



UNIVERSITY OF AZUAY

FACULTY OF LEGAL SCIENCES

**"STUDY OF FEASIBILITY FOR THE INTERNATIONALIZATION OF
ECUADORIAN ORGANIC COFFEE TO THE GERMAN MARKET THROUGH
A PRODUCTION AND MARKETING COMPANY".**

**GRADUATION WORK PRIOR TO OBTAINING A BACHELOR'S DEGREE IN
INTERNATIONAL STUDIES WITH A MINOR IN FOREIGN TRADE**

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Dedication

I dedicate this work to my parents and husband, without them I would not have been able to perform the necessary tasks for the conclusion of the present investigation. In the same way, I thank them for all the support provided throughout this time of study that allowed me to finish my career.

To my tutor, classmates and friends in life, for pleasantly being a support during my academic studies.

Claudia Mosquera

Dedication

I dedicate this work to my parents, for they have always been present in the best of times, as well as the worst, furthermore, they have provided me with the possibility to educate and develop myself as a good person with human values and adequate ethics.

In the same manner, I dedicate this work to my sister, tutor, friends and all of those who were part of this process.

Alex Villa

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Abstract

The objective of this research work is to determine the feasibility for the internationalization of Ecuadorian organic coffee in the German market through the implementation of a production and marketing company called NATCAFE, which will be located in the province of Loja, and will be financed through credit programs for small and medium enterprises or bank loans. By this way, we proceeded to determine the supply of organic coffee which the country has and the demand by the European country, considering the circumstances that determine these factors, such as: political, economic, social and technological. Thanks to this diagnosis and through the projection of the unsatisfied demand, the German market is determined as an optimum one for the export of coffee, complying with the regulations imposed by the European Union; in addition, the tariff regulations and those explicit by means of agreements and treaties are beneficial for the present project.

Introduction

The purpose of the research is to analyze the feasibility for the internationalization of Ecuadorian Organic Coffee (CO) in the German market, through an industry dedicated to processing and marketing. It must be emphasized that there has been a growing demand for production around the world based on social and personal habits, accompanied by criteria related to health and ecological production free of pesticides. There is a tendency on behalf of consumers to acquire products of organic character, especially in the German market, which is oriented toward the consumption of products whose production process is not harmful to the environment and is beneficial to health.

In Ecuador, a large proportion of the OC production units, identified as high-altitude coffee, belong to the southern region of Ecuador, particularly to the province of Loja. This production has advanced in the Ecuadorian market and shows excellent quality conditions in its products. As a result, the initiative to expand the prospects of international marketing is developed. However, there are deficiencies regarding marketing and exportation by producers since the country still needs to raise its production level, which allows it to meet commercial requirements; such as, the quantity and quality of the product, which is met in a variable way. In addition, problems such as lack of information and knowledge about the target market, high transport costs for exportation, and tariff and non-tariff barriers for internationalization are issues that represent obstacles when positioning a product abroad. The present study analyzes these factors and how they influence the coffee export processes.

The need to position the product in Germany is due to the fact that, in economy, the demand for products of natural origin exceeds national production. In the last three decades, an increase in the demand for food from naturally processed products has been seen, increasing by 36% in 2016 compared to 2012. This presents a situation for companies whose economic activity focuses on these items, wishing to innovate and venture into the export of organic coffee (FAO - Food and Agriculture Organization of the United Nations, 2016). According to PROECUADOR (2011), the average acquisition of coffee per year in Germany is 149.56 liters, a value located above the consumption of beer or mineral water, which are considered traditional and high demand in Germany.

Previous studies, have determined that the logistics and the circumstances in which the export process is developed, constitute the fundamental axis of the guarantees required by exporters (Duarte & de Souza, 2016). German ports have an updated adequate infrastructure, and a system that allows the use of optimal times in the logistics management of the cargo (Sujeta & Navickas, 2014).

Accordingly, it is necessary for Ecuadorian producers who intend to introduce their products into the German economy to analyze and consider the conditions within the business plan or in the feasibility studies.

The study was structured in three chapters. In the first chapter, the theoretical reference of coffee elaborated in a natural way and its productive process is addressed; in the second, a macro and microeconomic market analysis was carried out. Finally, in the third, after an economic and financial study, the feasibility of internationalization of the organic product elaborated by the Ecuadorian company NATCAFE is determined, which aims at the German market.

Chapter 1: Organic coffee and its production process

1.1 Background

Coffee is a product that has been related with the international market for long periods of time. It is speculated that its consumption originated in the European continent during the seventeenth century, which was popularized later in the eighteenth and nineteenth centuries. Gradually, the primary production of this product was instituting in the countries of America that were going through a historical moment of colonial regime while industrialization and a great part of its commercialization focused on the great world powers and developed countries (Palomares, Gonzales, & Mireles, 2012).

The progressive increase of the demand for organic products in the market arises as a consequence of the presence of environmental movements that promote the acquisition of natural foods, which promote good health in humans (Higuchi, 2015). The production of coffee and its commercialization represents a preponderant element for the Ecuadorian economy, since its export generates a very important contribution in the income of foreign currency coming from the international market (PRO ECUADOR, 2013). Thus, coffee is considered one of the most important elements for international export, due to the high demand of people for daily consumption. In concurrence, the commercialization of coffee generates income for the producing families and the other actors that participate in the production processes of this grain (Arguello, León, Díaz, Verdugo, & Caceres, 2017).

In Ecuador, there is a large productive capacity because its excellent geographical location with a wide variety of ecosystems, allowing coffee plantations to be located in several areas, including the Galapagos Islands. The country is considered one of the few in the world that exports all varieties of coffee that have been registered, among which you can find: Arabica coffee, natural and Robusta. The coffee produced in Ecuador is considered by a majority of the world as the best in South America and other regions in the world dedicated to the production of this input (PRO ECUADOR, 2012).

The production processes of Arabica coffee, considered the highest quality in Ecuador, are mostly carried out in the provinces of Manabí, Loja and in some places of the Andes, while the Robusta is produced and grown in the Amazon, mainly in Sucumbíos and Orellana (PRO ECUADOR, 2013).

1.2 Organic coffee

Organic coffee (OC) is the input related to the production processes are carried out through organic and certified practices; The main difference is the standards that require the absence of chemical components in all phases of the process, whether it be in production or commercialization, it must be fulfilled in an effective and rigorous manner, that is, from the beginning of the productive chain until the final destination (Polo, 2013).

As mentioned above, coffee is a key element in terms of Ecuadorian exports, and in the same way, for the world economy. In addition, this product is listed on the New York Stock Exchange in the US; and in London. Ecuador produces mainly two coffee diversities: the Arabica and the Robusta (PRO ECUADOR, 2012).

1.2.1 Arabica coffee

This variety of coffee is seasonal and requires between 180 and 200 days of constant rain to achieve optimal development, however, this variety can tolerate climatic conditions such as droughts. Production decreases in large proportions with the decline in rainfall. This variety requires a dry period of 3 months; in spite of this, it has an extensive adaptation to the different ecosystems that appear in the different geographies that Ecuador provides. Its cultivation can be carried out in the highest parts of the mountain range, as well as at sea level. The Arabica variety presents sub classifications that are cultivated in the region, which include: typical, bourbon, pacas, catuaí, catimor and sarchimor (PRO ECUADOR, 2013).

1.2.2 Robusta coffee

This variety, unlike the previous one, requires a tropical environment with high rainfall, meaning in the northern region of the Amazon robust coffee is traditionally grown. This type of coffee is native to the western region of Africa, being cultivated in flat, warm and humid lands, from sea level up to altitudes reaching 1,000 meters in height. This variety is more resistant than the Arabica, for that reason, it is called "Robusta." Due to its endurance in more severe climatic conditions, it requires temperatures higher than 24 ° Celsius. Production can be carried out in low, warm and humid lands (PRO ECUADOR, 2013).

1.3 Importance of consuming Organic Coffee

The importance of the acquisition of products made thanks to organic processes lies mainly in guaranteeing consumers quality food, free of synthetic agrochemicals, and are produced under agricultural systems that do not cause negative consequences in nature (Higuchi, 2015).

The benefits are focused on stimulating the nervous system, facilitating coordination and improving mood changes. This produces a high level of confidence in the consumer, since it ensures the administration of a healthy input, free of chemicals, pesticides and herbicides (Navas, 2012).

1.4 Organic Production

The principal objective of organic production is to manufacture supplies that do not cause harm to health, that are free of toxins, and are not harmful to nature; suppressing all elements and processes that attempt against this principle. In this way, the processes do not use chemicals, on the contrary, natural fertilizers are used. This makes it necessary to implement appropriate crop management practices consistent with the vision of natural production, in order to produce organically certified inputs (Polo, 2013).

1.4.1 Process of preparing organic coffee

The product must be prepared under processes that have a friendly perspective on the environment, conducive to human health and seek sustainable economic practice of those who are embroiled in production practices (Suca, Suca, & Siche, 2014). Generally, organic coffee is cultivated by groups of families, through domestic procedures, where the space occupied for coffee cultivation is also used for other crops such as fruit trees, bananas or plantains (Higuchi, 2015).

The establishment of a coffee plantation requires worthy quality seeds. There are different ways of obtaining seeds, one of which includes acquiring a certified species through conventional coffee plantations, either by importing it from Brazil, as MAGAP did for the project to reactivate Ecuadorian coffee. You can also acquire it in the country through the Agricultural College of Quinindé where there is a coffee germinated on a large scale. Another option is extracting it from coffee plantations whose production is carried out organically. After having obtained the seed, it will be sown on the ground. The first step is the elimination of coffee plants that have already completed their cycle, as well as the extraction of those that are sick. This is done to expose the hole to dry environmental conditions sought. It is important to mention that the practice of burning leaves, plants or other materials within the coffee plantations is prohibited. The holes for sowing must have the measurements of 40 cm of width and 40 cm of depth; this facilitates the expansion and growth of the roots of the plant. Moreover, the plants should be located with a separation of one to two meters away, which favors the availability of hydration of the land and access to sunlight, benefiting the production and the life of the plant (Gómez, 2010).

1.4.1.1 Phases of the organic coffee elaboration process

1.4.1.2 Procedure for the processing of organic coffee

The following section will describe the process that must be followed by any company dedicated to the organic coffee industry. According to Gómez (2010) there are different ways of processing the raw material and recommends considering the following guidelines:

- Collect only the fruits that are in a ripe state, since the green beans are crushed by the pulping machine.
- The pulping process must be carried out on the same day that the coffee was collected in order not to lose weight; ferment in the coffee drink.
- Use a sieve during pulping, to remove green beans and pulp.
- It is recommended that the fermentation process of the coffee last only between 12 and 14 hours.
- Avoid mixing piles of fresh coffee or those of different days of pulping.
- Wash well to facilitate drying.
- Sort coffee in water and separate foams and pulp.
- Dry the coffee immediately after washing.

1.4.1.3 Pulping

The harvested coffee must be extracted immediately in order to reduce the risk of contamination by fungi, mycotoxins, nuts, over ripe and empty, as well as leaves and foreign matter. Together, it is important that the grains be separated from ripe cherries (Gómez, 2010).

1.4.1.4 Drying

This stage is fundamental in the production process, since the organic quality of the product depends on it. It is important not to mix the grains that have different degrees of humidity. This practice can be executed in different types of spaces such as:

- Patios whose construction is made with clay brick, which does not produce changes in the color of the product; and therefore, does not affect the quality.
- On the other hand, the courtyards built with cement are useful in the pre-drying process and for a short period of time before going into the drying machines.
- In wooden sieves or structures to dry with the sun; this is a useful technique in small amounts of coffee (FUNDESYRAM, 2010).

1.4.1.5 Toasting

Before roasting the coffee, an exhaustive review of the grains should be done in order to visualize physical and moisture defects, which may cause negative effects on the quality. This phase is presented with a degree of importance equal to that of drying, since a good toasting will have a great influence on the quality of the flavor of the coffee prepared; this is more important than the chosen mixture. The phase consists of raising the temperature of the grains during a certain time. Thus, the effects of the process are described as follows:

- Loses approximately between 15 to 20% of weight; this effect occurs because the water present in the grain evaporates. In addition, the pyrolysis of certain elements occurs, but this does not have a great influence on the process.
- Its volume increases by 100% to 130%.
- A change in color from greenish yellow to brown; the tone may turn dark depending on the time chosen for roasting (FUNDESYRAM, 2010).

During this phase, the aroma, taste and color that will determine the product can be recognized. The final consumer usually buys coffee that is already roasted, in this regard, it is important to analyze the transformations that a grain undergoes until the end of the process (Gómez, 2010).

1.4.1.6 Grinding

The mill must be checked carefully that it does not contain dust or any type of sediment that can be mixed with the raw material. The grinding is done in a conventional mill, which, depending on the amount, can be operated manually or by electric power (Rosa, 2011).

1.4.1.7 Packing

The packaging of the organic product must be covered in its interior by aluminum and must have a thickness that protects the properties and aroma of the coffee (Rosa, 2011). This process must be carried out immediately after toasting and grinding, to prevent oxidation and with it the degradation of flavor and quality (Galarza & Peña Herrera, 2011).

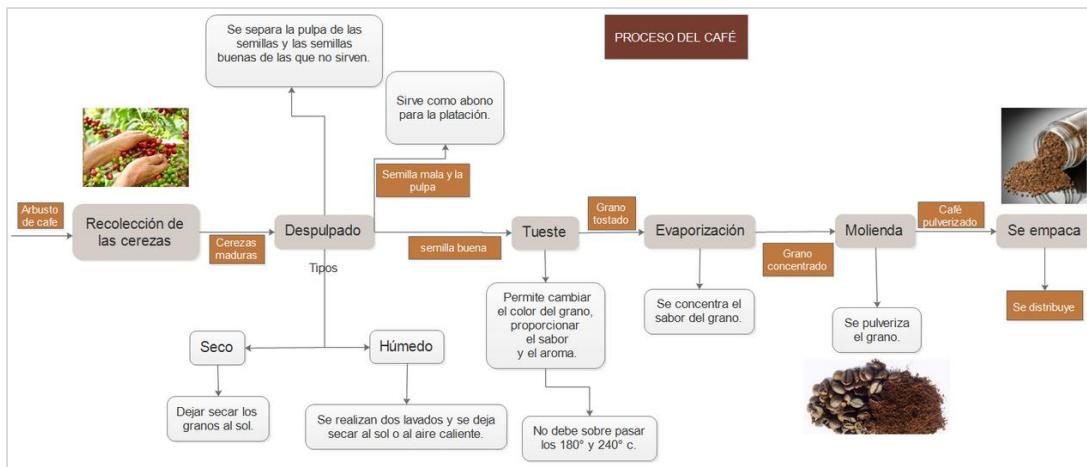


Illustration 1.1: Synopsis of the productive activities of organic coffee

Source: (CEDECO, 2006)

1.5 Main markets for organic coffee

The marketing of organic coffee has its origin in the middle of the 80's thanks to Gary Tallboy from the Specialty Coffee Consultants organization, Coffee Bean International (CBI) and Tom Harding of OCIA (Organic Crop Improvement Association) located in the countries of Mexico and Guatemala. At first it was sold only in health establishments, imported and roasted by few firms and with poor quality levels. While the first years of commercialization of the product were taking place, it was difficult to find it in the market. Currently, the increase in the supply of organic coffee products has produced an increase in their access and quality (Esguerra, 2013).

Coffee has been established as a commodity for consumption and commercial exchange, becoming a significant commodity at the world level. Of the total produced on the planet, a value greater than 80% is destined for international trade (Ocampo & Álvarez, 2017). Among the countries that acquire this product in the world are: The United States, Japan, Germany, France, Spain and several countries belonging to Europe, which together account for around 75% of coffee consumption marketed around the world (Santillan, 2011). In Spain, for example, in 2015 about 316,500 tons of coffee were imported, valued at 990 million euros, representing an annual increase of 2.8% (Maracas, 2017).

The European Union, as a whole, is an important region for the consumption of coffee, becoming in the last three decades, the main supports of world consumption with a value higher than 40% of imported coffee product. In 2014, coffee consumption for this region was 41.6 million sacks, with an average growth of 0.8% per year since 2012, from 41 million bags to 41.6 million bags in 2014

(Legiscomex .com, 2015). The total imports in Europe regarding green coffee during the year of 1999 were significantly high, reaching the value of 44 million bags. However, the vast majority of the European market (80%) is located in the western part of the continent (Commission for Environmental Cooperation, 2014).

The values regarding the magnitude of the organic coffee market present different variations depending on the commercial source that provides them. Thus, very few of the consuming countries have individualized registration about the imports they make concerning OC. The 28 European countries provide general reports about coffee imports without making a differentiation of the product, so it is difficult to access precise data on the importation of each country (International Trade Center, 2010).

It should be considered that Germany forms part of the International Coffee Organization (ICO); nevertheless, it is not a coffee producing country. This is because it is only dedicated to processing it by importing it as a raw material. One of the factors that affect the production of this product is the climate. Since Germany is located in an area where the climate is not tropical nor subtropical, it's impossible for such production. In this context, the country contributes enormously to the flow of trade for nations that do not belong to the European continent (Commercial Office of Ecuador in Germany, 2012).

Due to the reasons stated above, Germany is considered a promising market for Ecuador. The characteristic that stands out with great appeal in this destination is the demographic density of the European country; it has about 82 million inhabitants who demand food products daily. It is also the second biggest importer of coffee products worldwide. The first coffee importer worldwide is the US, which may seem like the best option for a target market, but the types of coffee requested in this country do not represent an optimal market for Ecuador. For example, in 2009 the Robusta coffee imports fell from 27% to 22%, with other coffee species appearing in greater numbers. Regarding the cultural heritage, in Germany there is a much greater propensity than in the USA for the consumption of organic products. Currently, Ecuador has exported to Germany a total of 123,080 sacks of 60 kilos (17,438,191 dollars) equivalent to 24% of all coffee exports. Of the total exported, 99.6% is soluble type coffee and the remaining small part is Robusta coffee (Commercial Office of Ecuador in Germany, 2012). All the premises previously considered point to beneficial circumstances in exporting Ecuadorian OC to this destination.

1.6 Contribution of the coffee exports to Ecuador's trade balance

From a historical perspective, during the years 1975 to 1995 exports had increased 20 times more, however, the negative outlook is that only four primary products were exported: banana, cocoa, oil and coffee. Coffee occupies 20% of the Ecuadorian geographic region, being located in 19 of the country's 21 provinces; its production employs around 500,000 people. This, broadly speaking, positions Ecuador as a coffee producing country. Coffee is presented as an economic alternative by Ecuadorian farmers, despite the fact that there has been a drop-in sales costs that affect commercialization (Jativa & Tinoco, Robusta coffee management Coffee Canephor in the Amazon region, 2014).

The trade balance is a cumulative weighting of the payment measure, within this context all imports and exports of merchandise or goods of the country are registered. In past years, Ecuador has experienced a significant increase in its exports going from \$ 18,137.1 million (2010) to \$ 25,700.3 million (2013) (Asencio, 2015). However, for 2017 there was a decrease in exports, reaching the figure of \$ 19,965 million, which produced a deficit in the trade balance.

The largest source of foreign currency income in the country is oil. Second but not less important, are exports unrelated to oil. These are made up of traditional exports such as: banana, shrimp, coffee, fish, cocoa; and non-traditional exports such as: flowers, fruits, industrialized products, among others.

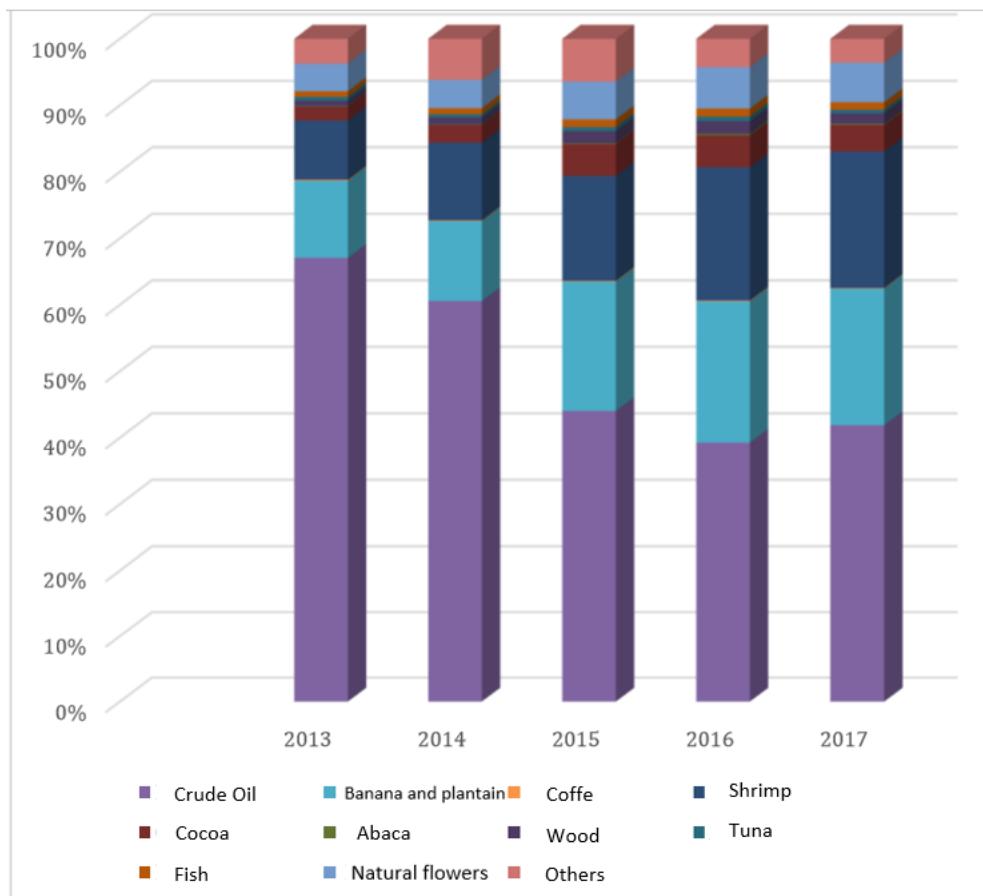


Illustration 1.2: Exports classified according to the economic sector in relation to the total value of exports, between the periods 2013 to 2017

Source: (Central Bank of Ecuador, 2017)

Within this panorama, the Ecuadorian coffee sector historically has not represented a great relevance within the country's exports. Illustration 1.2 shows that in the 2013 period coffee represented only 0.13% of the total exports, a condition that did not improve for 2017, but on the contrary, it decreased. According to the Directory of Exporters of Ecuador, as of 2017 there are a total of 61 registered coffee exporting companies. (PRO ECUADOR, 2017).

1.7 Target market selection

1.7.1 Study of possible European markets

The EU is a political community, constituted in 1951, currently composed of 28 European economies: Austria, Belgium, Bulgaria, Cyprus, Croatia, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland,

Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, and the United Kingdom, (European Union, 2018).

1.7.2 Conditions for the entry of products into the EU

To introduce the product into the EU, the following requirements must be fulfilled:

Sanitary regulation of food of non-animal origin: To export coffee to the EU, it is necessary that the product complies with the regulations set forth in the food laws or the equivalent conditions to the food matter. With the objective of providing guarantees so that all foods marketed are safe and do not contain contaminants that may constitute a threat to the health conditions of human beings, food exporters must abide by current food regulations, respecting the maximum number of non-natural products that may cause an effect on the product. Moreover, it is prohibited to export coffee with pesticide residues above the permitted levels, since they represent health risks, for example, 1 kg of grains, cannot contain more than 1mg of carbofuran² (European Commission, 2017).

Labeling of food products: The producer must ensure the necessary information to consumers, providing the possibility that they can make a conscious and rational decision regarding the acquisition of the product. Among the main information that should be cataloged in the label of the food offered, it should include:

- Sale name of the product to the public; in the absence of annual or imposed regulations by the EU, the name will be a brief description of the input or a common name related to the content.
- The generic name cannot be replaced by a trademark, a trade name or fancy name, but can be used together with the generic name; must include the physical state and the process to which it was submitted.
- A list of ingredients, in which the additives must be incorporated. Food products that are made up of individual ingredients and that match the name of the product are exempt from a list of ingredients. Finally, it must indicate whether allergenic elements or elements that may cause intolerances are found within the components.
- The net amount of food inputs that were previously packaged.
- The minimum date that the product can last in time, which consists of: day, month and year, in the order mentioned; preceded by the sentence "consume preferably before."

2 An extremely toxic pesticide

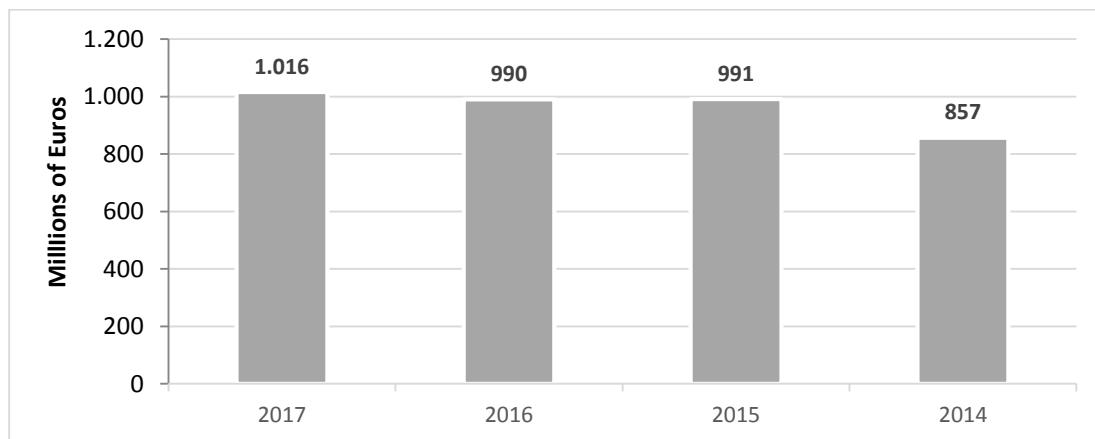
- Any type of condition regarding the conservation or manner of handling must be specified.
- The name of the production company and the geographical location of the manufacturer or entity responsible for packaging the product, or the distributor that sells within the EU.
- The place of origin of the product and the contraindications regarding its use must be stated. A foreign product can generate some type of condition such as allergies or intolerances.
- The lot identification for pre-packaged inputs, preceded by the letter "L" (European Commission, 2017).

1.7.3. Product Details

The OC, without toasting and decaffeination has the identifier 09-01-110000 in the EU regulatory framework.

1.7.4 Imports and Exports

Graph 1.1: Import values of natural coffee to the EU expressed in millions of Euros.

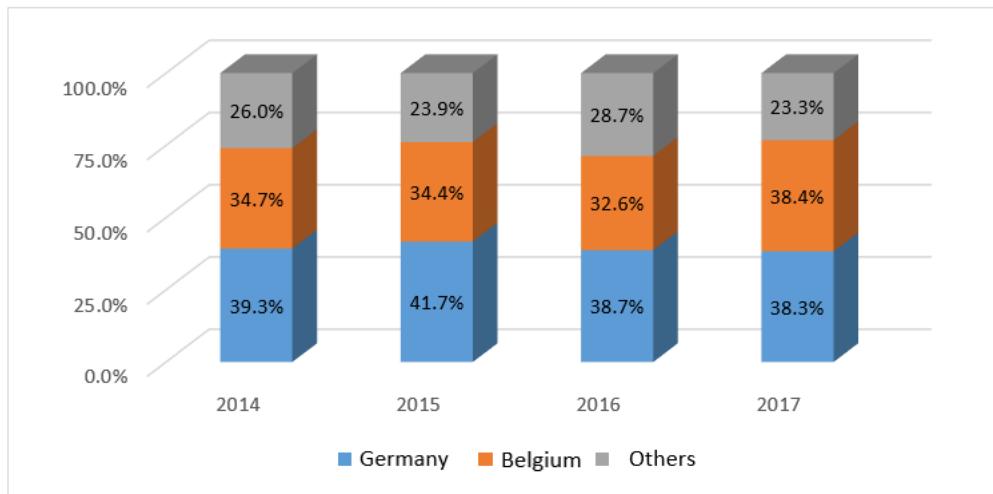


Source: (European Commission, 2017)

Elaborated by: Claudia Mosquera-Alex Villa

The data in Graph 1.1, shows that the range of importation into the EU during 2017, increased by 16% compared to 2014. The country with the largest representation of imports is Germany, as expressed in the following graph.

Graph 1.2: Percentage of coffee importations in relation to the EU countries



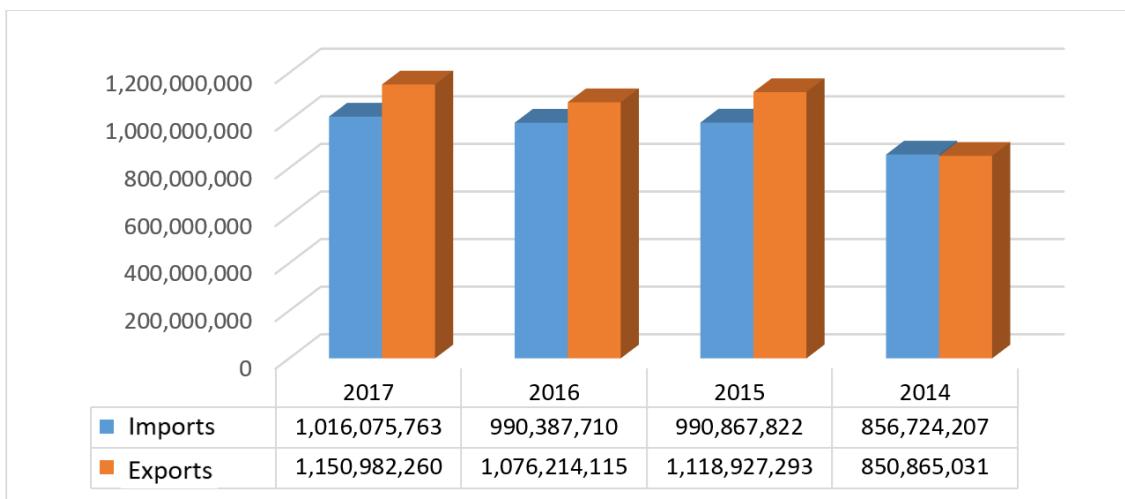
Source: (European Commission, 2017)

Elaborated by: Claudia Mosquera-Alex Villa

Graph 1.2 shows that Germany and Belgium were the countries with the highest imports (values expressed in euros). In 2017, Belgium imported more than Germany, but this value is not as significant; the data allows us to reflect on the fact that some of these economies are ideal for exporting OC from Ecuador.

Analyzing exports, in Graph 1.3, the composition in the trade balance of OC within the EU is observed.

Graph 1.3: Trade balance of imports and exports in the EU



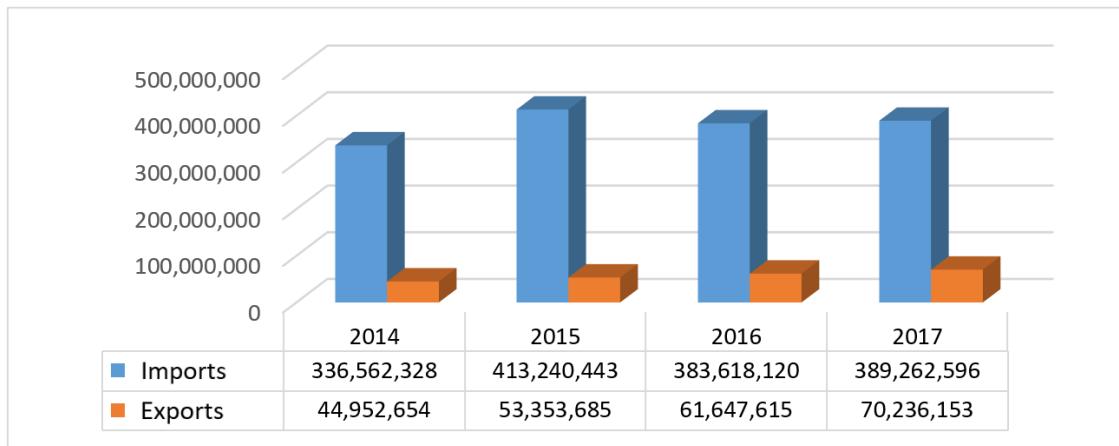
Source: (European Commission, 2017)

Elaborated by: Claudia Mosquera-Alex Villa

The composure of the trade balance for the EU is positive in 3 of the periods analyzed, meaning imports are exceeded by exports. In 2014, the balance was negative, since imports were greater than exports. This situation shows that, during 2017, the EU increased its sale of OC.

Studying the two economies that had a major incidence in the import of OC, the following results were evident.

Graph 1.4: Trade balance of organic coffee in Germany

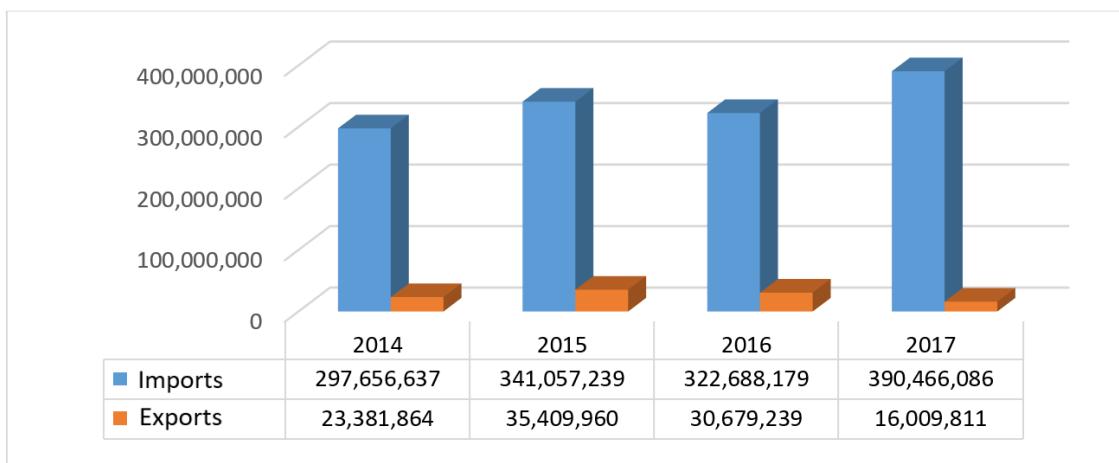


Source: (European Commission, 2017)

Elaborated by: Claudia Mosquera-Alex Villa

Graph 1.4 shows that the German country's trade balance is negative in all the periods mentioned, because imports were higher than exports, revealing that its production is less than that required by the population.

Graph 1.5: Trade balance of organic coffee in Belgium



Source: (European Commission, 2017)

Elaborated by: Claudia Mosquera-Alex Villa

The results found for Germany are similar to that of Belgium, that is, during the period between 2014 and 2017 this economy had a negative tendency in its balance, because the OC demand by consumers was greater than its offer.

During 2016, Germany imported 178,000 kg of raw and decaffeinated coffee, representing a monetary value of 931,654.00 euros. For the same year, Belgium imported less than Germany; its import volume was 29,000 kg, which meant 91,846.00 euros.

1.7.5 Per capita income

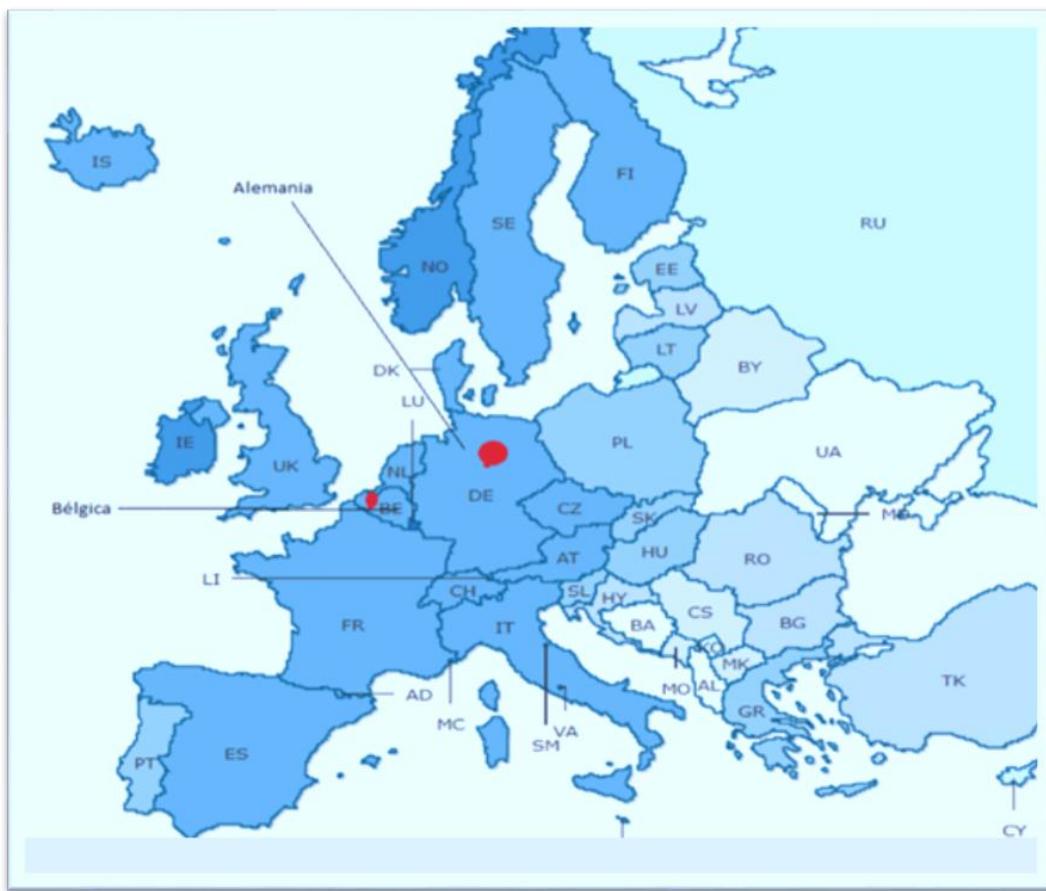


Illustration 1.3: Map of Europe

Source: CIA World Factbook

Illustration 1.3 shows a map of Europe according to the per capita income of all the countries that make up the continent. The color assigned to each one represents the proportion of the indicator, thus, the darker the value, the greater the magnitude. The red dot identifies the two potential economies of the EU who import OC. It can be seen that Germany and Belgium have the same magnitude in the tone color tone in monetary terms. During 2017, the GDP per capita of

Germany was 43,000 euros, and Belgium had a GDP per capita of 50,000 euros, nevertheless, Germany has a greater geographic extent.

1.7.6 Consumer profile

The Belgian consumer has a higher level of sensitivity regarding quality / price, however, the main variables that define it are: the regionalist divisions and those referring to language (French Wallonia, Flanders flamenco, bilingual Brussels and a German enclave). Brussels, being the headquarters of numerous companies and international organizations, is presented as a region in which the proportion of consumers with a high purchasing power increase. Despite an economic fall, Belgium continues to be exhibited as one of the richest countries in Europe. As shown in Illustration 1.3, it is one of the countries with the highest per capita income in the continent (Santander Trade, 2017).

The households of this economy are integrated on average by 2.4 people; 58.2% of a total of 11,348,159 people are between 25-69 years old. About 48.9% are men whose life expectancy is 77.7 years; and 50.8% are women with a life expectancy of 83.9 years. The average expenditure of households for the year 2016, was approximately \$ 263,620.00 dollars and the per capita spending during the same period was \$ 23,250.00 dollars (Santander Trade, 2017).

Unlike the Belgian consumer, for the German, what determines the acquisition of a product are the price and the quality, showing a tendency to buy in establishments that offer discounts. They are influenced by offers and prefer to visit several locations to take advantage of the most attractive prices. For the purchase of consumer goods Germans use the following criteria: safety, quality, prestige, comfort, comfort and price; while, for daily inputs, the only selection guideline is cost (Santander Trade, 2017).

German households are integrated on average by 2.2 people. Out of a total of 82,667,685 people, 49.1% are male, whose life expectancy is 77.8 years; and 50.8% are women with a life expectancy of 83.1 years. The consumption expense of homes during 2016 was 2,074,657 dollars (Santander Trade, 2017).

1.7.7 Consumer tendencies

In the EU, in the last decade, there has been an increase in the acquisition of natural inputs. In contrast, the manufacture of these are not fast, which means that European countries are predisposed to import these products (ProChile, 2015), consequently opening a suitable relevance in the market for producer countries such as Ecuador.

In Germany, the market for organic products has shown significant growth in recent years, becoming the first consumer country of products of natural origin in the EU. Its population is focused on developing a better organic lifestyle, where a German can attend a supermarket and buy different products for their consumption, from food to hygiene products, such as cleaners that also have a natural origin (Arce, 2007).

All this can be attributed to the campaigns promoted by the German State, encouraging the increase of daily consumption of fruits and vegetables, generating an increase in the commercial requirements of products beneficial to health (Arce, 2007). In Belgium organic agriculture is also in constant development. About 89% of Belgian consumers in the period of 2012 bought an organic product, hence, their total expenditure on organic products for the same year was of 403 million euros. Regarding those consumers, 18% of households are responsible for the total consumption of products of natural origin (ProChile, 2015).

All this leads to the conclusion that, within the EU, both Germany and Belgium have the necessary conditions to export organic coffee from Ecuador. The following table is a summary of the variables analyzed which will facilitate the selection of the preferred country for exportation.

Table 1.1: Comparison between the German and Belgian countries as an export destination

Variable	Germany	Belgium
Import value 2017	389.262.596 euros	390.466.086 euros
Import value 2017	70.236.153 euros	16.009.811 euros
Population	82.667.685 people	11.348.159 people
GDP per capita	43.000 euros	50.000 euros
Expenses per household 2016	2.074.657 dollars	263.620 dollars
% of Expenses in food	11,2%	13%
Consumption habits	They buy at discount stores, take advantage of the	They consider that at a higher price, higher quality.

Elaborated by: Claudia Mosquera – Alex Villa

According to the data shown in Table 1.1, it's determined that due to the volume of the population, spending per household, consumption habits and purchasing decision factors, the best country to export is Germany. It serves as a big advantage for the buyer to not only consider the cost and quality, but take advantage of the offers. Furthermore, it is a country where the production of coffee products is not fast, compared to Belgium whose agricultural sector has evolved.

1.7.8 Analysis of the producer country of organic coffee

Considering its high level of preference as a beverage around the world, in Ecuador coffee has radical significance due to its great contribution to the trade balance, its classification as a foreign exchange generator, and employment producer. In Illustration 1.4, it can be observed that coffee is produced in most of the Ecuadorian territory.

Illustration 1.4: Productive participation of coffee according to the Ecuadorian provinces



Source: INEC (2016) -Statistics Farming

Elaborated by: (PRO ECUADOR, 2017).

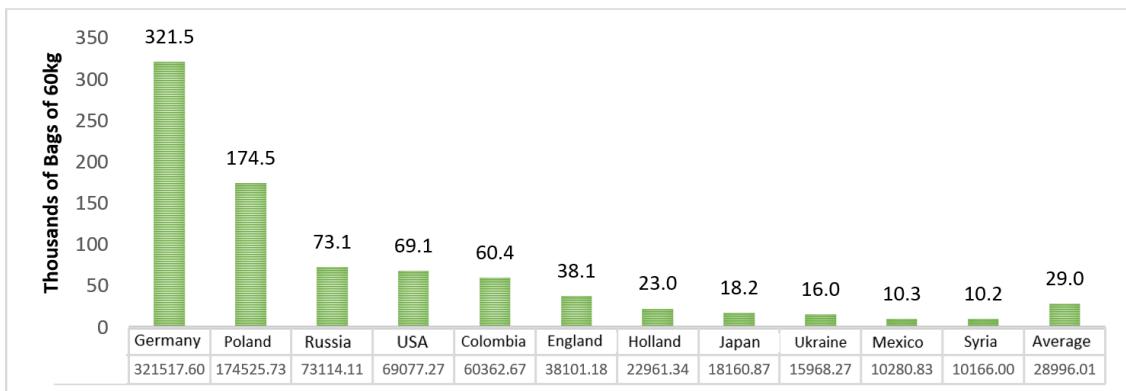
Graphically, you can see the coffee producing provinces; between 40% - 60% of the production is in Manabí and Sucumbíos, followed by the 19 provinces. Less than 20% are produced in Azuay and Loja. However, Guerrero (2016) in his study on the yield of coffee beans, highlights that Manabí, Sucumbíos and Loja are the provinces where 87% of the cultivated area is concentrated.

The two coffee diversities produced in Ecuador (Arabica and Robusta) show different degrees of yield. On the coast a greater yield is visualized involving the

Robusta type given its adaptive peculiarity to low geographies (100 to 400 masl). This means that it presents better results in places of lower altitude, but the Arabica modality is more efficient in high, mountainous and shaded areas, belonging to the highlands and eastern plains.

Within the coffee production in Ecuador, according to Guerrero (2016) it was determined that, in 2015 between 52% and 37% of the entities dedicated to cultivating and commercializing Arabica and Robusta coffee, respectively applied some fertilizers in the cultivation process. It is important to mention that for the cultivation of organic coffee; organic fertilizers are used. Some fertilizers include decomposed animal manures, such as cattle, swine, horses and birds; or humus from vermiculture or from the decomposition of vegetable by-products (coffee pulp, banana stems, cocoa shells, rice peels and peanuts, among others). It has been determined the existence of approximately 23 companies dedicated to the external marketing of coffee, 23% are large and the rest (67%) are SMEs, which are conglomerated in federations or associations among which is the Ecuadorian Coffee Corporation (CORECAF), the federation of coffee cooperatives (FENACAFE) and the FEDESUR-FAPECAFES. Graph 1.6 shows the export of coffee in sacks weighing 60 kg.

Graph 1.6: Export index of coffee from Ecuador to foreign countries in bags of 60 kg.

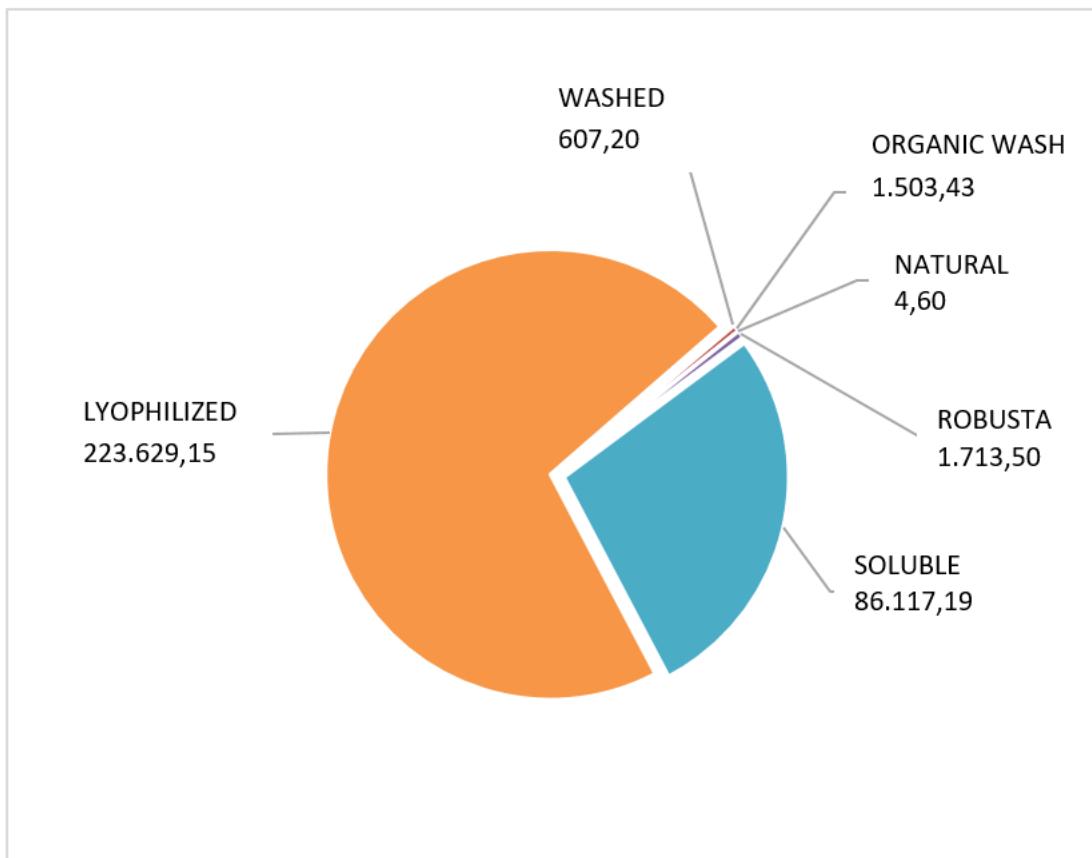


Source: (Central Bank of Ecuador, 2018).

Elaborated by: Claudia Mosquera-Alex Villa

The main export destination of the coffee product during 2016 was Germany, with a shipment volume of 321,517.60 bags, representing a monetary value of approximately \$ 53 million dollars. The average of bags of coffee exported was 28,996. After analyzing the export ratio classified by the type of coffee, the following results were obtained for the 2016 period

Graph 1.7: Exports to Germany according to the type of coffee in the 2016 period measured in number of bags.



Source: ANECAFÉ (2016)

Elaborated by: Claudia Mosquera-Alex Villa

Based on Graph 1.7, in 2016 the lyophilized coffee was the one with the highest volume of exports to Germany, followed by soluble, robust coffee and organic washed, as these are the most representative. Zone 7, formed by the provinces of Loja, El Oro, and Zamora Chinchipe, represent an important sector of coffee production in Ecuador. According to the study conducted by Cumbicus and Jiménez (2012) among its strengths are: superior organoleptic characteristics, higher production index, unique necessary infrastructure for the drying phase, availability of own land, and interest and awareness of partners.

A particularity of the commercialization of Ecuadorian coffee is that it is traded without added value, that is, it is marketed to a greater extent as a raw material. As a result, Loja is a strong producer of Arabica coffee raw material, mainly due to its climatic situation. It has a great variety of local and artisanal production with more than 22 groups producing coffee; being located between 1,000-2,000

meters in altitude, 20% of the national production of Arabica coffee comes from this province.

In a bibliographic analysis it was determined that one of the Loja entities, that produces and commercializes natural coffee in bulk, is Alma Lojana S.A., located in the province of Loja. It harvests at an approximate altitude of 1,500m, resulting in a 100% pure Arabica coffee; its first production started in 2011 (Café Alma Lojana, 2011). The processes for production, carried out, are catalogued as follows:

Table 1.2: Processes for the cultivation of Organic Coffee

Seed selection	Much of the future depends on this selection.
Shed	The covered seedbeds are ordered inside the shed for protection.
Seedbeds	Where the coffee seeds are sown.
Seed Nursery	Place where the coffee plant is grown out
Soil	Where the crop is planted.
Layout	The distribution and fixation of the site is determined, in which the coffee plants will be developed.
Hole opening	It should be approximately 30 cm. of depth. It is important that at the time of making the hole to separate the surface and the bottom ground. At the time of planting the coffee, it must be placed in an inverse manner, that is, the surface soil in the bottom.
Transfer of seedlings	To be sown on the ground the plants must have at least a few branches.
Coffee plantation	Plants are planted only in good condition, where the soil must be enriched with organic fertilizer in each hole. Placing a layer of 5 cm of organic fertilizer. Then a layer of 4 to 5 cm of soil is placed.

Source: Alma Lojana S.A. (2017)

Elaborated by: Claudia Mosquera - Alex Villa

Within the cultivation process, the process of care is also executed, which includes the phases of fertilization, eradication of weeds, pruning, shade regulation and the adequate control of pests and diseases. The export process to Germany can be carried out by sea and air transport, however, a large amount of cargo is handled by sea. Thanks to its geographical location and modern infrastructure, it has a number greater than 60 ports and auxiliary sub ports open

available for managing large loads. Among the main ones are Hamburg, Bremerhaven, Bremen Rostock, Lubeck.

The ports with the greatest affluence are: Hamburg and the Bremen. In Hamburg 32% of German commercial traffic passes through, which consists of four camps for containers and eight for cargo that is perishable, in bulk, needs refrigeration, or that is in a liquid and rolling state. The second one is located on the river Weser. On account of these characteristics, connections are established with relevant ports in the north of the European continent.

Considering the export process, the transportation routes will be multimodal due to the fact that the province of Loja lacks a seaport. Consequently, the product will be transported by land from the province of Loja to the seaport of Guayaquil, and from there it will be transported by sea to Germany.



Illustration 1.5: Port of Hamburg, Germany

Source: (DW, 2018)

The internal transport will be carried out by a transport company, whose cost is USD 0.10 per kg, meaning the total will depend on the cargo sent to the destination. The distance from Loja to the Guayaquil port is approximately 423 km, which represents approximately 7 hours.

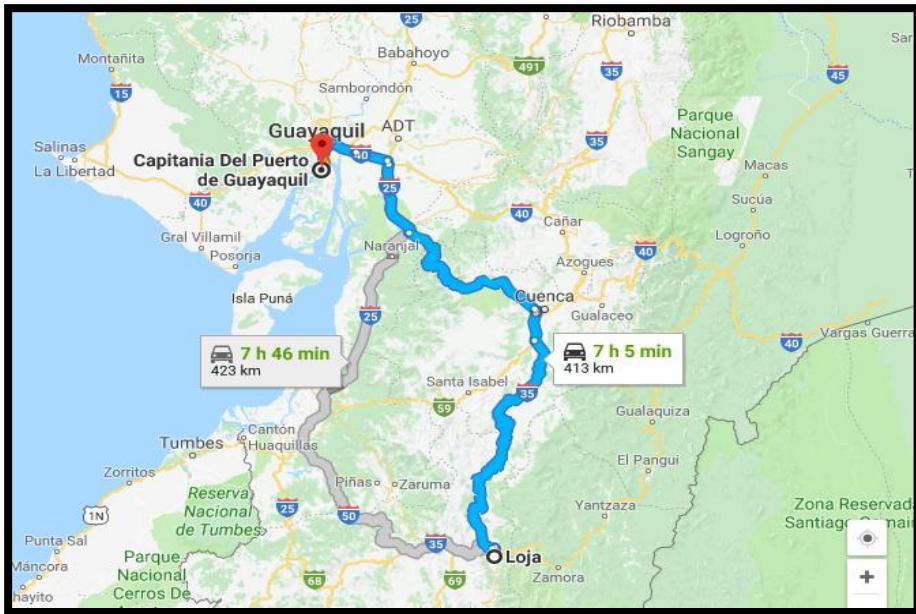


Illustration 1.6: Transfer route Loja - Port of Guayaquil

Source: (Google Maps, 2018)

Among the alternatives to export the Organic Coffee, either a container with lining or bags of 60 kg can be employed. To export the product through the first alternative, normal dry storages equipped with a liner are required. In this modality the exporter saves the value of the bags, assuming the amount of the lining. This modality can transport up to 21 tons of coffee instead of the 18 tons that can be transported in bags. However, since the amounts of organic coffee can vary, the coffee will be handled in sacks of 60 kg. It offers the possibility of transporting different weights, depending on the demand for coffee required by the delivery destination, without having the need to complete a certain weight.

Chapter 2: Macro and microeconomic market analysis

2.1 Overview of the destination country

Germany belongs to the European continent and its capital is Berlin. It is composed of 16 federated states, which have free powers, that is, each federal government (Bundesländer) decides its own competences in relation to internal security, education, culture and state administration. It is a socially, economically and technologically developed country, constituting itself as one of the most relevant destinations with the greatest economic appeal around the world (Frankfurter Societies - Median GmbH, 2017).

As an economically developed country, it has a solid industrial base, which makes it a highly competitive country with a strong presence in the markets of the United States, France, the United Kingdom and the Netherlands. Its prominent products include cars, spare parts, automotive parts, medicine, aircraft, etc., (Frankfurter Societies - Median GmbH, 2017)

According to the German Embassy (2017), it has a population of 82,217,837 million inhabitants. Approximately 16% of the inhabitants are under 15 years old, 15% are over 65 years old, implying that the majority of the population is between the ages of 15 to 69 years old (69%). The main economic sectors are agriculture and consumption, industrial, service, and foreign trade (Luna and Murillo, 2015). It is an economy with a high potential for the provision of services, which includes, IT services, telecommunications, banking, housing rental, among others. One of the characteristics of Germany is the importation of raw material, which is then processed, and the final product is exported; this includes coffee.

2.2 Macro country, origin and destination environment

To understand the macroeconomic environment, both in Ecuador and Germany, the PEST analysis was used as a tool, which includes 4 determining factors for the conditions of a state, among which are the political, economic, socio-cultural and technological factors.

2.2.1 Political factor

Within this context, it is important to analyze variables related to tariff barriers and commercial agreements that allow the entry of the product into the German market.

2.2.1.1 Custom Barriers

One of the main complications that arise in the export of a product are the tariff barriers, whose objective is to put obstacles to the export and consists of taxing a product through tariffs. Ecuador does not impose any tax on the export of any product, that is, for its exit from the national territory (PRO ECUADOR, 2017).

In Germany the tax to pay for coffee imports is 0% only if it's considered a raw material, so if it is a processed product three types of tariffs are applied, as indicated in Table 2.1.

Table 2.1: Import duties to Germany

Types of coffee	Tariff
Decaffeinated green coffee	8,3%
Roasted coffee	7,5%
Roasted decaffeinated coffee	9%

Source: Coffee Profile in Germany (PROECUADOR, 2015)

Elaborated by: Claudia Mosquera-Alex Villa

The information presented in the table above shows that decaffeinated roasted coffee has a higher tariff rate, followed by decaffeinated green coffee and roasted coffee, considering that these go directly to the final consumer. There are other non-tariff barriers that can be an obstacle to an export; among these are (Luna and Murillo, 2015):

- Dues
- Permissions
- Compensatory taxes
- Anti-dumping taxes
- Official prices
- Labeling
- Packaging
- Health

2.2.1.2 Trade Agreements and Free Trade Agreements

Germany as a member of the EU, and fifth world economic power has signed several Free Trade Agreements:

Table 2.2: Trade Agreements with Germany

Commercial Agreement	Member countries	Observation
Free trade agreement between Germany and Chile	Germany Chile	Bilateral trade, increasing exports between both countries, almost all trade barriers have been eliminated. The average customs rate is below 2 percentage points and the import process are much simpler.
Free trade agreement between Germany and CARIFORUM APE countries	Barbuda, Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary; Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta; Netherlands, Poland, Portugal, Romania, Slovak Republic, Slovenia, Spain, Sweden, United Kingdom, Bahamas, Barbados, Belize, Dominican, Grenada, Guyana, Jamaica, Dominican Republic, Saint Kitts, Nevis, Saint Vincent and the Grenadines, Saint Lucia, Surinam, Trinidad and Tobago.	Agreement on free trade and economic integration for products and services, covers trade and security policies, seeks the eradication of poverty through sustainable development, seeks promotion and respect for human rights, peace, democracy, gender equality, solidarity, justice, especially with the Caribbean countries.
FTA between Germany and Overseas Territories (OCT)	Signatory countries of the Caribbean, Europe, South America, Africa, Oceania, North America and Europe	System of non-reciprocal preferences, offering tariff preferences that favor the community.
Customs Union and European Union Economic Integration Agreement	Germany, Australia, Belgium, Bulgaria, Cyprus, Denmark, Slovenia, Spain, Estonia, Finland, France, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, United Kingdom, Czech Republic, Slovak Republic, Romania, Sweden	The Euro, common policy and security is established as the only common currency.

Source: (PROECUADOR, 2015)

Elaborated by: Claudia Mosquera-Alex Villa

Table 2.2 shows that Germany has several trade agreements, Chile being the only Latin American economy with an FTA, giving an advantage to the two economies because the existence of preferential tariffs generates greater exports between the two economies.

For its part, Ecuador's main trade agreements have been signed with countries in the region, including Brazil, Panama and Peru, as presented in Table 2.3.

Table 1: Commercial agreements of the Republic of Ecuador with foreign countries.

Commercial agreements	Countries
Economic Complementation Agreement between the Republics of Ecuador and Chile	Chile
VIII Protocol to ECA No. 59 in which the Federative Republic of Brazil grants tariff preferences to the Republic of Ecuador	Brazil
II Additional Protocol to the Economic Complementation Agreement No. 46 Held between the Republic of Ecuador and the Republic of Cuba	Cuba
Framework Cooperation Agreement between the Republic of Ecuador and the Bolivarian Republic of Venezuela to deepen Trade and Development bonds	Venezuela
Memorandum of understanding for the promotion and implementation of the project "Export by postal shipping for medium, small and micro enterprises" between the Government of the Federative Republic of Brazil and the Government of the Republic of Ecuador	Brazil
Treaty of Partial Scope of Economic Complementation between the Government of the Republic of Ecuador and the Government of the Republic of Guatemala	Guatemala
Complementary Agreement to the basic technical cooperation agreement between the government of the Federative Republic of Brazil and the Government of the Republic of Ecuador for the implementation of digital terrestrial television in Ecuador	Brazil
Memorandum of Understanding between the Ministry of Foreign Affairs, Trade and Integration of the Republic of Ecuador and the Ministry of Foreign Affairs of the Republic of Belarus, for the Creation of the Joint Economic-Commercial Cooperation Commission.	Belarus
Memorandum of Understanding between the governments of the Federative Republic of Brazil and the Government of the	Brazil

Commercial agreements	Countries
Republic of Ecuador regarding commercial monitoring, investments and financing.	
Protocol of Accession of the Republic of Panama Opening Markets in favor of Ecuador.	Panama
Memorandum of Understanding between the Ministry of Foreign Affairs, Trade and Integration of the Republic of Ecuador and the Ministry of Commerce of the Republic of Indonesia on Cooperation in Trade and Investment.	Indonesia
Memorandum of Understanding on Economic Cooperation between the Ministry of Foreign Affairs, Trade and Integration of the Republic of Ecuador and the Department of Commerce of the Republic of India	India
Agreement for Cooperation in the area of Solidarity Economy and Fair Trade, signed between Ecuador and France	Francia
Minutes of the Meeting of the Binational Technical Committee on Economic and Commercial Affairs within the framework of the Colombo Ecuadorian Neighborhood and Integration Commission,	Colombia
Mutual Recognition Agreement	Colombia
Binational Technical Committee for Trade, Investment and Tourism Facilitation	Peru
IX Ecuadorian-Peruvian Neighborhood Commission	Peru
Memorandum of Understanding on Tourism Promotion between the Commission for the Promotion of Peru for the Export of Tourism Promperu and the Ministry of Tourism of Ecuador.	Peru
Memorandum of Understanding Pro Ecuador and Proinversion	Peru
Presidential Joint Statement Ecuador-Peru	Peru
Cooperation agreement in the area of commercial promotion and transfer of technology in international trade between the Republic of Ecuador and the Republic of Argentina	Argentina
Annex No. 1 to the memorandum of understanding on collaboration on trade promotion actions between the Ministry of Foreign Affairs, Trade and Integration of the Republic of Ecuador and the Ministry of Foreign Affairs, International Trade and Cult of the Republic of Argentina	Argentina
Memorandum of understanding on collaboration of commercial promotion actions between the Ministry of Foreign Affairs, international trade and the cult of the Republic of Argentina and the Ministry of Foreign Affairs, trade and integration of the Republic of Ecuador.	Argentina
Minutes 1, Meeting of the commercial economic commission of the Economic Complementation Agreement No. 65 between Chile and Ecuador	Chile

Commercial agreements	Countries
Institutional Cooperation Agreement between the Institute for the Promotion of Exports and Investments (PROECUADOR) and the Agency for the Promotion of Investments and Exports (Uruguay XXI)	Uruguay
Regional agreement to open markets in favor of Ecuador-Protocol of accession of the Republic of Panama	Panama
Regional agreement that establishes the regional tariff preference-Protocol of accession of the Republic of Panama	Panama
Joint feasibility study group to deepen economic and commercial relations between the Dominican Republic and Ecuador.	Dominican Republic
Multiparty trade agreement Ecuador-European Union.	European Union
Agreement for industrial development.	Germany
Bilateral investment treaty.	Germany

Source: (Ministerio de Comercio Exterior, 2017)

Elaborated by: Claudia Mosquera-Alex Villa

The trade agreements are characterized by accords, which are signed between two nations with the purpose of, through policies, the two nations receiving mutual benefits. Ecuador has entered into multiple trade agreements with countries of the Americas, however, a strictly commercial agreement for the benefit of Ecuadorian organic coffee between Ecuador and Germany is nonexistent.

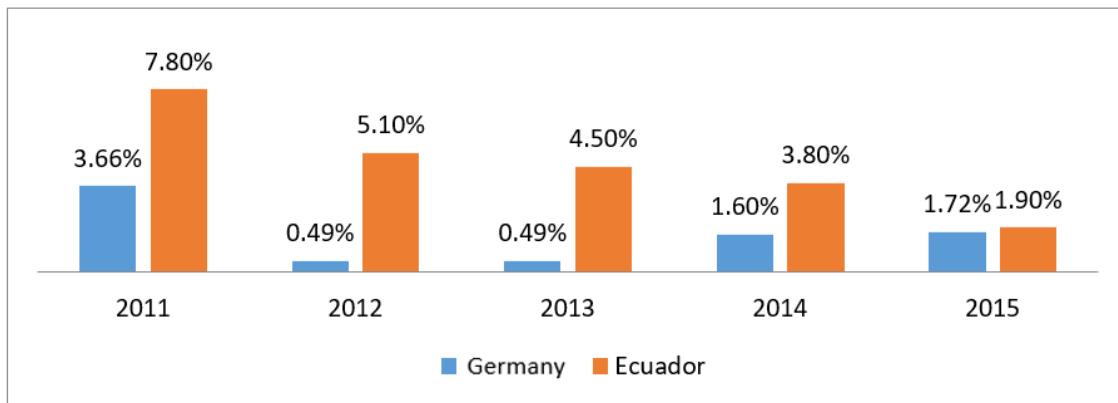
2.2.2 Economic Factor

In the analysis of the economic factor it is important to consider variables such as the nation's GDP, industry GDP, trade balance, inflation, interest rate; considering that, as their value increases, investments are directly affected, seeing that it is necessary to pay more interest for a financial credit.

2.2.2.1 GDP Evolution

The Gross Domestic Product (GDP) represents the dollar value of goods and services of a nation (Paura, Venzor, & Flores, 2016). In Ecuador, the annual GDP growth rate can be seen in Graph 2.1.

Graph 2.1: GDP Annual growth rate of Ecuador and Germany, 2011-2015



Source: Central Bank of Ecuador, Global-rates

Elaborated by: Claudia Mosquera-Alex Villa

Ecuador's GDP growth rate has a superior value compared to the growth rate of Germany's GDP between the years 2011 and 2015. The growth rate of the country diminishes progressively throughout the years, that is to say, the Ecuadorian economy began to grow to a lesser extent since 2011. The growth between 2011 and 2015 was roughly 4.6% which means that each year Ecuador had less resources to cover their expenses.

The rate of growth in Germany shows a cyclical behavior. In 2012, the German economy grew by just 0.49% compared to the 3 percentage points it obtained in 2011. In 2013, the rate did not change compared to 2012, rising in 2014 to 1.6% and in 2015 to 1.72%, indicating that the economy was subsequently favored.

2.2.2.2 Trade Balance

The trade balance allows an evaluation and comparison of the national income obtained from exports with the expenses from imports (Central Bank of Ecuador, 2017). The following are the indicators of Ecuador's trade balance:

Table 2.4: Commercial balance (in millions of FOB dollars), Ecuador 2013-2017

Indicator	Jan - Dec 2013	Jan - Dec 2014	Jan - Dec 2015	Jan - Dec 2016	Jan - Dec 2017
Commercial Balance - Total	-1.075,0	-723,1	-2.129,7	1.247,1	186,8
Commercial Balance - Oil	8.237,4	6.917,1	2.756,9	2.969,1	2.975,4
Oil exports	14.107,4	13.275,9	6.660,3	5.459,2	5.594,9

Oil imports	5.870,0	6.358,8	3.903,4	2.490,1	2.619,5
Commercial Balance - Non-oil	-9.312,4	-7.640,2	-4.886,6	-1.722,0	-2.788,5
Non-oil exports	10.643,5	12.448,6	11.670,3	11.338,5	10.126,5
Non-oil imports	19.956,0	20.088,8	16.556,9	13.060,5	12.915

Source: Central Bank of Ecuador (2017)

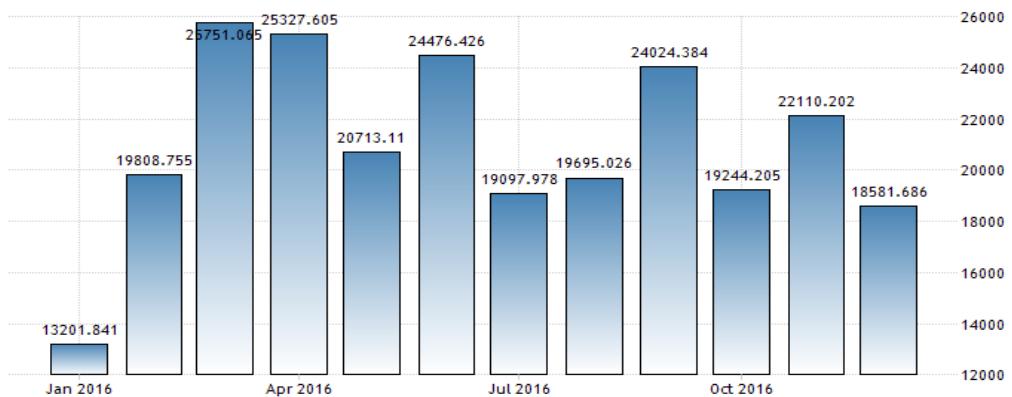
Elaborated by: Claudia Mosquera-Alex Villa

As indicated in Table 2.4, Ecuador's trade balance for the year 2017 registered a positive balance due to a considerable reduction in non-oil imports.

Regarding oil, exports have been decreasing over the period of 2013-2016, from 14,107.4 million USD to 5,459.2 million USD. In 2016 there was a reduction of 61% in income from crude oil exports, compared to 2013. Nevertheless, in 2017 there is a slight increase in exports, compared to the figure exposed for 2016. Within the trade balance, non-oil exports also have a significant participation, a group which includes consumer goods, services and capital. Within the first group is coffee that has been exported, either as raw material or processed product for final consumption.

As shown in Table 2.4, there is a deficit in the balance of non-oil product trade, showing that more goods are imported for consumption, than those that are exported. This is due to the fact that Ecuador still depends on the technological development of industrialized countries like the United States, China and Germany, characterized by importing raw materials, processing them and then exporting them as a final product. For example, the cocoa that is exported as a raw material, is later imported as chocolate; In the same way OC, is imported from Ecuador as a raw material and is processed in Germany to be later exported (Lyko, Robayo, & Wong, 2016).

Graphic 2.2: Germany's trade balance



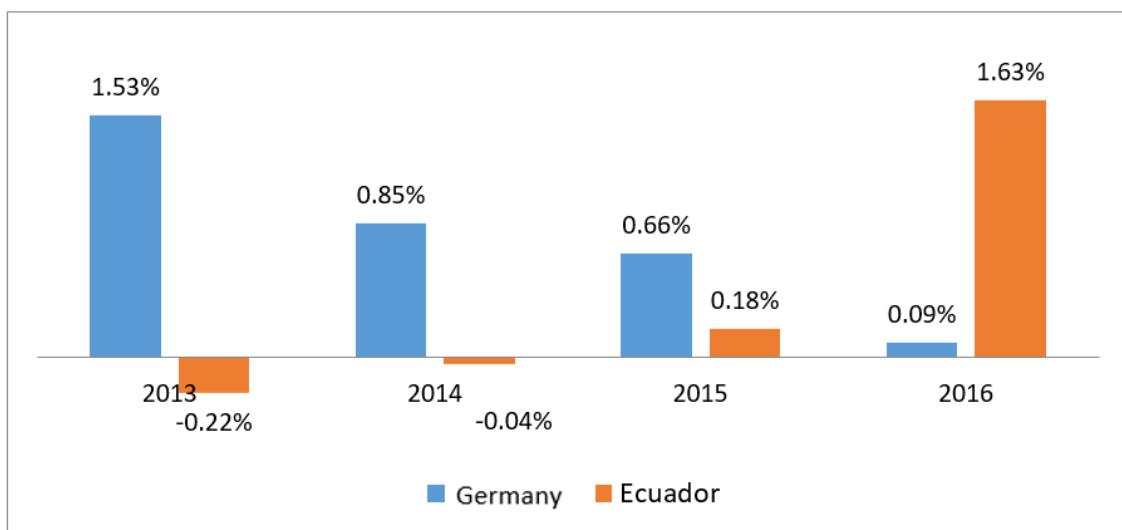
Source: Trading Economics (2017)

Elaborated by: Claudia Mosquera-Alex Villa

Graph 2.2, shows the toll of the German trade balance, which has been positive with a greater sum in the month of March 2016. The country's exports are greater than its imports due to an economy that acquires raw materials, including coffee, for further processing and exportation, in addition to its high level of technological innovation, allowing large-scale commercialization.

2.2.2.3 Inflation

Graph 2.3: Inflation rate, Ecuador and Germany, 2013-2016



Source: Central Bank of Ecuador (2018) and Global-rates (2017)

Elaborated by: Claudia Mosquera-Alex Villa

As shown in Graph 2.3, from the year 2013 to 2016, Germany has the highest inflation rate. In the last year, Ecuador registered a higher rate of inflation (1.63%); contrary to the case of Germany that has a decreasing trend, which indicates that costs are falling. According to this information, exporting coffee would be beneficial, considering that at a lower price, consumers tend to demand more of a product.

2.2.2.4 Interest rate

The interest rate is an indicator that reveals the price of money in the financial market. Based on the monthly statistical data provided by the Central Bank of Ecuador, it is perceived that the active interest rate of Ecuador for 2017 is 8.68% and 4.28% corresponding to the passive rate. This implies that the active interest rate is not so high, a reason why businessmen access financial credits for investment projects, which can be seen in the exportation of OC (Central Bank of Ecuador, 2018). In 2017 an interest rate of 4.75% was registered in Germany, with an interbank interest rate of 14.75%, this being higher than the active interest rate of Ecuador. This means that German businessmen have to return a much greater amount than the Ecuadorians in exchange for the borrowed money,

2.2.3 Social Factor

Within the social factor it is important to observe variables such as: behavior and trends of the consumer referring to the input that is intended to export.

2.2.3.1 Consumer Behavior

The main factor that influences the decisions to acquire a product by the Germans is the product quality, followed by the price. It is worth noting that they prefer to buy in localities that offer discounts in order to cut their expenses (Luna and Murillo, 2015). This means the main characteristic of the German consumer is the preference of high quality at low prices. This concurs with the fact that the inputs that are intended to be exported will be manufactured complying with all the standardized quality regulations and at a competitive price.

According to PROECUADOR (2015) the annual average per capita coffee consumption in German inhabitants is 4.81 kg. Roasted coffee is the preferred type and instant coffee the least attractive of the coffee varieties; 58% of which prefer a medium-high level of caffeine. In the latest periods of time, the purchase of natural products in the German market has generated a boom thanks to the fact that its population is concerned about their health, resulting in a preference of products with less industrial processing, among them, coffee. There are no

exact statistics on the purchase of OC, however, it has been found that sales of these products in Germany increased by around 5% during 2014.

2.2.3.2 Consumer tendencies

The fundamental characteristic of a product from the perspective of the German consumer is food safety and the minimization of environmental pollution, so there is a tendency for the acquisition of products of natural origin (PROECUADOR, 2015). In addition, these consumers have a marked tendency to compare costs and often tend to buy at discount places, noting the time of purchase, order, safety, quality, prestige, comfort, convenience and cost (Banco Santander, 2017).

2.2.4 Technological factor

Within this factor, variables such as technological capacity and the rate of technological transfers are considered. Ecuador is classified as a country with low levels of investment in the development of information and communication technologies. In 2014, the country invested 3.1% of GDP in ICT, mainly focusing in development of software, hardware, internet providers and telecommunications companies. Among the main sub-sectors that benefited from ICT are: agro-food, petrochemical, mining, banking and business, pharmaceutical, construction and transport, tourism, environment, sea, energy, industrial automation and public services (Ministry Coordinator of Production, Employment and Competitiveness, 2017).

The Ecuadorian industry is going through a process of development; however, there is no significant government investment for technological innovation, which has a radical importance in economic growth and development. The country's developing industry tends to export its raw materials that are later imported as final products, resulting in a great competitive disadvantage.

The implementation of ICT in economic sectors is important, since they contribute to obtaining greater productivity, competitiveness, generation of jobs and presence in international markets (Ministry Coordinator of Production, Employment and Competitiveness, 2017). Industries that possess high technology can transform the raw material into final products. In the case of OC, this can be an exported as a final product, ready to meet human needs.

Germany had a 4.6% share in global ICT sales in 2014, making it the fourth ICT market around the world due to its size. Nearly 36% of the industries in 2013 have introduced innovations, thus generating a massive effect on the economy, labor processes, education, research and security. (Federal Ministry of Labor and Social Affairs, 2017).

As this is a pioneering economy in the development and implementation of ICT, it has a fully developed industry, with the consequent need to buy raw material to process it. This positions it competitively with an advantage over the Ecuadorian economy, where the material is extracted and marketed, such is the case with coffee.

2.3 Assessment of internal and external factors

Among the internal and external factors that were analyzed for the selection of the market are: population, GDP, product regulations, tariffs and trade agreements, geographical distance, German institutional support, scenario for the distribution of products, fairs and specialized exhibitions in the sector, and consumer familiarity with the products. (PROECUADOR, 2015).

Based on the analysis, it was determined that the German population has increased its consumption of natural products in recent times, offering the relevance to invest in this economy, coffee being the product selected due to its high production in Ecuador. Reaffirming what was mentioned above, it will be ensured that the exportation process complies with the required quality standards. Exporting the product will benefit the economy as its contribution to the trade balance will increase, helping to reduce the registered deficit.

2.4 Exportation Process

Within this process, it is important to consider that the German industry is very competitive. Products imported from outside the EU have different legislation, and on the other hand is German trade legislation, but when dealing with products that are going to be marketed as raw material, they are subjected to tariff barriers such as taxes and certificates (PROECUADOR, 2015).

Table 2.5: Certification required to proceed with the export of organic coffee

Certification	Cost	Observation
AGRO CALIDAD	80,00 dollars	Includes inspection and advice.
Phytosanitary certificate	50,00 dollars	Product inspection (by shipment).
Certificate of origin	10,00 dollars	Use by the importer / buyer of any tariff preference Check the origin of the product.

Source: PROECUADOR (2015)

Elaborated by: Claudia Mosquera-Alex Villa

Table 2.5 shows the most frequent certificates, which are required to export OC, these include: AGRO QUALITY, phytosanitary certificate, certificate of origin. To have access to these certificates, the exporter must be registered and use the

SIGCO system, which belongs to the website of the Ministry of Industries and Productivity (PROECUADOR, 2015).

The European Union applies the common and integrated customs tariff, TARIC nomenclature, and preferential trade agreements for the entry of products into its territory. Germany establishes certain treatment depending on the use of the product, granting exemptions from the payment of tariffs. The main regimes are (PROECUADOR, 2015):

- Customs warehouse; goods that are considered not to have been imported while they remain in the warehouse.
- Inward processing; goods imported for processing in order to be exported again.
- Temporary import; goods which will not be in for a long period of time in the country, but will be exported again in a short period of time.
- Tariff suspension; measure applied to inputs, that is, to products not produced by the community.
- Tariff exemption; measure that is applied to inputs of a scientific or educational nature. Among this group are also objects for personal or domestic use.

2.5 International logistics

2.5.1 Modalities for transporting the product

To sell overseas, a competent importer with high knowledge of the organic food market in Germany is required; for this, you must be specialized and have precise knowledge about the requirements for importation, the packaging guidelines, and labeling that organic products require.

Among the main brands of Organic Coffee are Ulrich Walter, Globoids, Fair globe, Jacques Vabre, Alnatura, Biogourmet, Gepa, Mount Hagen. In addition, Peru is presented as the main competition for the brands mentioned above, with price being the main element that determines the positioning of this country in the international market. The directory of Peruvian suppliers of Organic Coffee, is the institution that stands out before the competition.

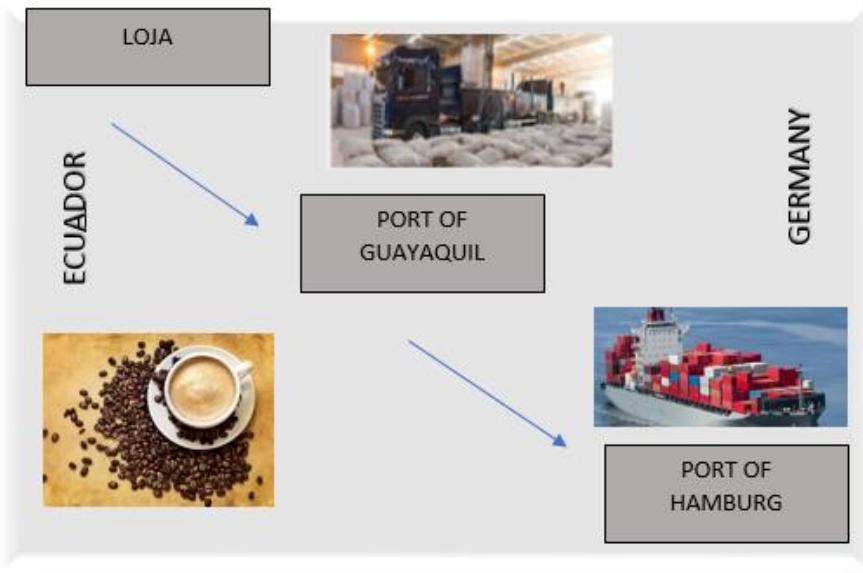


Illustration 2.1: Ways of transportation

Elaborated by: Claudia Mosquera – Alex Villa

For the transportation of coffee, the following aspects have been considered:

- The transport chosen for the export of Organic Coffee is by the sea.
- The main seaport in Germany is in the city of Hamburg, which will be used for the coffee reception.
- Estimated transport time from the seaport of Guayaquil to Hamburg is approximately 30 to 35 days.
- The product will be transported in the form of 60 kg bags.
- 20-foot containers will be used, for it will allow a standard load to be sent exclusively without risk of loss of space for the same transportation value in terms of volume as in a 40-foot container. A 20-foot container has a capacity of approximately 18 tons of coffee transport in 60-kg bags (IContainers, 2018).
- The internal transport of the product from Loja to Guayaquil will be done by land.

It is fundamental to contemplate that among the main advantages of transporting coffee is the minimization of costs, compared to the transport of packaged coffee for final consumption. In addition, it does not generate odors or product losses due to handling, and the preservation of quality is usually better (Muñoz, 2014). In general, a 20-foot container can transport about 21 tons of coffee, representing 2 tons more than transporting coffee in sacks; this difference is almost 17% more

and is equivalent to savings of 15% freight per container (International Trade Center, 2018).

2.6 Competition

In recent years, there has been a tendency in Germany to increase consumption of organic coffee. Of the 1,128,015 bags of OC imported from Ecuador worldwide, 18% were shipped to Germany (PROECUADOR, 2015).

About 75% of coffee imports in Germany come from four countries in Latin America and Vietnam. The main supplier of coffee in 2014 was Brazil, with a percentage of 33.35%, followed by Honduras with 8.04%, Peru with 5.33% and Colombia with 4.92%, which are located in the first, third, fourth and fifth place, covering 51.64% of the coffee import in Germany; Vietnam ranks second in coffee imports for Germany with a 23.22% share (PROECUADOR, 2015)

Chapter 3: Feasibility of internationalization of Ecuadorian coffee

3.1 Background on the export of Ecuadorian coffee

The execution of a feasibility study is essential, since it consists of an evaluative process, both financial and economic, when dealing with the implementation of an entrepreneurial project. In accordance with this, the investment in an Ecuadorian coffee internationalization project is necessary due to the different optimum production levels at the present time. During the period between 2002 and 2011, there was an increase in the trend of production, which presented a dramatic change in 2012, when there was a significant fall of 69% compared to 2011 due to the decrease in the amount of planted area by 8% and the decrease in yield in 62%. This is attributable to the aging of the plantations and the renewal time, which lasts 2 years on average (Monteros Guerrero, 2016).

Coffee consumption around the world doubled since the 1990s, with a steady 2.5% growth per year attributed to the increase in demography and the change in consumer habits, which has recently presented a trend towards high quality coffee (Pizarro-Imaicela, Barrezueta-Unda, & Prado-Carpio, 2016). Germany ranks third in terms of coffee consumption in the world, after the US and Brazil. Germany represents 6% of worldwide coffee consumption (DW, 2018). According to the World Coffee Organization, Ecuador has a consumption of 155 thousand sacks of coffee (60 kg) per year; figure that remains stable from 2013 to the present (International Coffee Organization, 2017).

The execution of the proposed study made it possible to determine whether the economic benefits to be received by the future exporter will be positive or incur a loss and to determine if it is viable or not to enter the said market. Additionally, all the factors involved in the expedition were described, such as export, distribution channel, target, price and costs.

3.2 Market analysis

3.2.1 Product description

The product to be exported is Organic Coffee, whose tariff heading for Arabica coffee is 0901.11.90.10 and for Robusta it is 0901.11.90.20 (Committee on Foreign Trade, 2017). To speak of an organic product is to refer to one whose cultivation does not include the use of fertilizers of any kind, fungicides or insecticides. It is subject to a careful process, from the selection of seeds to the benefit of moisture in different degrees, which give the coffee a good flavor, body acidity and aroma (Villanueva, 2017).

3.2.2 Geography of the destination market

According to PROECUADOR (2015) in 2014, the German regions with the highest demand for coffee were North Rhine-Westphalia with 21.4% followed by Bayern (15.2%) and Baden-Württemberg (12.9%). Roasted coffee and individual portions are the main forms of consumption in North Rhine-Westphalia (Cologne-Düsseldorf). In Bayer (Munich) the particularities demanded by consumers are oriented towards special preparations, ground coffee and instant coffee. In Baden Württemberg (Stuttgart), the consumption of special preparations and individual portions is preferred.

3.2.3 Consumer tastes

Among the tastes of consumption that stand out is the filter roasted coffee, which had a market share of 70% in 2014, two percentage points higher than that presented in 2013. In the second place is the coffee "Whole Bean" that has a market share of 17%, this type of coffee, is used mainly in machines for the preparation of specialties of the product, such as: cappuccino, macchiato or espresso. Finally, the individual portions, pills and capsules of coffee occupy the third place of consumption, these have experienced in recent years a very high growth, in 2014 it experienced a growth of 40% and reached a market positioning of 13%, while which, in 2013 was 11.7% (PROECUADOR, 2015).

3.2.4 Consumer profile

It is estimated that the average German consumes 6.3 kg of coffee per year, which represents a higher per capita consumption than in other European countries, where coffee is very popular, including Italy (5.8 kg / year) and France (5.2 kg / year). However, this consumption per person is behind the Nordic countries, including Sweden (7.0 kg / year) and Finland (12 kg / year) (Ministry of Foreign Affairs, 2016). The German coffee consumer prefers to buy products of organic origin despite having to pay a higher price for it (Bara & Pérez-Akaki, 2015).

German consumers are also increasingly interested in buying organic products, thanks to the constant interest in preserving the environment. In that sense, there are growing concerns and care about the additives in packaged foods and pesticides in food, which leads to a large amount of land for organic products to stand out as a more natural and less modified alternative (Agriculture and Agri-Food Canada, 2015).

The German consumer is characterized by being an adult between 40-50 years. This group makes up for 19% consumption on the market, followed by the group of 70 years and older with a participation of 16.8%. The first group described

prefers coffee in individual portions, people over 50 choose the roasted coffee from the filter. It is necessary to clarify that there are social and cultural determinants that condition the consumption of coffee at a certain age, such as consumption in children. Of the population group analyzed, 84.6% consume coffee at home, and 15.4% consume outside. Of those who consume at home, 64.1% drink roasted coffee from a filter and 20.5% consume soluble coffee. On the other hand, of those who consume outside, 54.6% prefer cappuccino (PROECUADOR, 2015).

3.3 The market position

One of the main techniques to position a product in a foreign market is through the establishment of competitive costs and advertising campaigns. In view of the need to market the product, the trading company must create a web page with the aim of advertising organic coffee. This will provide already positioned intermediaries with greater ease of communication and allow the efficiency of transactions.

3.4 Distribution channels

According to Kotler (2007) the level of marketing channel is the level of intermediaries that perform a function to relate the product with the final consumer and give it a competitive position in the market. The channels can be

- **Indirect:** It occurs when the production of the product is commercialized at the regional level, and the buyer chooses to export it. This means the exporter makes the necessary steps so that the feasibility is adequate and, in this way, the exporter is benefited (MINAGRI, 2016).
- **Through intermediaries:** The organic coffee producer, during the export process can count on the collaboration of an intermediary company, which already has a portfolio of clients abroad, in this case Germany. As stated by MINAGRE (2016), this process is carried out between two small companies which still do not have experience and the operational level required to enter new markets.
- **Direct:** The company assumes everything that deals with the export process, starting from the customs paperwork until the input is at its final destination. By assuming this type of export, the company is likely to have greater economic benefits.

The elements involved are:

- Agents: refers to the purchase order processor who receives a commission as compensation for his work.
- Distributors: An external merchant who buys the products from the Ecuadorian exporter in order to sell them in their market.
- Retailers: Corresponds to a group of a large number of retail chains that identify an opportunity to sell a product. The exporter needs to have a contact with those responsible for purchasing within the chain.
- Direct sale to final consumers: Consists of selling directly to consumers in the country of destination.

Based on the data from PROECUADOR (2015) it has been noted that Ecuador currently uses three channels to carry out coffee distribution. In this investigation, distribution through importers directly related to the industry has been considered. In illustration 3.1, the channel to be used is shown:

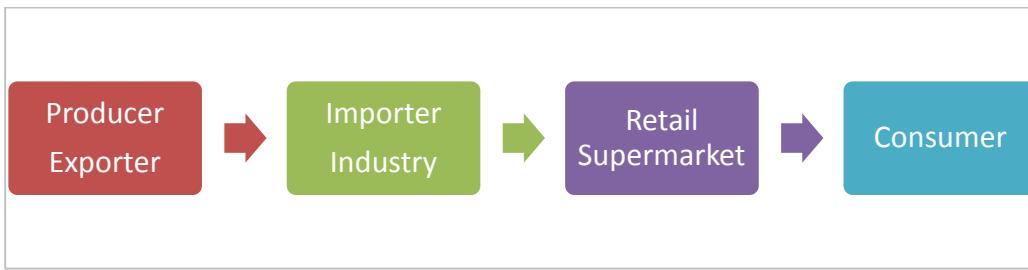


Illustration ¡Error! No hay texto con el estilo especificado en el documento..1:
Modality for coffee distribution

Source: PROECUADOR (2015)

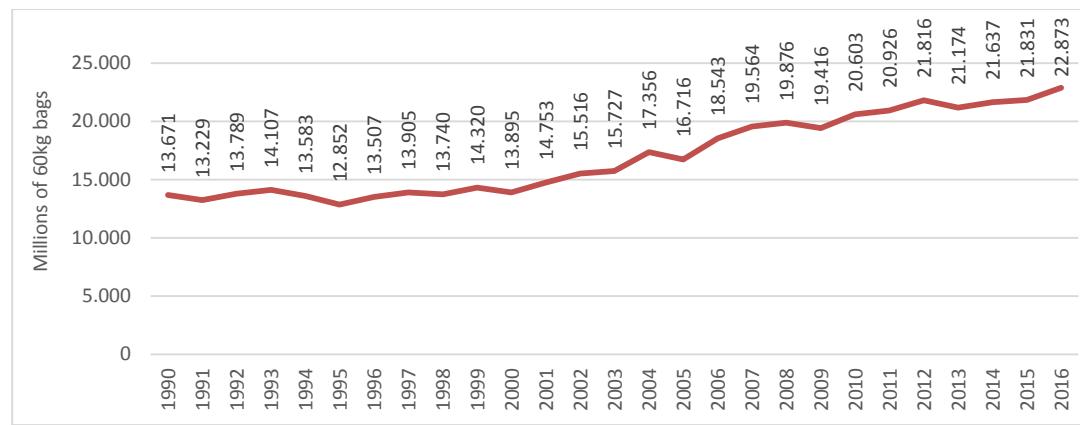
In this context, the distribution of coffee will be made through intermediaries that are established importers in Germany that are in constant relation with the marketing and distribution of coffee. This is necessary because it provides facilities in relation to the management of the market in the destination country. The importers of this region know the commercial environment and the means of internal distribution. It should be noted that the import of the German company will be coffee as raw material to later roast and process, taking care of the distribution to supermarkets or retail stores, which are the last intermediary between the product and the consumer.

With this background, the export of unprocessed Organic Coffee is simpler than the export of previously processed and packaged coffee; the German company is in charge of the transformation. To the benefit of the company, the stores that offer organic food products have gained a high position compared to other types of stores that offer coffee products with a different preparation. In this regard, the German market is conducive to the sale of Organic Coffee.

3.5 Demand Analysis

To determine the demand, the starting point is the analysis of the importation of coffee by Germany.

Graph 3.1: Level of coffee imported by Germany in 60 kg bags from 1990 to 2016



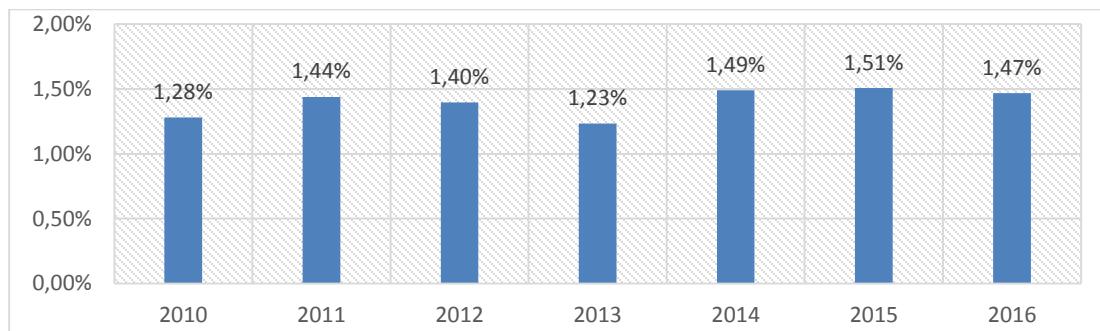
Source: World Coffee Organization (International Coffee Organization, 2017)

Elaborated by: Claudia Mosquera-Alex Villa

Graph 3.1 indicates that the level of coffee imports from 1990 to 1995 remains stable. However, as of 1996, coffee imports gradually surpassed consumption; evidencing that the difference is increasing. This situation could be explained by the fact that Germany imports coffee not only for consumption, but also processes it and re-exports it. Germany is positioned as a coffee exporter without the need to own crops (PRO ECUADOR, 2012). Therefore, to consider the demand for coffee, the coffee import data was evaluated.

The main countries that provide this input to Germany are: Brazil, considered the leading supplier with approximately 34%, followed by Vietnam with 23%, In Latin America, Honduras has a share of 8%, followed by Peru and Colombia with 5 % each (PROECUADOR, 2015).

Graph 3.2: Relation between Ecuadorian exports and German imports 2010-2016



Source: World Coffee Organization (International Coffee Organization, 2017)

Elaborated by: Claudia Mosquera-Alex Villa

Graph 3.2 shows that, of all the coffee imports made by Germany with the world, Ecuador covers approximately 1.5% of them. Based on the data presented, it can be concluded that, the German market is a broad market in which Ecuadorian products still need to be consolidated. These products are still in an introduction phase. The data that has been presented shows the figures of coffee exports in general; no distinction is made between the kinds of coffee that the country exports.

Only a small number of consumer countries individually record the imports of coffee they make; 28 countries belonging to the EU report coffee imports in an aggregate manner as if it were a single type of product, making it difficult to obtain records on the imports made by each country (International Trade Center, 2010). PROECUADOR (2015) points out that the consumption of sustainable coffee bearing a certificate or seal (including Organic Coffee), is increasing. Between 2005 and 2011, imports of Organic Coffee increased by 167% in Germany. Out of the 1.128.015 bags of Organic Coffee (see Annex 3) imported from Ecuador worldwide, 18% were sent to Germany. This is data that is presented in a cumulative manner. Based on the information presented by the National Association of Coffee Exporters (ANECAFE), an estimate of the demand for Organic Coffee was made by Germany.

3.5.1 Demand Estimate

For the year 2016, ANECAFE reports that of 921,174 bags of coffee exported by Ecuador, 5,088 were Organic Coffee; from that figure, 1,503 bags were exported to Germany. Additionally, data from the World Bank on the population growth rate

for Germany was used. The application of the following formula was utilized to estimate the annual demand in relation to the population growth rate of the German country, that is, the annual demand for bags of coffee up to the year 2027:

$$FV = PV(1 + i)^n$$

Where:

FV = future value

PV = present value

i = growth rate

n = periods

Table 3.1: Estimated demand for Ecuadorian Organic Coffee by Germany

Year	Population Rate of Germany	Growth	Annual demand (bags of 60 kg)	Annual demand (kg)
2016	-		1.503	90.180
2017	1,19%		1.521	91.260
2018	1,19%		1.539	92.340
2019	1,19%		1.557	93.420
2020	1,19%		1.576	94.560
2021	1,19%		1.595	95.700
2022	1,19%		1.614	96.840
2023	1,19%		1.633	97.980
2024	1,19%		1.653	99.180
2025	1,19%		1.672	100.320
2026	1,19%		1.692	101.520
2027	1,19%		1.713	102.780

Elaborated by: Claudia Mosquera – Alex Villa

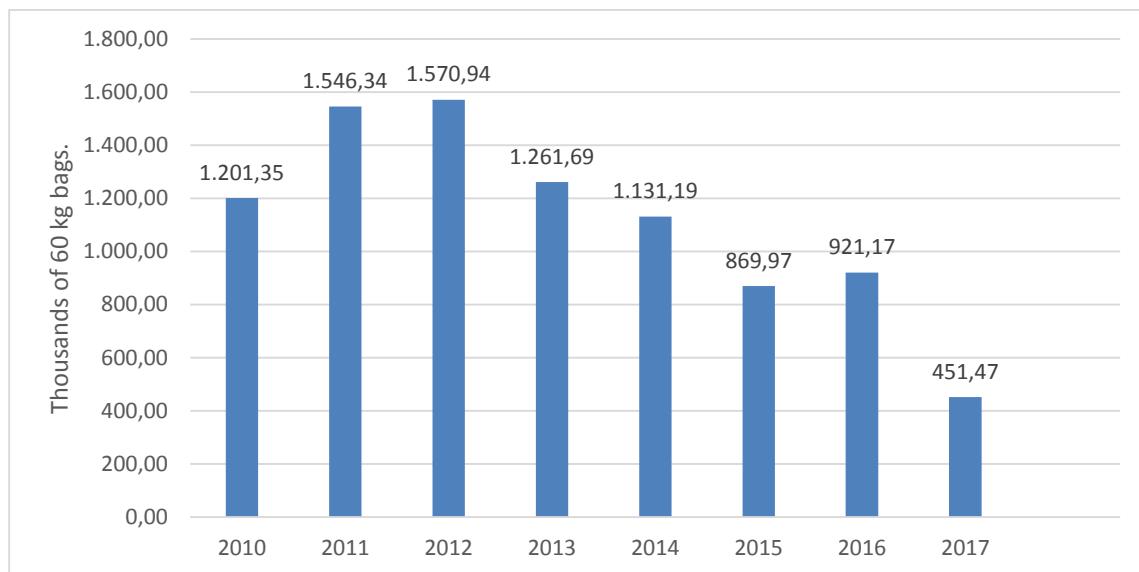
According to estimates made, based on the population growth of 1.19% in Germany, a demand for coffee per year was projected in the country, rising from 1,503 bags in 2017 to 1,713 bags in 2027.

3.6 Supply Analysis

According to the National Association of Coffee Exporters (ANECAFE), the total exports of Ecuadorian coffee to the foreign market stood at 921,000 bags in 2016,

presenting a slight recovery compared to the previous year. Graph 3.3 shows the behavior of exports from 2010 to 2017:

Graph 3.3: Coffee exports made by Ecuador according to the volume (thousands of bags of 60 kilos) in the period 2010-2017.)

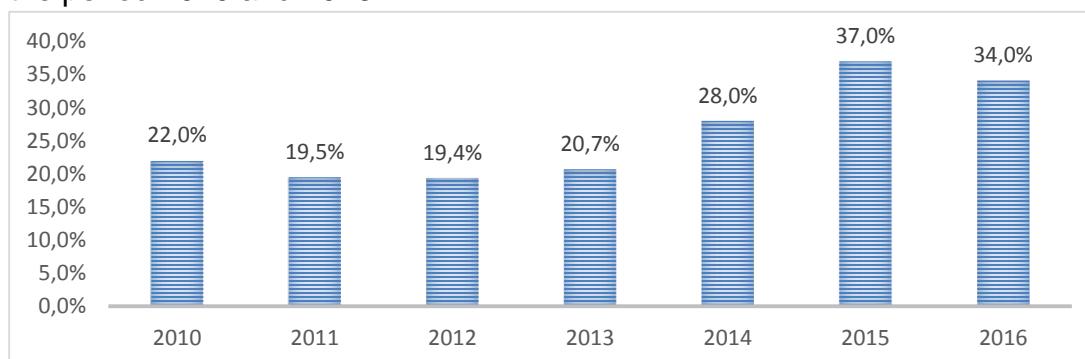


Source: (National Association of Coffee Exporters of Ecuador, 2017)

Elaborated by: Claudia Mosquera-Alex Villa

Coffee exports in the period 2010-2017 have a range of 800,000 and 1,600,000 bags of 60 kilos, the equivalent of 48,000 to 96,000 tons; values that, as of 2013, show a decrease. For 2017 there is a marked decrease.

Graph 3.4: Percentage of coffee exports made from Ecuador to Germany during the period 2010 and 2016



Source: (National Association of Coffee Exporters of Ecuador, 2017)

Elaborated by: Claudia Mosquera-Alex Villa

Coffee exports from Ecuador reveal Germany as one of their main destinations, as shown in Graph 3.4. It can be observed that approximately 20% of total coffee exports are destined to this country and, over the years, this percentage has grown.

3.6.1 Supply Estimate

To estimate Ecuador's OC, offer to Germany, the future value formula was applied (equation 1), in this case using the growth rate of the Gross Domestic Product (GDP) for 2016. The World Bank presents this rate as negative, which means lower production for 2017 and subsequent years.

Table 3.2: Estimation of the offer of Ecuadorian Organic Coffee to Germany, based on the formula of future value and the Ecuadorian GDP

Year	Ecuadorian GDP Growth Rate	Annual Offer (60 kg bags)	Annual Offer (Kg)
2016		1.503	90.180
2017	-1,47%	1.481	88.860
2018	-1,47%	1.459	87.540
2019	-1,47%	1.438	86.280
2020	-1,47%	1.417	85.020
2021	-1,47%	1.396	83.760
2022	-1,47%	1.375	82.500
2023	-1,47%	1.355	81.300
2024	-1,47%	1.335	80.100
2025	-1,47%	1.316	78.960
2026	-1,47%	1.297	77.820
2027	-1,47%	1.277	76.620

Source: Secondary information

Elaborated by: Claudia Mosquera-Alex Villa

According to the estimates presented, if the GDP with a declining trend is maintained, it would be expected that in the year 2027 the annual supply would be 1,277 bags of coffee for the foreign market.

3.7 Unmet demand

Considering both the estimated supply and demand, a difference corresponding to the unmet demand is obtained, which considerably increases over the projected years. This situation is a great opportunity to implement a company

dedicated to the production and marketing of natural coffee, which can cover, partially or totally, the unsatisfied demand in Germany.

Table 3.3: Projection of the unmet demand for CO produced in Ecuador for Germany up to the year 2027

Year	Estimated Demand (60 kg bags)	Estimated Offer (bags of 60 kg)	Unsatisfied demand (bags of 60 kg)
2017	1.521	1.481	40
2018	1.539	1.459	80
2019	1.557	1.438	120
2020	1.576	1.417	159
2021	1.595	1.396	199
2022	1.614	1.375	238
2023	1.633	1.355	278
2024	1.653	1.335	317
2025	1.672	1.316	357
2026	1.692	1.297	396
2027	1.713	1.277	435

Source: Estimates made with own calculations

Elaborated by: Claudia Mosquera-Alex Villa

3.8 Technical study

The technical study of the project acknowledged the analysis of elements related to the basic engineering of the product to be implemented. In this section, the size and location of the

plant, the production process and other aspects related to logistics were analyzed, which in turn established the level of investment (initial and total), costs, and operating expenses (Borja, 2014).

3.8.1 Plant layout

In the future execution of the project, it will be necessary to have own premises for the implementation of the company dedicated to the processing and commercialization of coffee, whose name is foreseen as "NATCAFÉ". The location must be adequate for the development of the productive process; its distribution is considered as follows:

Distribution area: an office will be adjusted, from which the company administrator can receive the raw material, organize and record the inventories, the production process and the distribution of the product. Within this area, the following inputs will be required:

- Computer
- Printer
- Office Materials
- Telephone
- Various supplies

Production area: this area will be used for the storage of raw materials and the placement of machinery necessary for the development of the production process, among the machines to be used are:

- Coffee pulping machine

To pack the product, it requires:

- Tables
- Sacks/bags of 60kg
- String
- Others

Sales area: the finished product arrives in this area to be distributed to the clients.

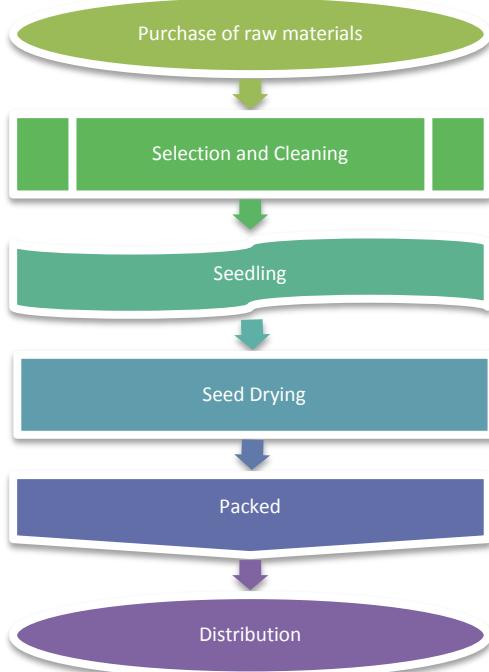
As the main objective of the project is exporting OC to Germany, the process of the company will consist of acquiring the raw material (coffee cherry) to later process it by pulping, drying and packing in sacks.

1. **Acquisition of raw material:** Will be acquired directly from the owners of the farms.
2. **Cleaning and selection:** The mature and complete grains will be selected, this consists of separating those of green color from those of reddish or yellow color (indicative of greater maturity), then they are cleaned to eliminate any type of impurity or garbage.
3. **Pulping:** Consists in removing the skin to obtain the husk less and clean grains; this is done by introducing coffee in the machine pulping machine.
4. **Drying:** After depumping, drying is continued, carried out in cement patios, where the sun dries it directly or in ovens to dry it quicker (Borja, 2014).

5. **Packing:** Dried coffee beans are packed into bags and ready for distribution.
6. **Distribution:** Once the coffee is packaged, it is distributed through the means previously mentioned, that is, through the internal and external distribution channels.

Roasting and grinding are not carried out, because the German market imports more grain coffee to submit it to its own production processes and export them again.

Illustration 3.2: Productive process of the company



Source: Secondary information

Elaborated by: Claudia Mosquera-Alex Villa

3.8.2 Project localization

Coffee is a tropical plant and demands certain environmental conditions for its growth; among them, an altitude between 900 and 1,400 meters above sea level, an annual rainfall of 1,600 to 2,000 mm, with a dry stage of 3 to 4 months for flowering and fruiting, and an average temperature of 17 ° C to 23 ° C. In terms of soil, ideally, it's a mixture of clay and sand, as well as a good level of organic matter and a slight level of acidity (Galarza & Peña Herrera, 2011).

These characteristics must be considered, especially when it comes to cultivation, since the consumer market is more demanding regarding quality. In the country

there are about one thousand farms that produce OC, amongst are those belonging to the Coffee Production Association (APECAP), FAPECAFES and the La América de Jipijapa farm, which are certified and distributed in the provinces of El Oro, Manabí, Morona Santiago, Zamora Chinchipe and Loja (Galarza & Peña Herrera, 2011).

3.8.2.1 Macro localization

There must be consideration for a region that meets the required climate conditions that is able to provide necessary raw materials, has access roads and availability of labor. When analyzing the first two conditions, the Sierra region is considered as the most appropriate, as it is the largest producer of vegetables and fruits nationwide, and the largest coffee producer (Sánchez, 2014).

Regarding the requirement of raw material necessary for the production of OC, it is advisable to establish the project in one of the provinces that have OC producing farms. In this way, access to the necessary inputs for processing and distribution will be more practical. It's worth mentioning that the presence of coffee farms around the area in which the coffee processing and distribution company is to be implemented would not greatly affect the execution of the project, since for the most part, these companies produce OC for consumption or internal marketing.

The province of Loja is considered as the best place for the implementation of the project as a result of the optimal climatic conditions, access roads, proximity to the province of Azuay and its reference as a coffee producing province. In Loja, the cultivation of coffee represents one of the strongest undertakings. The geographical situation, the quality of the soil and the availability and ingenuity of the workforce, make this production of high quality and desired in national and international markets. In fact, 13.5% of the coffee areas nationwide, are located in Loja (Ban Ecuador, 2017).

3.6.2.2 Micro localization

The city of Loja is located south of Ecuador, in the province of Loja, has approximately 260.00 inhabitants, and is located at 2,100 meters above sea level. The temperature varies between 16 ° C and 21 ° C and an average of 18 ° C, resulting in a spring-like climate for most of the year. It is surrounded by important valleys (CA Tamayo, Gonzanamá, Vilcabamba, among others) and next to its main natural reserve, the Podocarpus National Park, which was awarded the third place of Nations in Bloom as "Third most city ecological world" in 2001 (GAD Loja, 2017).

3.9 Installed capacity

The installed capacity allows the determination of the maximum amount of production obtained within a standardized process, in a certain period and under normal operating conditions (Borja, 2014). To establish the optimum capacity, it is necessary to know how many workers are necessary to hire and their daily work hours.

Table 3.4: Required staff for the execution of production activities within the company

Detail	Hours per day
Supervisor	8
Operator	24

Source: Secondary information

Elaborated by: Claudia Mosquera-Alex Villa

According to Table 3.4, a supervisor is required to work 8 hours per day; as for the operative section, it must remain in operation 24 hours a day. For this position 3 people are needed to hire to work for 8 hours each.

Table 3.5: The production process and the tasks necessary to obtain a finished product.

PROCESS	DETAIL	TASK	HOURS
PROCESS 1	Purchase of raw materials	1 worker receives the raw material	1 HOUR
PROCESS 2	Selection of coffee bean and cleaning	2 clean and select coffee beans	2 HOURS
PROCESS 3	Pulping	2 workers are responsible for handling the pulping machine and the placement of the coffee in it.	1 HOUR
PROCESS 4	Drying	Operators carry the coffee beans for drying	1,5 HOURS
PROCESS 5	Packing	Each of the workers places the dried coffee in bags.	1 HOUR
	Product distribution	Each operator dispatches the bags to the distribution means.	0,75 HOURS (45 MINUTES)

PROCESS	DETAIL	TASK	HOURS
	Cleaning	2 workers clean the production area.	0,75 HOURS (45 MINUTES)
	Inventories	1 operator records the inventory	
TOTAL			8 HOURS

Source: Secondary information

Elaborated by: Claudia Mosquera-Alex Villa

Taking as reference the information provided by APECAEL, an association dedicated to the production of coffee and located in the province of Loja, in order to cover the unmet demand, the initial production of OC will be 2,400 kg per year. This is intended to increase by 50% after the third year and 100% after the sixth.

3.10 Demand covered by the project

Table 3.6: Demand that will cover the projected plan until 2027, according to the installed capacity and its relation with the unsatisfied demand

YEAR	Market opportunity		Installed capacity (in kg)	Covered Demand
	BAGS OF 60 kg	IN kg		
2017	40	2.400	2.400	100%
2018	80	4.800	2.400	50%
2019	120	7.200	2.400	33%
2020	159	9.540	3.600	38%
2021	199	11.940	3.600	30%
2022	238	14.280	3.600	25%
2023	278	16.680	4.800	29%
2024	317	19.020	4.800	25%
2025	357	21.420	4.800	22%
2026	396	23.760	4.800	20%
2027	435	26.100	4.800	18%

Source: Estimates made with own calculations

Elaborated by: Claudia Mosquera-Alex Villa

By relating the unmet demand (market opportunity) with the installed capacity, the percentage of the demand that would be covered by the project was obtained; this demand that is expected will gradually increase over time.

3.11 Financial analysis

The implementation of the following project requires investment in certain assets, such as: machinery and furniture, which are presented below:

3.11.1 Project investment

For the execution of the productive process and the operation of the plant, it is necessary to invest in the following elements:

Table 3.7: Machinery, equipment and real estate necessary for the progress of the project, according to its quantity, unit cost and total cost

CONCEPT	DESCRIPTION	AMOUNT	UNIT Q.	TOTAL Q.
Land	Land for the construction of a plant that allows the development of the project	1	35.000,00	35.000,00
Infrastructure	Adaptation of the land for storage, administrative area, coffee office	1	60.000,00	60.000,00
Machinery	Pulping machine	1	8.500,00	8.500,00
Technological equipment	Computer	5	1.150,00	5.750,00
	Weighing machine	1	500,00	500,00
	Printer	2	200,00	400,00
	Telephone	3	25,00	75,00
	Desk	5	250,00	1.250,00
Furniture	Office swivel chairs	5	85,00	425,00
	Office chairs	10	55,00	550,00
Promotion and publicity	Web page	1	600,00	600,00
Investment in records and certificates (export)	Sanitary registration	1	1.000,00	1.000,00
	Records and certificates (export)	1	1.000,00	1.000,00

CONCEPT	DESCRIPTION	AMOUNT	UNIT Q.	TOTAL Q.
Working Capital				22.205,08
Total				137.255,08

Source: Secondary information

Elaborated by: Claudia Mosquera-Alex Villa

The investment amount needed to export the product is 137,255.08 dollars, which will be obtained through credit for small and medium enterprises offered by Ban Ecuador. In addition to this, it is important to establish the investment in capital cost, since this determines the value of the company. This was obtained from the following expression:

Table 3.8: Investment in capital cost

ANUAL COST	\$ 90.053,93
Number of days of gaps between shifts	90
Number of days per year	365
ICT	\$ 22.205,08

Source: Secondary information

Elaborated by: Claudia Mosquera-Alex Villa

- Additionally, a time of 30 days is considered in which the payment will be made upon delivery of the product, it is the time in which the product must reach the distributor.

The time necessary to cover the operation and maintenance value is 90 days, with which, the investment value of working capital is 13,934.79 dollars. Table 3.9 shows the detail of the total of the operative values required to carry out the export of Organic Coffee.

Table 3.9: Operating Costs

Concept	Description	Quantity	Unit Q	Total Q
Supplies	Sheets	3	3,60	10,80
	Pens	3	1,15	3,45
	Permanent markers	4	0,75	3,00
	Printer ink	4	35,00	140,00
	Highlighters	4	0,75	3,00

Concept	Description	Quantity	Unit Q	Total Q
Packing	Packaging-labeling	636	0,40	254,40
	Bags of yute	636	0,15	95,40
	Packing tapes	30	3,00	90,00
Raw materials	Coffee	80 kg.	60,00	4.800,00
Services	Water	12 months	45,00	540,00
	Electricity Service	12 months	80,00	960,00
	Telephone service	12 months	35,00	420,00
	Internet	12 months	30,00	360,00
Cleaning	Brooms	2	1,50	3,00
	Mops	2	2,50	5,00
	Towels	3	3,41	10,23
	Cleaning supplies	2	8,00	16,00
	Personal hygiene supplies	12	1,50	18,00
Promotion and advertising expenses	Maintenance of the web page	12 months	150,00	1.800,00
Internal transport	Loja -Guayaquil	12 months	400,00	4.800,00
	Production company	12 months	30,00	360,00
Salaries and salaries expenses	Payment of salaries and personal wages	12 months	5.350,00	64.200,00
Depreciation		12 months	755,63	9.067,50
Unforeseen maintenance	Insurance	12 months	136,01	1.632,15
Industrial implements	Fire extinguishers	2	65,00	130,00
	First aid kit	1	35,00	35,00
Industrial Security	Copies	3	60,00	180,00
	Boots	6	7,25	43,50
	Gloves	3	3,50	10,50
	Mandil	6	10,50	63,00

Concept	Description	Quantity	Unit Q	Total Q
Total				90.053,93

Source: (Casteblanco, 2009)

Elaborated by: Claudia Mosquera-Alex Villa

As an entity dedicated mainly to export, the human resource will consist of: administrative area staff, an expert in foreign trade, a commercial assistant, three operators, and an accountant; the economic compensation to be received by these personnel is detailed in Table 3.10.

Table 3.10: Wages and salaries according to the position held by the employee within the company

Concept	Quantity	Unit Q.	Unit (month)	Q. Total Q. (anual)
General Manager	1	1.200	1.200	14.400
Graduate in International Relations	1	700	700	8.400
Commercial Assistant	1	600	600	7.200
Operators	3	450	1.350	16.200
Accountant	1	600	600	7.200
Grocer	1	450	450	5.400
Keeper	1	450	450	5.400
Total		4.450	5.350	64.200

Source: Secondary information

Elaborated by: Claudia Mosquera-Alex Villa

The values corresponding to the depreciation of machinery, equipment and furniture, as well as computer equipment are presented in Table 3.11.

Table 3.11: Annual depreciation of machinery, furniture and equipment

Description	Unity	Unit price	Total value	% Dep .	Annual depreciation value
Computer	5	1.150,00	5.750,00	33%	1.897,50

Pulping Machine	1	8.500,00	8.500,00	10%	850,00
Weighing machine	1	500,00	500,00	10%	50,00
Printer	2	200,00	400,00	10%	40,00
Telephone	3	25,00	75,00	10%	7,50
Desk	5	250,00	1.250,00	10%	125,00
Office swivel chairs	5	85,00	425,00	10%	42,50
Office chairs	10	55,00	550,00	10%	55,00
Infrastructure	1	60.000,00	60.000,00	10%	6.000,00
Total					9.067,50

Source: Secondary information

Elaborated by: Claudia Mosquera-Alex Villa

Within the operational expenses, the insurance and maintenance of the equipment must be considered, as well as analyzing the amount of investment for the contingencies. All these values are calculated from the total annual depreciation amount, for the purposes of these projects the items corresponding are shown in Table 3.12.

Table 3.12: Operating expenses according to maintenance, insurance and investment amount for contingencies

Description	%	Annual depreciation	\$ Unity
Maintenance	10%	9.067,50	906,75
Equipment insurance	5%	9.067,50	453,38
Unforeseen maintenance	3%	9.067,50	272,03
Total			1.632,15

Source: Secondary information

Elaborated by: Claudia Mosquera-Alex Villa

3.12 Income flow

To determine the income flow, an annual projection was made for the period of time comprised between 2017 and 2027. For this, the export price of the year 2017 was taken as a base, which is 104, 52 dollars.

Table 3.13: Projection of the income flow according to the export value of coffee and the production that will be generated annually until 2027

YEAR	PRODUCTION	EXPORTATION PRICE	INCOME
2017	2.400	104,52	250.848,00
2018	2.400	104,52	250.848,00
2019	2.400	104,52	250.848,00
2020	3.600	156,78	564.408,00
2021	3.600	156,78	564.408,00
2022	3.600	156,78	564.408,00
2023	4.800	209,04	1.003.392,00
2024	4.800	209,04	1.003.392,00
2025	4.800	209,04	1.003.392,00
2026	4.800	209,04	1.003.392,00
2027	4.800	209,04	1.003.392,00

Source: Secondary information

Elaborated by: Claudia Mosquera-Alex Villa

The income for the first 3 years amounts to 250,848.00 dollars, the fourth-year amounts to 564,408.00 until reaching \$ 1,003,392.00 in the seventh year onwards. It is expected that this revenue stream will have a positive impact on the results, which can be seen in Annex 1.

3.13 Capital Costs

Capital Costs refers to the profitability that an investor demands in exchange for renouncing certain resources that will be used in projects with similar levels of risk. This is an indispensable tool to determine the present value of future cash flows, which will allow to determine the feasibility of the business. The discount rate for a financed capital is presented: 40% personal capital and 60% external financing, which will be implemented through loans or bank loans.

Table 3.14: Discount rate with external financing

$WACC = E / A * R_e + D / A * R_d * (1 - T_c)$	
A, Total Investment	227.309,00
E, Capital	90.923,60
D, Debt	136.385,40

Re, Cost of equity	15,89%
Rd, Cost of debt	12,50%
Tc, Corporate tax rate	22%
WACC, Weighted Avg. Cost of Capital =	12,21%

Source: Secondary information

Elaborated by: Claudia Mosquera-Alex Villa

The weighted average cost of capital is 12.21%, which was analyzed with the respective amortization table (Annex 2). This formula allows discounting future cash flows when proceeding to evaluate an investment project. The capital cost was determined from the following operation:

Table 3.15: Capital Cost

$r_e = r_f + \beta * (r_m - r_f) = \text{Capital Asset Pricing Model}$ - CAPM	
Rf: return expected by the investor of an asset without risk	4,56%
r _m , profitability that the investor expects to obtain if he invests in an investment portfolio that reflects the market	14,00%
β, a coefficient that measures the relationship between asset risk and market risk	1,20
r _e , discount rate without financing	15,89%

Source: Secondary information

Elaborated by: Claudia Mosquera-Alex Villa

The discount rate of personal capital for this investment project, is 15.89%.

3.14 Determination of feasibility

In this process it is important to consider the cash flow, which reflects the income and costs of the project.

Table 3.16: Projection of cash flows according to costs, investment, profits and expenses

YEAR	SALES	EXPENSES				TOTAL EXPENSES	DISCOUNTED NET FLOW
		COSTS	INVESTMENT	DISTRIBUTION OF UTILITIES			
0	250.848,00		\$-137.255,00				\$-137.255,00
1	250.848,00	93.791,16		21.421,93	\$115.213,09	\$135.634,91	
2	250.848,00	97.683,49		20.838,08	\$118.521,57	\$132.326,43	
3	564.408,00	101.737,36		67.264,00	\$169.001,35	\$395.406,65	
4	564.408,00	105.959,45		66.630,68	\$172.590,13	\$391.817,87	
5	564.408,00	110.356,76		65.971,09	\$176.327,85	\$388.080,15	
6	1.003.392,00	114.936,57		131.131,72	\$246.068,28	\$757.323,72	
7	1.003.392,00	119.706,43		130.416,24	\$250.122,66	\$753.269,34	
8	1.003.392,00	124.674,24		129.671,06	\$254.345,30	\$749.046,70	
9	1.003.392,00	129.848,22		128.894,97	\$258.743,18	\$744.648,82	
10	1.003.392,00	135.236,91		128.086,66	\$263.323,58	\$740.068,42	

Source: Secondary information

Elaborated by: Claudia Mosquera-Alex Villa

Once the cash flow has been obtained, the profitability indicators are calculated.

IRR	135,61%
NPV	\$ 2.485.405,76

The project is profitable and feasible to invest in it as a result of the net present value being positive, with an adequate internal rate of return.

3.15 Export risk analysis

Every company activity is exposed to risks, in concurrence with this, the commercialization of products in international markets also has risks. These can be clearly related to export, documentation and acceptance of the product in the new market (Carrizosa, 2011).

However, after extensive text review, it was identified that the main risk that may arise is a failure in the export process. As a result of the lack of knowledge on the proper handling of the required documentation, emergence of risks can occur. Efficient management can facilitate the eradication of these risks.

Conclusions and recommendations

Conclusions

Having met the objective of the investigation, the following is concluded:

- Organic Coffee increasingly takes a greater share in the national and international market, mainly motivated by a change in the consumption habits of people, who every day are more concerned about their health. Thus, generating a niche market that should be exploited through the implementation of a project whose objective is the internationalization of Ecuadorian organic coffee in the European Union.
- The German market is a promising market for Ecuador, since it has a high population density, with a number of about 82 million inhabitants, which demand daily food products. Additionally, it is the second country worldwide when it comes to coffee imports. Within the German economy, the regions with the greatest demand for coffee are North Rhine-Westphalia with 21.4% followed by Bayern (15.2%) and Baden-Wultemberg (12.9%). Roasted coffee and individual portions are the main forms of consumption in North Rhine-Westphalia (Cologne-Dusseldorf).
- In the framework of the Ecuadorian economy, the exportation of coffee has not reached representative levels in the trade balance in comparison with other products such as oil and bananas. This means the exploitation of this market is under development, presenting itself as an opportunity for entrepreneurship and production.
- The conditions for the entry of products to the European Union in terms of sanitary regulation, labeling of food products and product data, do not represent a risk for Ecuadorian exports, since the coffee products of the country meet the required standards and provide the guarantees demanded by Europe.
- The consumer profile present in the German market is adequate for Ecuadorian products given that the German buyer pays particular attention to the price and quality of the products, and appropriately Ecuadorian coffee has been characterized by a high degree of quality. In addition, thanks to commercial agreements with the European Union, the price of the product acquires a competitive character.
- The boom in the consumption of natural products in Germany favors a competitive market for Ecuadorian coffee, since its production complies with regulations that characterize it as an organic product, which is sought-after by the German consumer.

- The tariff barriers do not represent a risk for the importation of coffee by the German country. When exported from Ecuador as raw material, upon entering the importing country, it does not pay customs duties. The opposite occurs with processed coffee which pays taxes depending on its typology. Furthermore, there are commercial and bilateral agreements that benefit the export processes, both in the European Union and in Germany specifically.
- Ecuador covers approximately 1.5% of imports in Germany, which indicates that this market is an opportunity to create economic ties with that country, especially in relation to the exportation of coffee.
- According to the data presented in this research work, the unmet demand projected between the periods of time from 2017 to 2027 is growing. This represents a great opportunity for the coffee producers of Ecuador and can be assessed as an objective to cover this demand partially or totally.
- The company and processing plant, must be located in a favorable place for the development of productive activities. In this sense, Loja is considered as the suitable place for the execution of the project, given that it has availability of raw materials, adequate distribution routes, and a relevant climate for the product.
- Regarding the distribution process, it has been determined that the best channel for the distribution of Organic Coffee is using two intermediaries. One being the industrial importer who uses the coffee as a raw material to toast and prepare, to be later distributed to the different supermarkets and / or retail stores. The other being the supermarkets/retail stores who will be in charge of making the product reach the final consumer.
- The most efficient and feasible way to export coffee to Europe is through the use of 60 kg bags.
- The most effective way to position the product in the market is through marketing strategies, which should be focused on the quality of the product and the advantages it offers to health.
- The investment amount for the implementation of the project amounts to US \$ 137,255.08, a figure that can be obtained through micro credits for small and medium enterprises provided by the state; or through loans from private banks.
- The projected revenue expected by the company for the year 2027 amounts to 1,003,392 US dollars, implying that in relation to the proposed investment, the company is profitable.

- After carrying out the financial analysis, it was determined that the export of the Organic Coffee is feasible, since the internal rate of return is 135.61% and the NPV amounts to 2,485,405.76 dollars.
- Finally, regarding the risks that may arise in the execution and development of the project proposed in the present academic work, these are of an administrative nature, referring to the lack of information about the handling of the documentation required for the exportation process.

Recommendations

Once concluded with the work, it is recommended that the company:

- Take advantage of the unmet demand present in the German market, with the aim of positioning Ecuadorian brands in the market in a competitive manner in terms of prices, quality and compliance with European regulations.
- Comply with the regulations established by the European Commission with regard to sanitary regulations, product labeling and cataloging of the data. Subsequently without compliance with these conditions, the products will not be able to enter the European community.
- Perform constant marketing campaigns that demonstrate the quality of the product, indicate that it is a product made naturally and that in its production process it has not caused damage to the environment.
- Implement a web page, focused on the global promotion of the product, determining different strategies for the different demographic data to which the offer is focused towards.
- Keep updated regarding trade agreements between the exporting country and the European Union, in view of the fact that political, social and cultural conditions may vary in short periods of time.
- Carry out periodic analyzes about the distribution channels of the product, to determine alternatives and efficiency.
- It is important to generate campaigns from both the public and private sectors in favor of orientating Ecuadorian coffee towards a better position.

Bibliography

- Agriculture and Agri-Food Canada. (January de 2015). Consumer Profile: Germany. *MARKET ACCESS SECRETARIAT - Global Analysis Report*, 1-10. Obtenido de <http://www.agr.gc.ca/resources/prod/Internet-Internet/MISB-DGSIM/ATS-SEA/PDF/6582-eng.pdf>
- Arce, R. (2007). *Estudio de mercado de Alemania para alimentos frescos y procesados*. Obtenido de <http://servicios.procomer.go.cr/aplicacion/civ/documentos/EE-IM-01-2007%20Alemania.pdf>
- Arguello, C. S., León, J. E., Díaz, P. B., Verdugo, C. M., & Caceres, M. E. (January de 2017). Incidencia De La Cadena De Valor En El Desarrollo Sustentable Del Cultivo De Café Robusta (*Coffea Canephor*). Estudio De Caso: Parroquia San Jacinto Del Búa. *European Scientific Journal*, 13(1), 102-133. Obtenido de <https://eujournal.org/index.php/esj/article/viewFile/8743/8357>
- Asencio, N. F. (1 de junio de 2015). *LAS POLÍTICAS TRIBUTARIAS Y SU INCIDENCIA EN EL SECTOR EXTERNO DE LA ECONOMÍA ECUATORIANA: PERÍODO 2010-2013*. Obtenido de <http://repositorio.ug.edu.ec/bitstream/redug/7101/1/TESIS%20FINAL%2004-2015.pdf>
- Asociación Nacional de Exportadores de Café de Ecuador. (2017). *Exportación del café ecuatoriano*. Recuperado el 22 de septiembre de 2017, de www.anecafe.org.ec
- Banco Central del Ecuador. (2017). *Estadísticas de Comercio Exterior*. Recuperado el 26 de diciembre de 2017, de <https://www.bce.fin.ec/index.php/c-exterior>
- Banco Central del Ecuador. (2017). *Evolución de la Balanza Comercial. Enero - Diciembre 2016*. Informe Institucional Económico, Banco Central del Ecuador, Quito, Ecuador. Obtenido de <https://contenido.bce.fin.ec/documentos/Estadisticas/SectorExterno/BalanzaPagos/balanzaComercial/ebc201702.pdf>
- Banco Central del Ecuador. (2018). *Índice de Precios al Consumidor, Productor y Mercado Laboral*. Recuperado el 9 de marzo de 2018, de [www.bce.fin.ec: https://www.bce.fin.ec/index.php/component/k2/item/315-](https://www.bce.fin.ec/index.php/component/k2/item/315-)

indice-de-precios-al-consumidor-y-productor-salarios-empleo-y-mercado-laboral

Banco Central del Ecuador. (2018). *Información Estadística Mensual No.1991 - Enero 2018.* Recuperado el 2 de marzo de 2018, de <https://contenido.bce.fin.ec/home1/estadisticas/bolmensual/IEMensual.jsp>

Banco Santander. (2017). *Alemania: llegar al consumidor.* Obtenido de https://es.portal.santandertrade.com/analizar-mercados/alemania/llegar-al-consumidor?&actualiser_id_banque=oui&id_banque=0&memoriser_choix=memoriser

Banco Stander. (2017). Obtenido de https://es.portal.santandertrade.com/analizar-mercados/alemania/llegar-al-consumidor?&actualiser_id_banque=oui&id_banque=0&memoriser_choix=memoriser

Ban Ecuador. (2017). *Ban Ecuador.* Obtenido de <https://www.banecuador.fin.ec/noticias-banecuador/boletines-de-prensa/loja-apuesta-fuerte-al-cultivo-cafe/>

Bara, C., & Pérez-Akaki, P. (2015). Status Quo, Desafíos y oportunidades para el café alternativo que se produce en México y se consume en Alemania. *Agricultura, sociedad y desarrollo*, 12(1), 59-86. Obtenido de <http://www.scielo.org.mx/pdf/asd/v12n1/v12n1a4.pdf>

Borja, E. (Abril de 2014). Estudio de factibilidad para la creación de una empresa productora y comercializadora de café orgánico en el cantón Mira, provincia del Carchi . Quito, Pichincha, Ecuador.

Campbell, M. (2008). *¿Cuáles son los beneficios del consumo de café orgánico?*

Carrizosa, I. (2011). *Análisis y gestión de riesgos al exportar.* Obtenido de <http://www.negociosyemprendimiento.org/2011/10/analisis-gestion-de-riesgos-al-exportar.html>

CEDECO. (2006). *El Beneficiado del Café Orgánico.* Obtenido de http://cedeco.or.cr/files/beneficiado_de_cafe_org.pdf

Centro de Comercio Internacional. (2007). Obtenido de <http://www.intracen.org/guia-del-cafe/logistica-y-seguros/Cafe-a-granel-en-contenedores-resena/>

Centro de Comercio Internacional. (2010). Obtenido de <http://www.intracen.org/guia-del-cafe/mercados-nicho-aspectos-ambientales-y-sociales/el-mercado-mundial-del-cafe-organico/>

Centro de Comercio Internacional. (2018). *Café a granel en contenedores: reseña.* Recuperado el 10 de abril de 2018, de <http://www.intracen.org/guia-del-cafe/logistica-y-seguros/Cafe-a-granel-en-contenedores-resena/>

Comisión Europea. (2017). *Eurostat.* Recuperado el 16 de enero de 2018, de <http://ec.europa.eu/eurostat/data/database>

Comisión para la Cooperación Ambiental. (2014). *Mexican shade grown coffee.*

Duarte, R., & de Souza, P. P. (June de 2016). Logistics Aspects Of Transport Modalities On The Exports Of Raw Sugar. *European Scientific Journal,* 12(16), 345-362. Obtenido de <https://eujournal.org/index.php/esj/article/viewFile/7584/7383>

DW. (2018). *El café significa vínculos únicos entre Alemania y América Latina.* (Deutsche Welle) Recuperado el 10 de abril de 2018, de <http://www.dw.com/es/el-caf%C3%A9-significa-v%C3%ADnculos-%C3%BAnicos-entre-alemania-y-am%C3%A9rica-latina/a-18817127>

DW. (2018). *Puerto de Hamburgo: Modelo de exportación.* Recuperado el 5 de abril de 2018, de <http://www.dw.com/es/puerto-de-hamburgo-modelo-de-exportaci%C3%B3n/a-16740132>

(2006). *El Beneficiado del Café Orgánico.* Obtenido de http://cedeco.or.cr/files/beneficiado_de_cafe_org.pdf

El Tiempo. (2016). Obtenido de <http://www.eltiempo.com.ec/noticias/empresarial/11/401303/se-analizaron-perfiles-y-comportamiento-del-consumidor>

El Universo. (2015). Obtenido de <http://www.eluniverso.com/noticias/2015/05/03/nota/4831091/tendencias-patrones-consumo-son-claves>

Esguerra, M. d. (2013). *EL MERCADO INTERNACIONAL DEL CAFÉ VERDE, SU EVOLUCIÓN RECIENTE Y SUS PERSPECTIVAS 2013-2020.*

F., S., C., S., & Siche, R. (2014). Análisis emergético del café peruano. *Rev. Per. Quím. Ing. Quím*, 43-57.

FAO - Organización de las Naciones Unidas para la Alimentación y la Agricultura. (2016). *Alemania*. Recuperado el 6 de abril de 2018, de <http://www.fao.org/docrep/004/y1669s/y1669s09.htm>

Foros Ecuador. (2013). Obtenido de <http://www.forosecuador.ec/forum/ecuador/educaci%C3%B3n-y-ciencia/33900-poderes-del-estado-ecuatoriano-y-sus-funciones>

Frankfurter Societies - Median GmbH. (2017). *La actualidad de alemania*. Obtenido de <https://www.tatsachen-ueber-deutschland.de/es/categorias/de-un-vistazo>

Frankfurter Societäts-Medien GmbH. (2017). *La actualidad de alemania*. Obtenido de <https://www.tatsachen-ueber-deutschland.de/es/categorias/de-un-vistazo>

FUNDESYRAM. (2010). *Guía para la innovación*. Obtenido de http://www.fundesram.info/document/PDFPUB/GUIA_CAFE_OK.pdf

GAD Loja. (2017). Condiciones sociodemográficas y ambientales de Loja. Obtenido de <https://www.utpl.edu.ec/utpl/campus-utpl/acerca-de-loja>

Galarza, D., & Peña Herrera, V. (Octubre de 2011). Exportación de café zarumeño orgánico gourmet a Alemania. Quito, Pichincha, Ecuador.

Galarza, D., & Peña Herrera, V. (2011). *Exportación de café Zarumeño Orgánico Gourmet a Alemania*. Quito: Universidad Internacional del Ecuador.

Global rates. (2017). Obtenido de es.global-rates.com/estadisticas-economicas/inflacion/indice-de...al.../alemania.aspx

Gómez, O. (2010). *Guía para la innovación de la Caficultura. De lo Convencional a lo Orgánico*. El Salvador.

Gonzales, J. (2012). *Café Orgánico en Mexico*. México.

Google Maps. (2018). *Ruta: Loja - Guayaquil*. Recuperado el 15 de febrero de 2018, de <https://www.google.com.ec/maps/dir/Loja/puerto+de+guayaquil,+Guayaquil>

Guia de Alemania. (s.f.). Obtenido de <http://www.guiadealemania.com/dinero-en-alemania/>

Higuchi, A. (2015). Características de los consumidores de productos orgánicos y expansión de su oferta en Lima. *Centro de Investigación de la Universidad del Pacífico*, 57-89 /.

Icontainers. (2018). *Contenedor de 20 pies*. Recuperado el 10 de abril de 2018, de <https://www.icontainers.com/es/2012/02/01/contenedor-20-pies/>

International Coffee Organization. (2017). *Historical Data on the Global Coffee Trade*. Recuperado el 28 de enero de 2018, de http://www.ico.org/new_historical.asp?section=Statistics

IVACE. (2015). *Instituto Valenciano de Competitividad Empresarial*. Obtenido de http://www.ivace.es/Internacional_Informes-Publicaciones/Pa%C3%ADses/Alemania/ALEMANIA_2015_.pdf

Jativa, M., & Tinoco, L. (1994). *El manejo de cafe Robusta Coffee Canephor en la región amazónica*. Instituto nacional autónomo de investigaciones agropecuarias Ecuador.

Jativa, M., & Tinoco, L. (2014). *El manejo de cafe Robusta Coffee Canephor en la región amazónica*. Instituto nacional autónomo de investigaciones agropecuarias Ecuador.

Legiscomex.com. (3 de Noviembre de 2015). *Café en la Unión Europea / Inteligencia de mercados*. Recuperado el 10 de abril de 2018, de <https://www.legiscomex.com/BancoMedios/Documentos%20PDF/estudio-mercado-cafe-union-europea-2015-consumo-rci302.pdf>

Luna y Murillo. (2015). *Plan de Exportación para la comercialización de café de Habas al mercado alemán*. Guayaquil: Universidad Politécnica Salesiana. Obtenido de <https://dspace.ups.edu.ec/bitstream/123456789/10017/1/UPS-GT001018.pdf>

Lyko, H., Robayo, A., & Wong, M. B. (Mayo de 2016). Perspectivas comerciales del Ecuador con los países de Europa del Este: Bulgaria, Eslovaquia, Hungría, Polonia, República Checa y Rumanía, miembros de la Unión Europea. *Revista PUCE*(102), 79-104. Obtenido de <http://www.revistapuce.edu.ec/index.php/revpuce/article/download/5/7>

Maracas. (2017). *Alimentación en España 2016. Producción, Industria, Distribución, Consumo* (19^a EDICIÓN ed.). Madrid, España: MERCASA. Obtenido de http://www.mercasa-ediciones.es/alimentacion_2016/pdfs/Alimentacion_en_Espana_web_2016_150px.pdf

MINAGRI. (2016). *Ministerio de Agricultura y Riesgo Perú*. Recuperado el 21 de 03 de 2016, de <http://minagri.gob.pe/portal/objetivos/192-exportaciones/introduccion/677-formas-de-exportacion>

Ministerio Coordinador de Producción, Empleo y Competitividad. (2017). *Republic of Oportunuty Ecuador*. Obtenido de <http://inversion.produccion.gob.ec/portafolio-de-inversiones/tecnologias-de-la-informacion-y-comunicacion/>

Ministerio de Comercio Exterior. (2017). Obtenido de <http://www.comercioexterior.gob.ec/acuerdos-comerciales/>

Ministerio Federal de Trabajo y Asuntos Sociales. (2017). Obtenido de <http://www.make-it-in-germany.com/es/para-profesionales-cualificados/trabajar/una-presentacion-de-los-diferentes-sectores/tic>

Ministry of Foreing Affairs. (March de 2016). Product Factsheet: Organic coffee in Germany. *CBI Market Intelligence*, 1-16. Recuperado el 28 de enero de 2018, de https://www.cbi.eu/sites/default/files/market_information/researches/product-factsheet-germany-organic-coffee-2016.pdf

Monteros Guerrero, A. (2016). *Rendimientos de café grano seco en el Ecuador 2016*. Informe sectorial bugernamental, Ministerio de Agricultura, Ganadería, Acuacultura y Pesca, Dirección de Análisis y Procesamiento de la Información, Coordinación General del Sistema de Información Nacional, Quito, Ecuador. Obtenido de http://sinagap.agricultura.gob.ec/pdf/estudios_agroeconomicos/rendimiento_cafe_grano_seco2016.pdf

Muñoz, J. (2014). *Desarrollo de un esquema de exportación de café procesado (molido y tostado) de la empresa Fastec de Colombia S.A.S hacia los países China y Estados Unidos de América*. Trabajo de Grado, Universidad Tecnológica de Pereira, Administración Industrial, Pereira. Obtenido de <http://repositorio.utp.edu.co/dspace/bitstream/handle/11059/4816/33817373M971.pdf;sequence=1>

Navas, J. C. (2012). *El cultivo de café orgánico como una alternativa para el desarrollo de la zona de Cuetzalán*. Obtenido de <http://tesis.ipn.mx/bitstream/handle/123456789/11532/24.pdf?sequence=1>

Ocampo, O. L., & Álvarez, L. M. (julio - diciembre de 2017). Tendencia de la producción y el consumo del café en Colombia. *Apuntes del CENES*, 36(64), 139-165. doi:10.19053/01203053.v36.n64.2017.5419

Oficina Commercial de Ecuador en Alemania . (23 de 08 de 2012). *PERFIL DE CAFÉ EN ALEMANIA*. Obtenido de http://www.proecuador.gob.ec/wp-content/uploads/2015/02/PROECU_PPM2011_CAF%C3%89_ALEMANIA.pdf

Oficina Commercial de Ecuador en Alemania. (23 de 08 de 2012). *Perfil del Café en Alemania*. Obtenido de http://www.proecuador.gob.ec/wp-content/uploads/2015/02/PROECU_PPM2011_CAF%C3%89_ALEMANIA.pdf

Palomares, J., Gonzales, J., & Mireles, S. (2012). *Café Orgánico en Mexico*.

Paura, J., Venzor, I., & Flores, H. (junio de 2016). Efectos de los indicadores económicos en la recaudación fiscal federal: PIB, Inflación, Tipo de Cambio. *VINCULATEGICA EFAN*, 2(1), 176-198.

Philip Kotler, G. A. (2007). *Marketing Version para Latinoamérica 368* (11 ed.). México: Pearson Educación.

Pizarro-Imaicela, J. C., Barrezueta-Unda, S., & Prado-Carpio, E. (mayo de 2016). Análisis de canales de comercialización y consumo de café (coffea arábica) en la ciudad de Machala, Ecuador. *Revista: Caribeña de Ciencias Sociales*, (en línea). Obtenido de <http://www.eumed.net/rev/caribe/2016/05/cafe.html>

Polo, Y. (2013). *Análisis de factibilidad técnica, ambiental y financiera para la producción y comercialización de café sostenible por el grupo asociativo Robles del Macizo, Corregimiento de Bruselas* . Bogotá: Universidad Distrital Francisco José de Caldas Bogotá.

PRO ECUADOR. (2012). *Perfil de Café en España*. Instituto de Promoción de Exportaciones e Inversiones. Oficina Commercial de Ecuador en España.

PRO ECUADOR. (2013). *Análisis Sectorial de Café*.

PRO ECUADOR. (2017). Obtenido de <http://www.proecuador.gob.ec/faqs/que-son-barreras-arancelarias/>

PRO ECUADOR. (2017). *Directorio de Exportadores de Ecuador*. Recuperado el 5 de octubre de 2017, de <https://www.proecuador.gob.ec/compradores/directorio-de-exportadores-de-ecuador/>

ProChile. (2015). *Productos orgánicos en Bélgica*. Obtenido de http://www.prochile.gob.cl/wp-content/uploads/2016/01/Tendencias_Belgica_Organicos_2015.pdf

PROECUADOR. (2015). *Perfil de café en Alemania*. Obtenido de Información de mercado: http://www.proecuador.gob.ec/wp-content/uploads/2015/09/PROEC_PPM2015_CAF%C3%89_ALEMANIA.pdf

PROECUADOR. (2015). *Perfil del café en Alemania*. Alemania: PROECUADOR. Obtenido de <https://www.proecuador.gob.ec/pubs/perfil-de-cafe-en-alemania-2015/>

PROECUADOR. (2015). *Perfil del café en Alemania*. Alemania: PROECUADOR. *República of Oportunuty Ecuador.* (2017). Obtenido de <http://inversion.produccion.gob.ec/portafolio-de-inversiones/tecnologias-de-la-informacion-y-comunicacion/>

Rosa, J. (Julio de 2011). Producción, industrialización y comercialización de café orgánico en la comunidad de Lorena, municipio de Ixcán, departamento de Quiché. Ixcán, Quiché, Guatemala.

Sánchez, D. (Abril de 2014). Proyecto de factibilidad para la creacion de una microempresa productora y comercializadora de café de higo con fitrantes, ubicada en el cantón Cayambe, provincia de Pichincha. Quito, Pichincha, Ecuador.

Santander Trade. (noviembre de 2017). *Santander Trade Portal*. Obtenido de Bélgica: Llegar al consumidor: https://es.portal.santandertrade.com/analizar-mercados/belgica/llegar-al-consumidor?&actualiser_id_banque=oui&id_banque=0&memoriser_choix=memoriser

Santillan, A. (2011). *Los niveles de exportación de café en el Ecuador por variedades 2009-2010*. Guayaquil: Universidad de Guayaquil.

- Schaack, D. (2016). *The organic market in Germany - highlights 2016*. Recuperado el 6 de abril de 2018, de <http://orgprints.org/31200/7/schaack-2017-organic-market-germany-biofach2017.pdf>
- Suca, F., Suca, C., & Siche, R. (2014). Análisis emergético del café peruano. *Rev. Per. Quím. Ing. Quím.*, 17(1), 43-57. Obtenido de <http://revistasinvestigacion.unmsm.edu.pe/index.php/quim/article/download/11314/10146>
- Sujeta, L., & Navickas, V. (2014). The Impact Of Port Logistic Systems On A Country's Competitiveness (Case Of Small Countries). *Economics And Management*, 19(1), 44-53. Obtenido de <http://ecoman.ktu.lt/index.php/Ekv/article/viewFile/5612/3473>
- Trading Economics. (2017). *Alemania - Indicadores Económicos*. Recuperado el enero de 2018, de <https://es.tradingeconomics.com/germany/indicators>
- Unión Europea. (2018). *Unión Europea - Países*. Recuperado el 6 de abril de 2018, de https://europa.eu/european-union/about-eu/countries_es
- Universidad Técnica Particular de Loja. (2017). *Universidad Técnica Particular de Loja*. Obtenido de <https://www.utpl.edu.ec/utpl/campus-utpl/acerca-de-loja>
- Villanueva. (2017). *Exportación de café orgánico*. Obtenido de <https://pygexportaciones.blogspot.com/2017/04/trabajo-de-exportacion-de-cafe-organico.html>

Annex 1 Income statement

DETAIL	YEAR 0	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	YEAR 8	YEAR 9	YEAR 10
INCOME	250.848 ,00	250.848, 00	250.848 ,00	564.408 ,00	564.408 ,00	564.408 ,00	1.003.39 2,00	1.003. 392,00	1.003.3 92,00	1.003.3 92,00	1.003.3 92,00
OPERATING COSTS	90.053, 93	93.791,1 6	97.683, 49	101.737 ,36	105.959 ,45	110.356 ,76	114.936, 57	119.70 6,43	124.674 ,24	129.848 ,22	135.236 ,91
OPERATING PROFIT	160.794 ,07	157.056, 84	153.164 ,51	462.670 ,64	458.448 ,55	454.051 ,24	888.455, 43	883.68 5,57	878.717 ,76	873.543 ,78	868.155 ,09
FINANCIAL EXPENSES	14.244, 00	14.244,0 0	14.244, 00	14.244, 00	14.244, 00	14.244, 00	14.244,0 0	14.244 ,00	14.244, 00	14.244, 00	14.244, 00
UTILITY BEFORE DIVIDENDS	146.550 ,07	142.812, 84	138.920 ,51	448.426 ,64	444.204 ,55	439.807 ,24	874.211, 43	869.44 1,57	864.473 ,76	859.299 ,78	853.911 ,09
15% WORKER SHARE	21.982, 51	21.421,9 3	20.838, 08	67.264, 00	66.630, 68	65.971, 09	131.131, 72	130.41 6,24	129.671 ,06	128.894 ,97	128.086 ,66
PROFIT BEFORE TAXES	124.567 ,56	121.390, 91	118.082 ,43	381.162 ,65	377.573 ,87	373.836 ,15	743.079, 72	739.02 5,34	734.802 ,70	730.404 ,82	725.824 ,42

22% OF INCOME TAX	27.404, 86	26.706,0 0	25.978, 13	83.855, 78	83.066, 25	82.243, 95	163.477, 54	162.58 5,57	161.656 ,59	160.689 ,06	159.681 ,37
NET PROFIT	97.162, 70	94.684,9 1	92.104, 30	297.306 ,87	294.507 ,62	291.592 ,20	579.602, 18	576.43 9,76	573.146 ,10	569.715 ,76	566.143 ,05

Annex 2 Amortization Table

Month	BEGINNING BALANCE	CUOTE	INTEREST	CAPITAL PAYMENT	FINAL BALANCE
1	136.386	14.244	1.088	13.156	123.230
2	123.230	14.244	983	13.261	109.968
3	109.968	14.244	877	13.367	96.601
4	96.601	14.244	770	13.474	83.128
5	83.128	14.244	663	13.581	69.547
6	69.547	14.244	555	13.689	55.858
7	55.858	14.244	445	13.798	42.059
8	42.059	14.244	335	13.908	28.151
9	28.151	14.244	224	14.019	14.131
10	14.131	14.244	113	14.131	(0)

Annex 3. Bag of 60kg.



Source: (Camilo, 2010)

Elaborated by: Claudia Mosquera – Alex Villa