU27) from 1995 to 2021 (in million euros), source: Statista

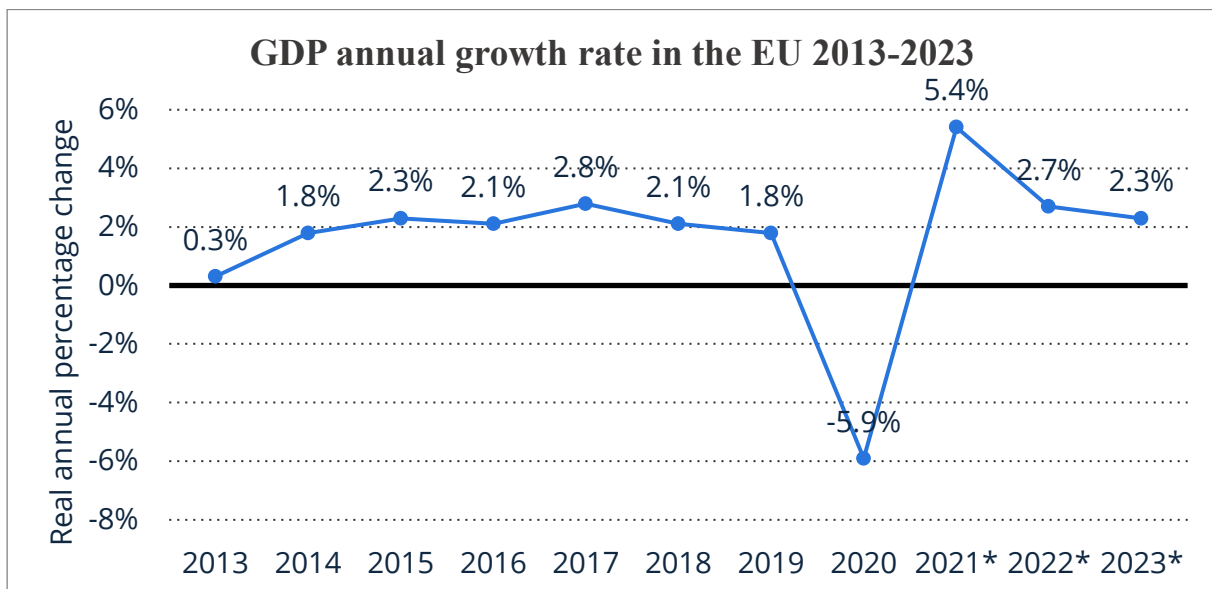


Figure 12.2 Average annual growth rate of gross domestic product in the European Union from 2013 to 2023

In 2021, the combined gross domestic product (GDP) of the European Union was just over € 14 trillion. Compared to world GDP, Europe's share has been around 15%, and which is set to fall to 13.99% by 2026. Europe's declining share of the world economy is a long-term and



correlated trend to European economies that are growing at a slower pace than other parts of the world, such as Asia, and in particular China.

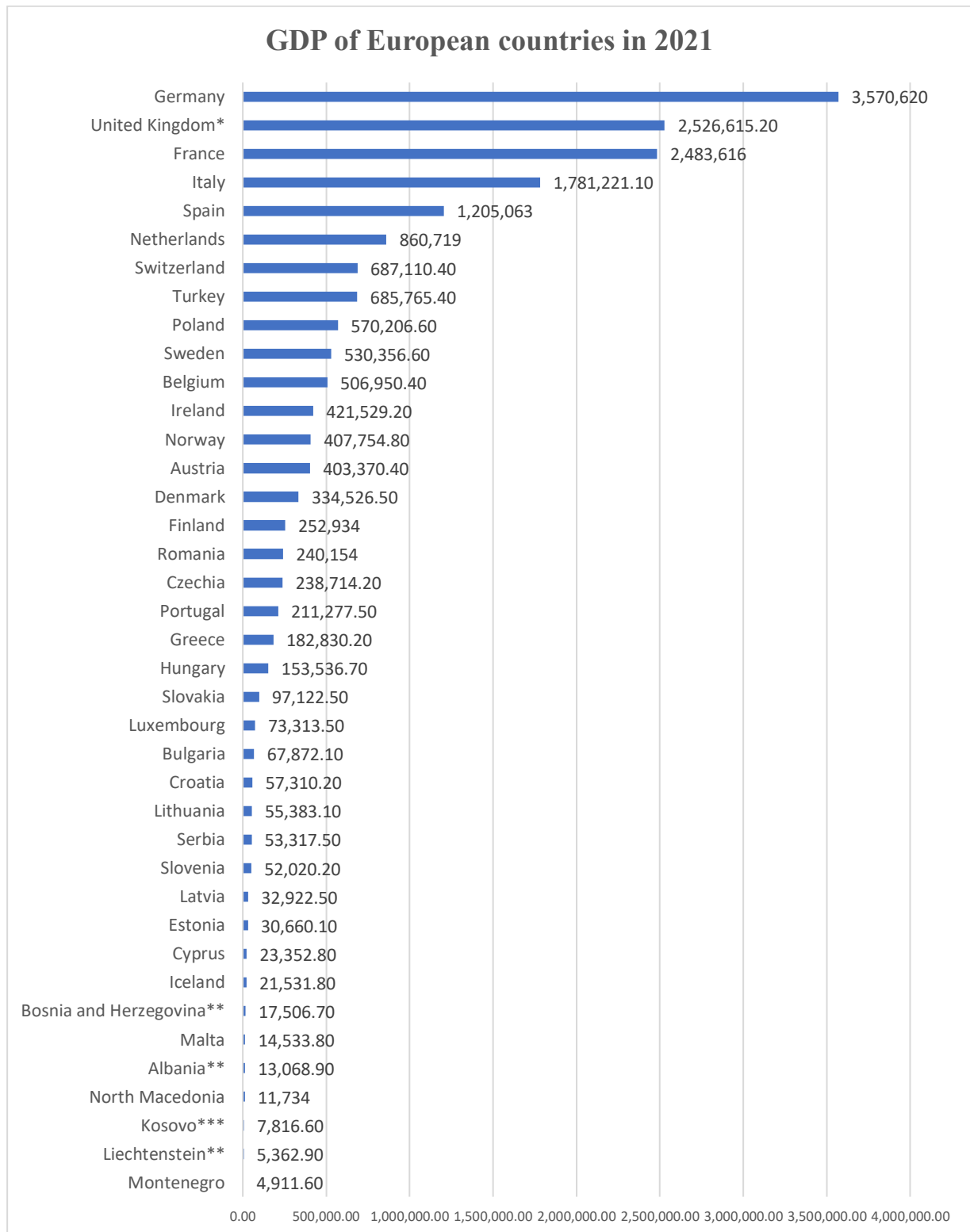


Figure 12.3: Gross domestic product at current market prices of selected European countries in 2021 (in million euros), source Statista

With a GDP of over € 3.3 trillion, Germany has the largest economy in Europe, followed by the UK and France, which have the second and third largest economies respectively. Despite this, none of these three economies grew at all in 2020, indeed: almost all European nations recorded negative results compared to growth rates in 2020, due to the Coronavirus pandemic. However, according to forecasts, growth is expected to return from 2021 onwards, with an average growth rate expected across the European Union of 4.2%.

Growth in consumer income around the world has allowed the drink to take on "premium" roles that have boosted profit margins. Indeed, populations in growing economies are now able to see coffee as a luxury commodity, they buy higher quality coffee. Where there is no economic growth, consumers choose not to spend on higher quality, but the lower quality coffee industry continues to thrive.

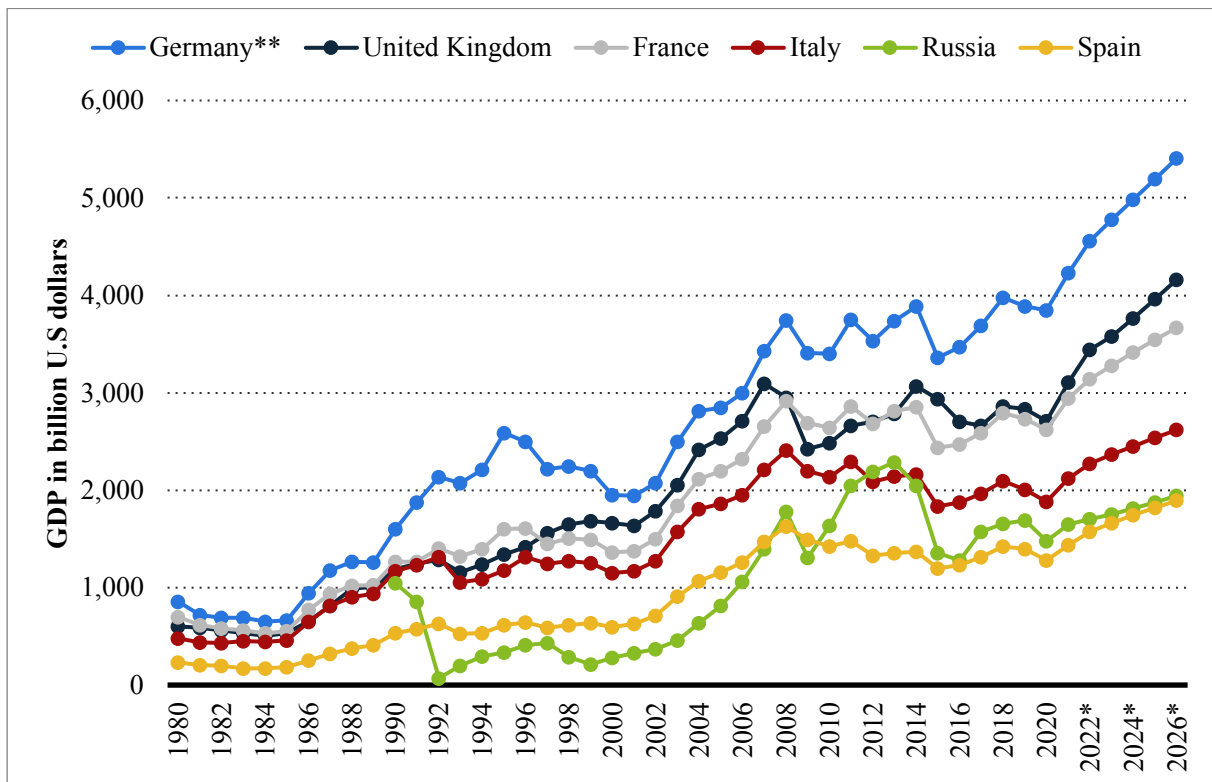


Figure 12.4: Gross domestic product (GDP) of Europe's largest economies 1980-2026, source: Statista

Economic development, and in particular the increase in per capita income, involves the growth of income available for consumption and therefore more resources to purchase more goods and services, including coffee; in emerging economies, economic development also translates into the growth of the middle class, which is able to pay more for better quality.

There is a strong positive correlation between coffee consumption and GDP, with an index equal to 0.75 (Giuli-Pascucci, 2014).

In a study referring to Western economies in the period 1830-1900, the elasticity of income demand was equal to 1.3: this means that coffee consumption grew 1.3 times faster than GDP. China is an example of this dynamic as over the past 20 years it has experienced an average annual growth rate in coffee consumption of 15%, which is far higher than the GDP growth recorded by its economy over the same period.

The elasticity of the demand for coffee to per capita income is not stable over time because it partly reflects the level of penetration of coffee consumption in the population. When this reaches high levels, a further increase in GDP does not have the same effect on the demand for coffee. In a study conducted by the United States Federal Trade Commission it was found that the elasticity of the demand for coffee in income in 1954 had been reduced to 0.2%. This means that income, while still playing a role, has a much more mitigated impact. The reasons for this minor effect are linked to two main factors: the first is linked to human tolerance to caffeine which must be consumed below certain quantities: the European Food Safety Authority suggests a quantity not exceeding 400 mg of caffeine. per day, the equivalent of up to five cups of coffee (in the case of pregnant and lactating women it is lowered to 200 mg). The second is linked to the so-called “Engel's law”, that is the observation according to which in the face of an increase in a family's income, the proportion devoted to food decreases.

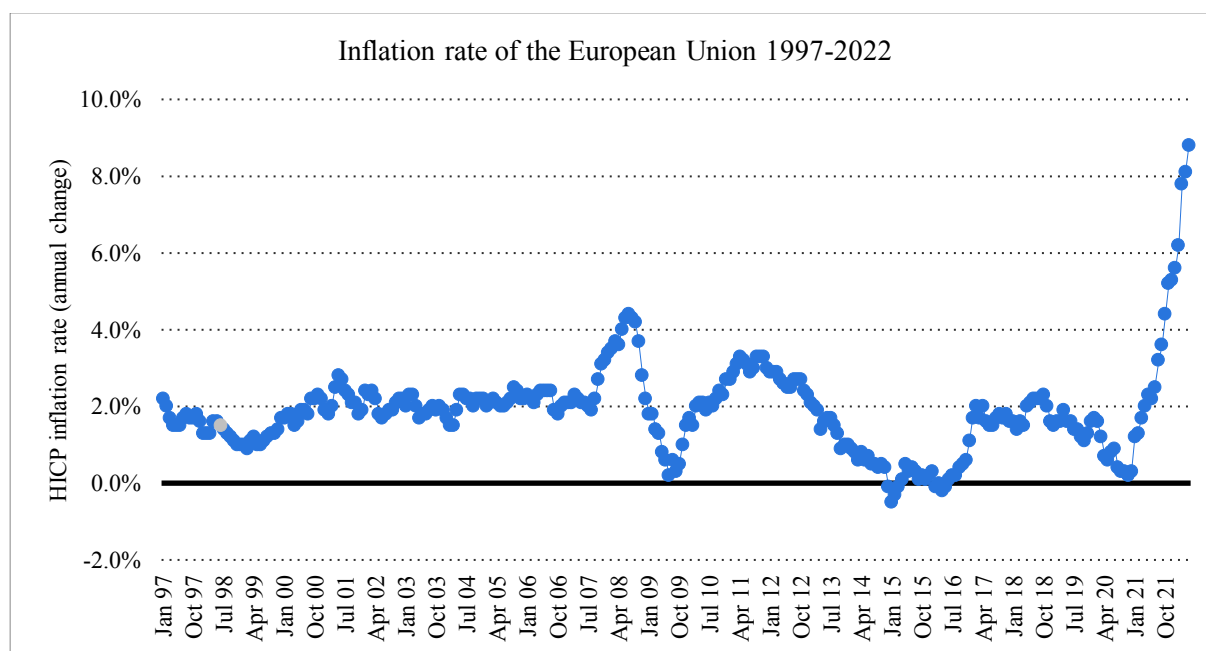


Figure 12.5: Harmonized index of consumer prices (HICP) inflation rate of the European Union from January 1997 to May 2022

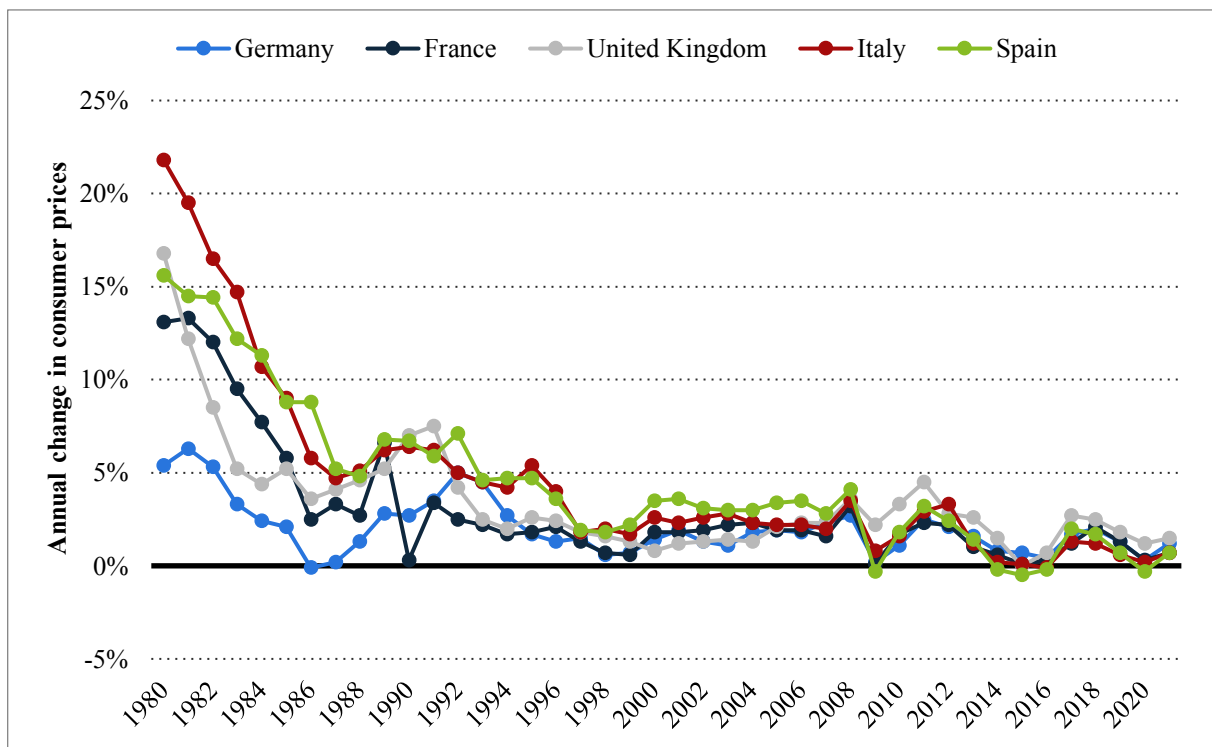


Figure 12.6: Inflation rate of average consumer prices in largest economies in Europe 1980-2021, source: Statista

The inflation rate will increase, and this will determine the increase in food prices. After witnessing a general increase in 2021, prices are expected to increase further to an estimated + 23% in 2022, due to the increase in the costs of raw materials such as fuel, electricity, and fertilizers. Also affecting prices were modest agricultural yields, which resulted in low inventories, and, more recently, the Russian invasion of Ukraine, which impacted not only the supply of food, such as grain and oil, but also it also produced effects on the prices of substitute products. Obviously, this will affect the final consumers.

According to data from Allianz Trade, it is estimated that food inflation will affect European consumer spending by an average of € 243.00 more, for the same basket of food products, compared to 2021. In particular, coffee will have an increase in consumer price equal to 1.9% more.

Analyzing the European countries, it is estimated that Italians, in 2022, will have to budget € 229.00 more for food spending, compared to 2021. In Germany they will even spend € 254.00 more, in France + 224.00 €, in Spain +200.00 €, while in Poland the increase will be contained to +152.00 €.

### 12.1.3 Social Factors

In recent years, there has been a shift in the outlook on health by the consumers. The trend now is to make healthier choices, which leads consumers to eat better food and avoid certain habits, even choosing to pay more. Although numerous studies confirm that coffee is not bad for health, it contains large amounts of caffeine, so it is likely that many consumers choose to give up caffeinated drinks for their health (for example to improve sleep). This could lead to a reduction in the demand for classic coffee, but at the same time to an increase in decaffeinated coffee and its derivatives. Another important socio-cultural trend, which we have seen in previous chapters, is fair trade. Even though fair-trade products are only a small fraction of all products sold in the food market, fair trade has found its way into segments such as flowers, bananas, chocolate or coffee (mainly fueled by the European and US market) and the labels that certify fair trade practices are recognizable by many consumers, who are increasingly careful to make informed choices by focusing on the producer. Nearly 226,338 tonnes of Fair-Trade coffee beans were sold worldwide in 2020.

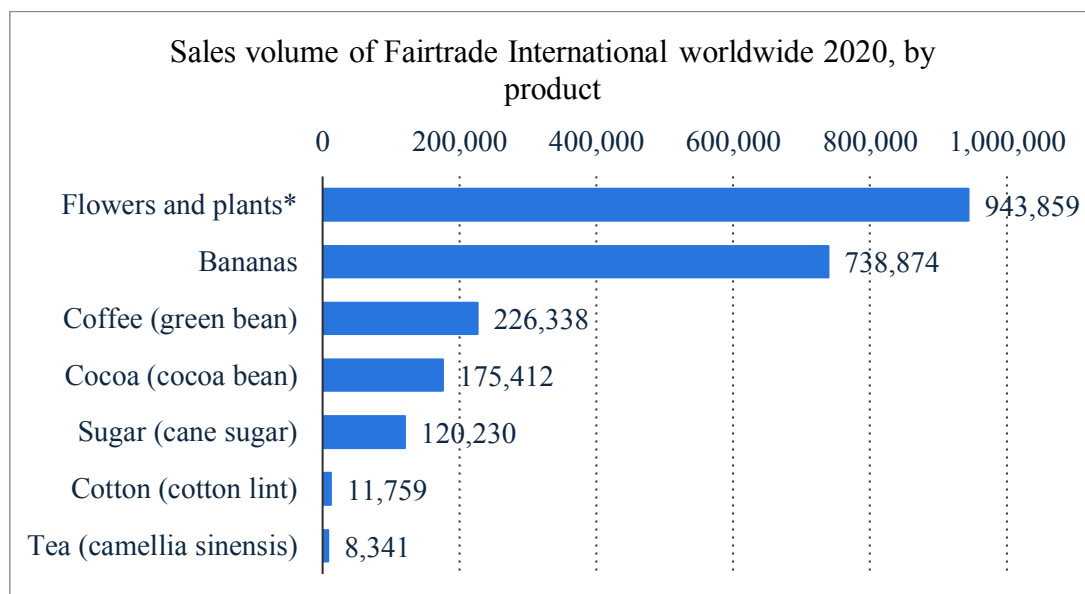


Figure 12.7: Sales volume of Fairtrade International worldwide 2020, by product, source Statista

As we saw in chapter 10, European consumers are buying more and more organic products, but sometimes they must compromise: in fact, many fairtrade products are not of organic origin. The European organic market reached a record level in 2020 with a value of 52 billion euros (45 billion in the EU). That's a 15% increase over 2019, the highest growth rate in the last

decade. Research conducted by NielsenIQ entitled "Conscious Eater"<sup>13</sup>, analyzes five European countries and their eating habits, to see how these affect the purchasing behavior of consumers. Over 37,000 families were involved in the survey in Italy, Great Britain, Spain, Germany, and France. As regards the issue of food sustainability, Italian consumers declare themselves less sensitive to issues related to sustainability and close the European ranking. In fact, only 11% of Italian families declare that they eat according to a specific diet as it is more sustainable and therefore with less impact on the environment. Italy is preceded by Spain with 14% and Great Britain with 17%. The countries most attentive to these issues, according to NielsenIQ, are France and Germany which respectively register 20% and 30% interest in sustainable eating to protect the planet. European families who opt for a diet in line with the rhythms of nature have a more mature age and prefer the consumption of fresh and seasonal foods, made with natural ingredients, without additives or GMOs, as well as organic, all characteristics seen as a quality assurance. According to the countries covered by the research, the percentage of green households are overall: in Germany and France 13%, in Spain 17%, in Italy and Great Britain 15%.

#### **12.1.4 Technological Factors**

One of the most important technological trends in all food and beverage industries is that of genetic engineering. With genetic engineering it is possible to modify products at the genetic level to improve their yield, taste, shelf life and more. Genetically modified coffee carries the "GMO" label to be recognized by the consumer. In general, genetic engineering should help grow the coffee industry, as it allows producers to generate greater profits. However, some consumers prefer not to consume genetically modified products due to several alleged side effects. Another important technological development are multipurpose coffee machines (in offices, universities), but also home coffee machines. These appliances make it easier to prepare coffee at home. This could result in more consumers making and drinking coffee at home, and consequently a decline in consumers drinking coffee away from home in bars and coffee chains, a trend encouraged by post-pandemic consumer behavior.

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<sup>13</sup> Survey conducted by NielsenIQ on 37,250 households in Italy (10-19 September 2021), Germany (18-19 May 2021), France (9-18 June 2021), Spain (15-24 October 2021) and Great Britain (14-27 October 2021), share of households in%.

### **12.1.5 Environmental Factors**

Numerous environmental problems such as pollution, climate change and deforestation are related to the food industry, for example due to the use of pesticides and fertilizers or the consumption of water. While the world is pushing for more sustainable farming practices, extreme drought and climate change are also expected to impact coffee production.

The main risks are for exporting countries, especially Ethiopia and Brazil, where the consequences of global warming have already begun to affect crops. In the Horn of Africa, the famous grain guarantees sustenance for 15 million people, 16 percent of the population. Should the planet's temperature rise by 4 ° C, the land suitable for the cultivation of Arabica coffee would decrease by 60 percent by the end of the century. (Kew Gardens, 2017)

In Brazil, the world's largest coffee producer, the situation is no better. In recent years, rainfall has been below average, and crops are suffering. Earlier this year, the government even announced a plan to import coffee from abroad. According to scientists, a 3 ° C global temperature rise would drop areas suitable for coffee growing in the country from 70-75 percent to 20-25 percent. It goes without saying that this would have a catastrophic impact on the entire economy of the country.

### **12.1.1 Legal Factors**

Coffee falls under food and beverage regulations in nearly all jurisdictions around the world because it is a consumer product, and therefore is subject to a wide range of laws on how it should be stored, transported, and produced. Furthermore, since it contains caffeine in large quantities, it must respect certain "maximum limits" in some parts of the world. In Europe, EFSA (European Food Safety Authority) has published a scientific opinion on the safety of caffeine. The opinion estimates the acute and daily intake quantities that do not give rise to problems in terms of safety for a healthy population in general. In fact, the institution establishes that single doses of caffeine up to 200 mg, about 3 mg per kilogram of body weight (mg / kg bw) from any source, are fine for a healthy adult. While single doses of 100 mg (about 1.4 mg / kg bw) of caffeine can affect the duration and quality of sleep in some adults, especially if consumed just before bedtime. Caffeine intake of up to 400 mg per day (approximately 5.7 mg / kg bw per day), consumed throughout the day, does not pose safety concerns for healthy adults in the general population, except for women in pregnancy. While, for the usual consumption of caffeine by children and adolescents, a safety level of 3 mg / kg per day is proposed.

## 12.2 Porter's Five forces

The five competitive forces model (also called Porter's five forces analysis) is a tool that companies can use to evaluate their competitive position. The model aims to identify the forces (and to study their intensity and importance) that operate in the economic environment and that, with their action, erode the long-term profitability of companies. In fact, these forces act continuously and, if not properly monitored and dealt with, lead to the loss of competitiveness. The analysis of these forces allows the company to obtain a complete picture of its competitive position, to make strategic decisions, to establish the behaviors and attitudes to adopt towards these forces. In Porter's framework, the ability of a company to obtain above-average results in the sector in which it is inserted therefore depends on its ability to position itself within the sector and on the effect of these 5 forces. (Wikipedia)

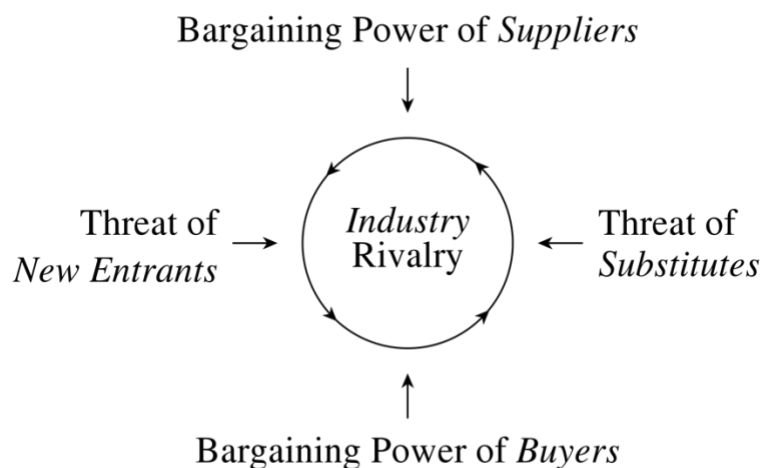


Figure 12.8

### 12.2.1 Industry Rivalry: High

Although the coffee market is expected to grow annually by 5.31% (CAGR 2022-2025), the sector is facing a strong rivalry, due to the presence of many competitors. Starbucks is the largest player with a turnover of USD 29.06 billion in 2021. Next, we find JDE a 2021 turnover of around USD 7 billion and then Lavazza, Nestlé, Costa Coffee, McCafé and others that we have analyzed in the previous chapters. All these companies are recognized not only in Europe but globally and this places a high level of competition between them.

It is important to note that these are international companies, but local chains within each country are also part of a competition which obviously intensifies competition in the coffee



industry. The rivalry in the coffee industry sector has grown with the advent of specialty coffees. While we used to find Starbucks against big international competitors, now we compete with companies of various sizes and different specialty coffees, many are small-scale specialty cafes, mostly concentrated in different regions of Europe. In addition to these small-scale specialty coffee companies, the big players in the industry now also must compete with two of the largest companies in the fast-food industry that have recently entered the specialty coffee segment. The first of these competitors is Dunkin Donuts, which is one of the largest chains of coffee shops and donut and donut shops in the world and in recent years the franchise has placed a huge emphasis on their coffee drinks. Currently, Dunkin Donuts operates approximately 5,500 franchises in the United States, 80 stores in Canada and 1,850 in the rest of the world. In Europe, however, we find points of sale in Spain, Switzerland, the Netherlands, Germany, Austria. In Italy they opened some shops in Rome in 1999, but they were a failure: in 2002 they closed permanently. The second biggest rival in the industry currently facing Starbucks is the McDonald's fast food restaurant chain, as seen in previous chapters. The key to McDonald's success has been the consistent quality standards achieved for the food, along with fast service and low prices. Ten years ago, Starbucks and McDonald's were at opposite ends of the spectrum in the restaurant business, but while McDonald's has encouraged the testing of numerous new drinks under the McCafé brand, Starbucks has begun to add numerous sandwiches to its menus. These strategies have brought the two competing giants to get closer.

Summing up, the current impact of the industry's rivalry strength is very high, due to the varied competition between coffee shops, roasters, and specialty coffees across Europe. The growth of the sector slows down, while the number of competitors within the sector has increased.

### **12.2.2 Threats of new Entrants: Low-Medium**

To enter the market, potential new entrants will need to rent a location, obtain a license, purchase the necessary and suitable equipment to open a coffee shop. While it is not difficult to open one, the expansion of the small café is relatively moderate due to the expansion of the main coffee chains. Indeed, the main deterrents to entry into the specialty coffee industry are the various barriers to entry. Economies of scale within the coffee industry have increased as the size of major players has grown. Larger companies enjoy excellent national distribution channels, through which they can transport their coffees at a relatively low cost compared to potential new entrants who do not have such developed distribution systems. These larger companies are also able to save on their accounting operations and marketing budgets, but also

save on their purchases by negotiating long-term contracts with coffee farmers and purchasing coffee beans in large quantities at discounted prices.

The cost disadvantages to which new entrants are subjected are different: certainly, a difficulty in accessing the distribution channels but also in supplying, in fact most of these have already been taken by current competitors in the industry. In addition, many companies now have proprietary technology designed for their products, as well as lower unit costs thanks to economies of learning.

Product differentiation within the coffee industry is no longer based on convenience and pricing, but on the store atmosphere, corporate social responsibility, and brand identification. Large companies already in the market have a very strong loyal customer base, which makes it difficult to create one for new entrants. From the above, entry barriers have increased and consequently the potential threat from new entrants has decreased. Although a large capital requirement is not required to open coffee shops, their expansion is unlikely in a market of this type.

#### **12.2.3 Threats of substitute Products: Medium-High**

Major caffeine-containing substitutes still pose a threat to the coffee industry. These are caffeinated soft drinks and Coca-Cola, although carbonated soft drinks are decreasing their "strength" mainly due to the health problems associated with these drinks. Tea, hot chocolate, and energy drinks are also considered worthy substitutes for coffee by consumers. In addition to these coffee substitutes, as seen in previous chapters, customers are increasingly choosing to make their own coffee at home rather than buying it in a shop. And since these substitutes do the same job as store-bought coffee and need the same brewing machines, customers won't incur in switching costs.

#### **12.2.4 Bargaining power of Supplier: Low**

The bargaining power of suppliers is relatively low. This is largely since inputs to industry are standard rather than differentiated. This allows companies to easily switch between suppliers. Currently, many of the farmers who sell to coffee chains are united by the certified and fair-trade coffee initiatives. These initiatives have increased their ability to exert bargaining power

over their buyers, as fair-trade coffee certification is highly considered by consumers when deciding where to buy their coffee. Therefore, although farmers are still numerous and small, they are now connected and act in some respects as a large entity.

despite this, very often large roasters buy coffee through long-term contracts to reduce the impact of price volatility. These contracts contain clauses that place a financial burden on coffee suppliers if they choose to supply a different company. With these clauses for coffee suppliers, their bargaining power is reduced.

#### **12.2.5 Bargaining power of Buyers: Medium**

The main buyers in the coffee industry remain individual consumers. There is a relatively low level of threat from buyers' bargaining power. This is since there are many buyers who do not individually purchase large volumes relative to a company's total sales. However, customers do not face significant exchange costs when moving from one café to another, and this gives them some power, enhanced by the fact that coffee drinkers could make the product at home instead of buying it.

The buyer is in a better position to pay a favorable price and a suitable level of quality from the product. The bargaining power that can be exercised by buyers within the coffee industry has increased thanks to the availability of information on market variables. This, along with the other changes discussed above, has increased its overall bargaining power from where it was in the late 1980s.

## **13. Market opportunity and future trends**

Coffee with its 3 billion cups a day is one of the most popular drinks on the planet, which generates an annual turnover estimated by I.C.O in global terms around \$ 200 billion (2020). The world demand for coffee in year 2021/2022 has been estimated at around 167 million bags. Over the past 50 years, the average annual growth rate has been 1.9%, which has risen to 2.2% in the last two decades. This means that from the 1960s to today, the size of the market has increased by 190% (from 57.9 to 166.5 million bags in 2020). Over the past 30 years, most of this growth has been generated in producing countries and emerging countries and this aspect can play an important role in the future evolution of the coffee market, as we will see in the next paragraph.

During the last decade the coffee sector has been at the center of a series of M&A deals: it is estimated that around 60 billion dollars have been invested since 2012, the year in which JAB holding started its aggressive approach to acquire some of the main players in the sector, through the acquisition of Peet's Coffee for 974 million dollars. This event kicked off a new phase of consolidation in the coffee sector which was also attended by the other main players such as Nestlé (with the acquisition of Blue Bottle and the Starbucks retail product agreement), Lavazza (Carte Noire, Merrild, Mars Drinks, Kicking Horse Coffee, Blue Pod Coffee), and Coca Cola (Costa Coffee). This huge cash flow invested in the sector suggests that there are many future growth prospects.

### **13.1 Market drivers**

#### **13.1.1 Demography**

One of the main market drivers is demographics, in particular population growth. In fact, the more the population grows, the more coffee will be consumed. In the period 1995-2020 the world population has grown from 5.7 billion to 7.8 billion people and the United Nations predicts that it will reach 9.73 billion in 2050. This means a further increase of 1.94 billion people. The growth will mainly concern the less developed countries, with low consumption of coffee, since in the already consuming countries, that is the western developed countries, the growth was just 104 million (+ 8.9%) and according to projections by 2050 it will only increase of 6.6 million (equal to 0.34% of the total increase).

From these data it is assumed that demographics are not a relevant factor for the growth in demand, but more important from this point of view is the variation in the demand for coffee in relation to age. In fact, children do not drink coffee, so demand is closely related to the population over the age of 14.

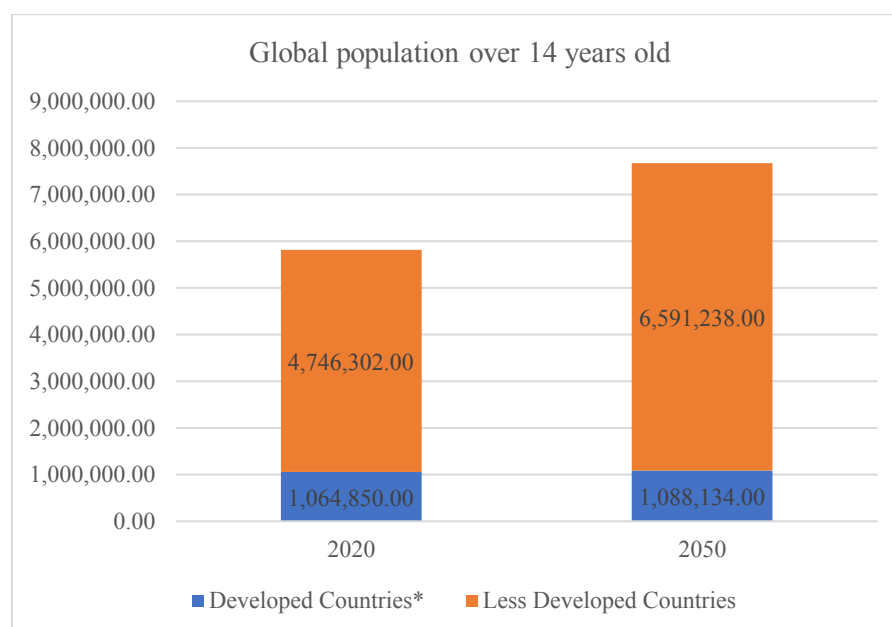


Figure 13.1: Global population over 14 years, source: United Nation Department of Economic and Social Affairs, 2019.

\*Developed Countries comprise Europe, North America, Australia, New Zealand and Japan.

Since 1950, the percentage of the population over the age of 14 has increased in both developed and least developed countries and this trend will continue well into the future, and this dynamic will inevitably shape future demand for coffee. According to estimates in 2050, of the 1.94 billion more people, 1.87 billion will be over 14, respectively 23 million refer to developed regions, while 1.85 billion will come from least developed countries.

However, looking at the growth rates, there is no pure parallelism: in fact, in the last 20 years the world population has grown at a rate of 1.2% per year, while the global consumption of coffee has grown by 2.2% per year.<sup>14</sup> This highlights how the demand for coffee does not depend only on demographics but is also strongly influenced by other factors.

<sup>14</sup> According to International Trade Center (ITC 2021)

### 13.1.2 Income

As previously mentioned in Chapter 12, economic development, and in particular the increase in per capita income, involves the growth of income available for consumption, therefore more resources to purchase more goods and services (including coffee).

According to a study conducted by Luciana Florencio (2020) in the period 1990-2017, the global nominal GDP per capita went from USD 4,738 to USD 10,751 (corresponding to an increase of 126.9%), while the annual consumption of coffee per capita per capita went from 0.897 kg in 1990 to 1.069 kg in 2016 (+ 19.2%).

### 13.1.3 Culture

In some cases, population growth and rising per capita income have not automatically translated into increased demand for coffee: there are often cultural reasons behind this phenomenon.

Similarly, low demand for coffee is linked to cultural factors: in countries such as Turkey, Russia, the United Kingdom, or Ireland, known as "tea consumers", coffee was not part of their cultural heritage. neither population growth nor economic development have caused the demand for coffee to increase. The impact of these countries is significant, as they constitute a large chunk of the world's population. It is also true, however, that from 1996 onwards, it is precisely in these countries that there has been a strong growth in the consumption of coffee, contrary to what happened instead in the countries that already consumed it. The growth margin is still high as in most of them the coffee penetration is still relatively low. An example is Japan, which has never been a consumer of coffee, but since 1950 the drink has caught on and now with its 8 million bags is one of the largest importers of green coffee in the world.

To explain the change of course of consumers in recent decades, let us take up two concepts expressed in chapter 6.

The "second wave" introduced new coffee-based drinks, such as *mocaccino* or *cappuccino*, which are sweeter and more palatable than pure coffee and therefore easier to drink by new segments of unaccustomed consumers drinking coffee.

And as a result, the atmosphere of the place where these drinks were served also gains in importance: the modern cafes introduced by Starbucks represent a new space for spending time in social activities that bridges the gap between home and office ("Third place").

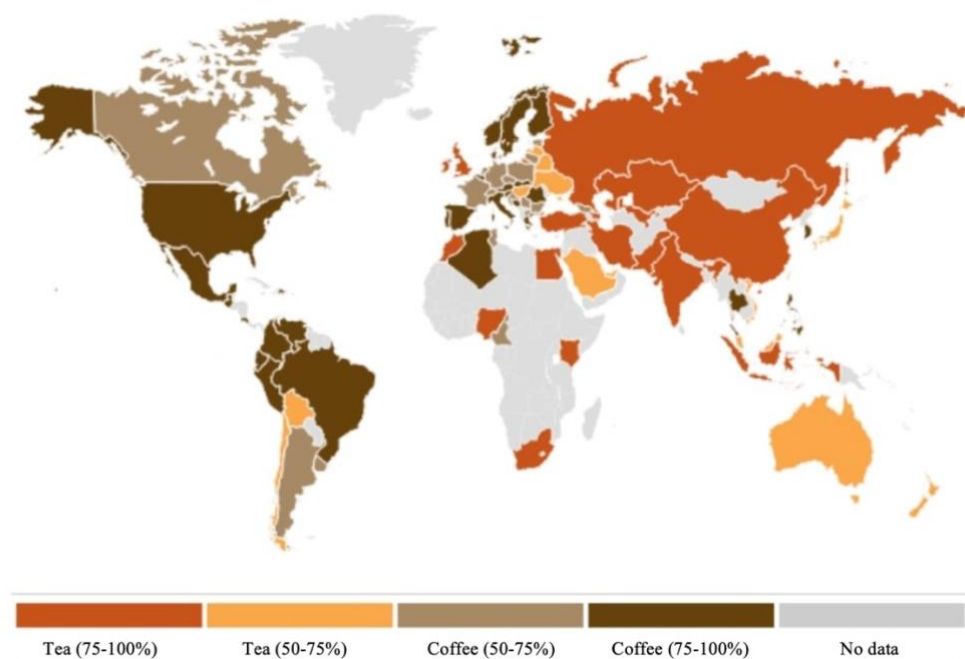


Figure 13.2: Consumption of tea or coffee in percentage, by Country, source: Euromonitor via Comunicaffè

The lifestyle associated with coffee shops meant that the cultural barrier that had limited their consumption for centuries fell.

Thanks to these two factors, coffee has begun to become popular even in some low-income per capita countries, such as China, Vietnam, Indonesia, Malaysia, Thailand, and Russia, especially through a new segment of the population called the "new rich", which they want to show their new social status. In fact, in many cases, drinking a cup of cappuccino or coffee in a modern coffee shop is considered a sign of distinction and social prestige.

## 13.2 Market opportunity

As can be seen from the graph comparing 1990 and 2016, the consumption of coffee in traditional markets (which include the United States, Canada, Western Europe and Japan) has dropped from 72% to 51%, leaving more and more space for countries producers and emerging markets. In fact, the average annual growth in coffee consumption in the 2000-2019 period was 1.8%, and is estimated at around 1% for the future, given that these are mature markets. It is different for developing countries, whose per capita consumption is still very low at 0.51 kg. The average annual growth rate (CAGR) recorded by these countries in the period 2000-2019

was 3.7%; This highlights their potential important influence on the global coffee market in the coming years.

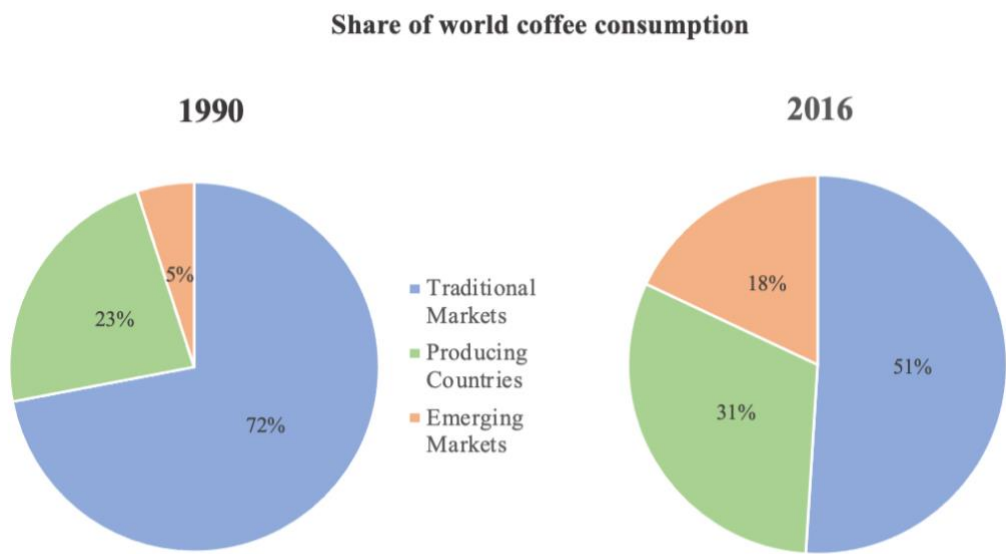


Figure 13.3: Share of world coffee consumption, source ICO

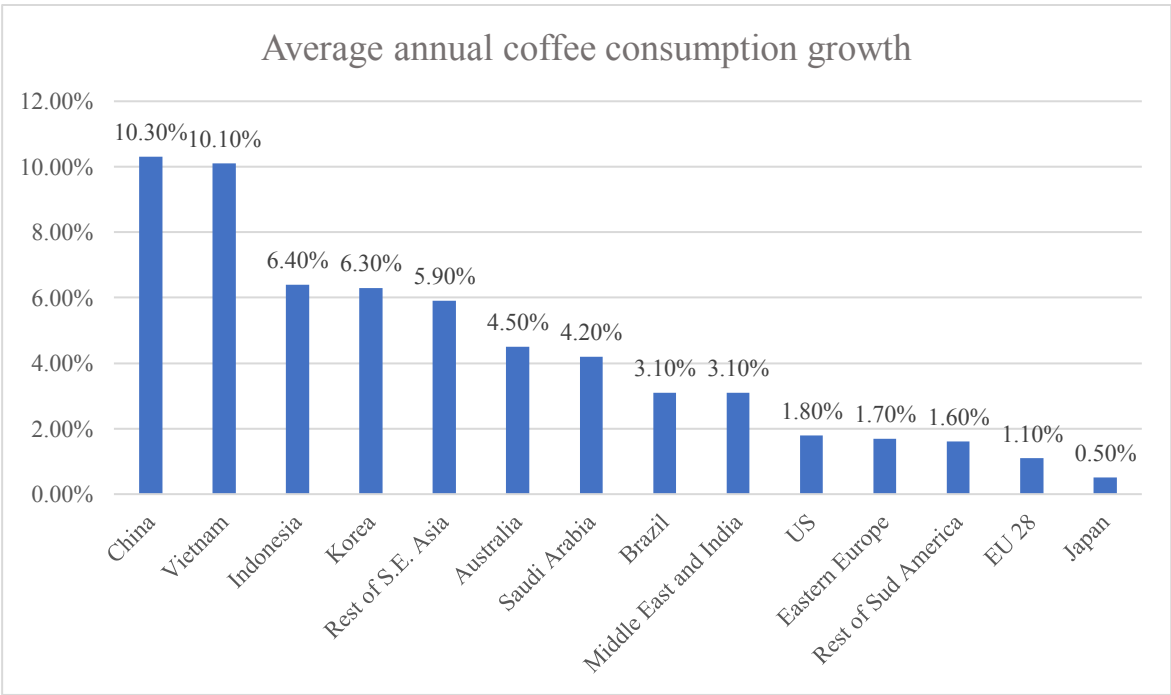


Figure 13.4: Average annual coffee consumption growth, 2005-2019, source: ITC (2021)



In the period from 2005 to 2019, the greatest growth was recorded in China, Vietnam, Indonesia, and the Republic of Korea. In Southeast Asia, coffee consumption in the period between 1992 and 2017 grew at an average rate of 6%, more than three times that of the rest of the world (Ico 2018). Coffee consumption is also very high in the Middle East, where Saudi Arabian coffee imports in the period 2008-2019 increased by 42.8%, by 193% in Turkey and even by 249% in the United Arab Emirates. (ICO, 2019) In these countries the high spending power together with the low alcohol consumption provide the ideal conditions for the rapid development of the coffee market. The growth opportunities for the coffee market are not limited only to volumes, because they can also come in terms of value. Looking at the dynamics of coffee exports in all its forms (which includes green coffee, roasted coffee, and soluble coffee), from 1991 to 2018 we observe a quadrupling of the value, from 8.4 billion dollars in 1991 to 35.6 billions of dollars in 2018. The reasons for this strong increase are mainly linked to the phenomenon of coffee shops described previously, but also to the surge in sales in the capsule market. In particular, the unit value of roasted coffee increased by 1.45 times, while in the case of green coffee it increased by 1.15 times (International Trade center, 2020). This growth in value denotes a greater willingness to pay by consumers, who are willing to pay a higher price for a higher perceived value, which can come from a better quality of the coffee, or from a better service (as in the case of the single-portion system), or from a higher experience in the coffee shop.

This value-driven trend is also called "premiumization", and is destined to last over time, as consumers are becoming more and more competent and therefore more demanding in terms of coffee quality. Furthermore, economic development and per capita income growth in many countries will mean an improvement in the quality of life, for which the cup of coffee will become affordable. Even in countries with low coffee consumption, the majority consume soluble coffee, which represents the first stage of a path towards an increasingly evolved consumption. As the knowledge of coffee, and perhaps also the spending power, increases, consumers tend to prefer more advanced ways of consumption with higher quality and value. As for the producing countries, on the other hand, many such as Colombia, Costa Rica, Mexico and India, are trying to push their internal consumption in such a way as to reduce their dependence on external buyers, trying to keep a greater value and thus being able to better support local producers, to try to improve their living conditions.

Traditional markets, as mentioned above, have reached maturity and the prospects for further growth are limited. But globally it is expected that nearly half of the market value growth will be generated in Western countries, following the shift in consumption towards more expensive

products. Specialty coffee represents only a small slice of the total market volume, around 8% (ITC, 2020). Despite this, it is estimated that this sector has the greatest potential for future growth thanks to the progressive change in consumer habits. A further sign of this trend is represented by the huge investments made by some of the main roasting players to acquire companies, knowledge, and know-how on the specialty market and which will therefore contribute to expanding it. This trend has stimulated the demand for better coffee quality even in the traditional market. This will determine in the long term a decrease in the differentiation in qualitative terms between the standard and specialty markets. This phenomenon is given the name of "*the fourth wave*", that is the development of a new market segment that is able to combine premium quality with increasingly accessible prices, to satisfy the most advanced consumers. To conclude, the global coffee market appears to be heading towards a prosperous future with demand that will continue to grow, and which may reach 300 million bags by 2050 (Coffee Barometer 2018).

### **13.2.1 Competition and expansion strategies**

Espresso coffee has played a central role in the evolution of the coffee industry, opening new countries to its consumption, and, in traditional countries, attracting new consumer segments. Espresso represents the symbol of the status of a modern, cosmopolitan, and evolved consumer. Over the years, the way coffee is consumed has undergone an evolution in almost all countries of the world. This change derives from the effect of technological evolution which has demolished some barriers and of globalization which has brought about a wide range of cultural contamination between populations characterized by different habits and traditions.

Espresso coffee drinks have managed to conquer not only the North European market, but also the American and Australian ones, but are also rapidly spreading in emerging Asian economies, such as India and China. Surely the passage of a type of coffee from one group of consumers to another is based on the adaptability of the drink itself. On the other hand, the creation of new sales formats and new methods of preparation met the needs of new consumers who were not satisfied by the already existing consumer cultures.

**Lavazza** is present in more than 90 countries through subsidiaries and distributors, was the first Italian company to work on espresso capsule systems. Furthermore, together with Illy, it was the first Italian roasting company to undertake the export business in foreign markets. Lavazza undertook a strategy of penetration abroad, putting into practice a process of gradual

internationalization towards the markets closest to its country of origin on the cultural, economic and type of coffee consumed side: the company therefore invested from France (with the acquisition of Carte Noire), the first country where Lavazza decided to enter by planning an initial strategy of indirect export and where the Group is still the second largest coffee group, to also reach Germany and Austria.

Companies such as Lavazza, market leader in domestic consumption, have been committed since the 1970s to exporting the authentic image of "Italian coffee", not only by marketing products abroad, but also by bringing espresso in offices around the world. Italy is the home of espresso, but 80% of the coffee consumed in the world every year is soluble, for a total of 1.3 billion tons of product. So to follow the consumption trend, also aimed at an expansion policy, in 2016 Lavazza launched *Prontissimo!*, the first instant coffee in its history, the innovative result of continuous investments in research and development of new products. Lavazza CEO Antonio Baravalle says instant coffee is it is the key to bringing the product to markets, such as the Asian one, which are traditionally linked to tea. The joint venture between Lavazza and Yum China Holdings has the aim to open new stores in China, for an amount of 1000 stores by 2025 with a deposit of 200 million USD. The very first Chinese Lavazza flagship store opened in Shanghai in April 2020. Other stores opened in Hangzhou, Guangzhou and Beijing. (Hafactory.com, 2021)

The company has also recently developed a Beans segment which is the most dynamic on the market and in which Lavazza records a sell out that grows at double the market average (+ 16.9% Lavazza vs + 8.5% market). In the Single Serve segment, which is becoming increasingly competitive, the Group continues its plan to launch aluminum capsules with zero CO2 impact.

**Nestlé** owns two brands in the capsule coffee machine sector: Nespresso and Nescafé.

Apparently, they compete with each other, but there are differences in the range of users and consumption. The popularity of espresso has been the basis of **Nespresso's** success and the disposable system. Once people started drinking espresso in coffee shops and developed a strong taste for coffee, they tried to bring it into their home and office use. In fact, Nespresso was created in 1986, based on the first capsule system patented by Nestlé in 1976, but it only became popular at the beginning of the new millennium, after the second and third waves. Before that, most markets were not ready to accept his product.

The success of the corporate strategy is linked to market actions that aim to improve financial performance, to strengthen the competitive position in the long term and to gain an economic

advantage over competitors, especially creating value for the customer. It is a strategy that has proven to be able to overcome the stagnation of a saturated market such as that of coffee, giving rise to new business opportunities and giving new life to the product. In this way, a first-rate customer experience is created. A key point that characterizes the success of Nespresso's business model is internationalization, thanks to which the group differs from market to market; this is due to the presence and diffusion of the brand all over the world. The brand is aimed at a high-hand target, that is, a group of consumers who have no problems paying a little more to be able to choose a higher quality product than what is offered by competitors. On the other hand, Nespresso capsules were immediately launched on the market as a real luxury item. If Nespresso is more suitable for lovers of pure coffee, offering a great variety of capsules for any palate, from simple to the most refined, **Nescafé** has a selection of capsules that ranges in a wider variety of drinks. Normal, long, or decaffeinated espresso coffee, American coffee, cappuccino, latte macchiato, as well as a good variety of teas and herbal teas, both hot and cold. Furthermore, the Dolce Gusto machines are designed to also accommodate tall and larger cups than a normal coffee cup, perfect for consumers who want a long coffee. It is precisely under the Nescafé brand that Nestlé has its own soluble products: an obvious choice given the type of customers Nespresso is aimed at, who instead love pure and restricted coffee.

This differentiation is precisely given by the fact of wanting to reach a wider network of consumers, satisfying them all. The first patented technology concerns the "cold brew". In fact, Nestlé has the patent for this cold extraction method: the coffee is crossed by the water one drop at a time with a slow percolation to have a perfect tasting. (Nestlé)

These cold brews are mainly used to penetrate Asian markets, particularly China and Japan. Nescafé Cold Brew is, in fact, the first coffee blend sold in these countries.

**Illy** is the most popular coffee brand globally, known for producing a single 100% Arabic blend. To produce the company's brand capsules, it has entered a partnership with Jacobs Douwe Egberts, the second most important coffee group in the world controlled by JB Holding. In this way, competition with Nestlé and Starbucks for domination of the world market has intensified. As far as the target markets of the product are concerned, it is important to highlight that since the end of the 1950s (thanks to the pressurization technique) Illy was active in various foreign European countries.

From the 1990s, the company's sales network began to develop through the establishment of branches in the main countries, which include France, Germany, the United States, Spain, Benelux, Canada, and Portugal. Illy's orientation towards foreign markets followed the same

path taken by the Italian market, divided into affirmation of the brand in the Ho.Re.Ca. and entering the GDO with an already known brand, focusing on positioning in the high-end market and relying on a significant differentiation of the product and services offered from a qualitative, sensorial, and ethical point of view. The main company objectives are therefore summarized in 2 fundamental guidelines: stimulate global expansion and develop retail by omnichannel, focusing on the enhancement and development of companies whose main value is the pursuit of perfection. The heart of the Illy business is espresso. The competitive strategy of the group is characterized by the qualitative excellence of the product and the constant inclination towards the international market (in particular, the focus is currently on the Asian market and an opening towards the English market). In Shanghai, Illycaffè proposes the Italian lifestyle, and plays an important role in increasing the perception of Made in Italy.

## Conclusions

The world coffee supply chain is very broad and articulated and contains within it various variables that influence its economic performance. Strategic competition is strongly linked to the different consumption patterns, both in the retail sector and in coffee shops sector. It must be taken into consideration that the major competitors analyzed come out of a post-pandemic situation, therefore their margins have been affected. In any case, based on the data collected, it seems evident that in markets where there is a higher attention to organic and sustainability such as in Germany and Scandinavian countries, and therefore where consumers are willing to pay more, there are higher margins and higher profit. The situation in Italy is different, where the willingness to pay remains high because of the consumer who is looking for product quality, but the profitability of even a large roaster like Lavazza is slightly reduced compared to the sector average due to a strong competition.

Currently, Europe is one of the most important markets for the processing and consumption of coffee, but the goal for the future of the market is to aim to expand into emerging markets, such as the Asian or American market. Made in Italy and the famous *espresso* remains a guarantee on the quality and value side, but in a highly competitive market it is important to invest to achieve a competitive advantage, also based on product differentiation, to meet a specific demand in various countries. As we have seen in the European case, the segmentation of the type of consumption inevitably leads to a segmentation of the type of coffee.

From an economic point of view, Starbucks is the undisputed leader for out-of-home consumption, while among the most important roasters we certainly find Nestlé and JDE, which stand out on a European scale, but also from a worldwide point of view. These major roasters that have been described have to compete with both the medium and small businesses on the territory and with the larger fast-food chains that are trying to enter the market by expanding their cafeteria menu.

The trends described as the globalization of espresso, or the specialty coffee segment are the ones those European big players will follow, trying to increase the growth of profit in the domestic market, but also for expansion policies abroad.

The segment of the single-portion system, with the sale of pods and capsules intended for coffee machines for domestic use, represents and will continue to represent an increasingly large slice of the modern market, occupying a significant share of it; this segment was substantially conditioned by the advent of e-commerce, a fundamental lever in the sale and purchase of pods

and capsules and now a reference point for the coffee market, while the coffee bean segment will continue to expand, even if remaining a niche market. The change in the business model put into practice by leading companies in the European market and the transformation of consumer needs have proved to be factors of primary importance for the birth of the so-called "fourth wave" of coffee, in which greater quantities and quality are attributed. This new wave provides added value to the product and is identified with the slogan "Better and more".

Unfortunately, despite the prospects for growth, a series of environmental, social, and economic factors are putting the future of the coffee sector at risk. First, climate change: with the increase in temperatures, irregular rainfall, and the frequency of extreme weather events, guaranteeing production to meet the growing demand will be increasingly difficult. The areas currently dedicated to cultivation will be unsuitable and other areas will have to be found: it is estimated that 60% of the land that will be dedicated to coffee production by 2050 is currently wooded, and obviously the loss of about 15 million hectares of tropical forest will entail a negative impact in terms of carbon dioxide production, which will fuel further environmental problems. Another major problem concerns smallholder farmers who are also the most vulnerable part of the coffee supply chain. Low prices, excessive volatility and low yields due to the consequences of climate change not only impact the income of 125 million farmers, which in many cases falls below the subsistence level (which according to the World Bank corresponds to a per capita daily income of 1.9 USD), but they also prevent farmers from investing in their farms to make them more productive and modern and, at the same time, reduce the interest of the younger generations to engage in coffee cultivation, which is causing a shortage of manpower, which is bound to worsen in the coming years.

While the main roasters try to adopt sustainable policies, investing more and more in the implementation of green processes with a lower environmental impact, whose goal is to achieve zero carbon dioxide emissions along all the processes of the supply chain and focusing on packaging recyclable and waste reduction, initiatives to support the condition of farmers seems to be negligible. In fact, it is estimated that for an annual value of 200 billion dollars, only 350 million dollars is the total investment intended in actions for social and environmental sustainability.

To have the opportunity to access the prosperous future that is estimated, the coffee market industries must review their business model, focusing and investing heavily on environmental and social sustainability, offering a transparent relationship that allows to trace the product sold and that guarantees the expert and evolved consumer an ever higher quality.

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