



Faculty of Legal Sciences

Bachelor's Degree in International Studies

**FEASIBILITY PROJECT FOR THE EXPORT OF
TOQUILLA STRAW HATS FROM CANTON
SIGSIG TO THE GERMAN MARKET**

**Thesis submitted in partial fulfillment of the
requirements for the Bachelor of International
Studies degree**

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DEDICATION

To my mother, aunt, and grandmother for their unconditional support. Many of my achievements are thanks to you all.

I want to express my gratitude to my mother, who has instilled in me the values of effort and dedication in every goal I set out to achieve. Your effort and determination inspire me to keep going always.

Thank you, Mother.

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I want to express my gratitude to the University of Azuay, which has allowed me to develop as a professional and has become my second home.

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Resumen

La artesanía fina ecuatoriana presenta una alta demanda a nivel mundial debido a su calidad y belleza, la Unión Europea es uno de sus mayores importadores. El presente estudio tiene por objeto evaluar la factibilidad de la exportación de sombreros de paja toquilla del Cantón Sígsig al mercado alemán, para lo cual se utilizaron métodos cualitativos que recopilaron información sobre el estado productivo del sombrero de paja toquilla en el cantón. El estudio también plantea un proyecto de factibilidad que sustenta la productividad que puede reflejar la exportación del sombrero de paja toquilla hacia el mercado alemán. Los resultados determinaron una alta demanda en el mercado objetivo y la viabilidad del proyecto. Se concluye la importancia del desarrollo del proyecto y como continuar el proceso para llegar a exportar.

Palabras clave: artesanía, exportación, factibilidad financiera, sombreros de paja toquilla, mercado objetivo

Abstract

Ecuadorian fine handicrafts are in high demand worldwide due to their quality and beauty; the European Union is one of its largest importers. The present study aims to evaluate the feasibility of exporting toquilla straw hats from Sígsig Canton to the German market, for which qualitative methods were used to gather information on the production status of toquilla straw hats in the canton. The study also proposes a feasibility project that supports the productivity that can be reflected in the export of the toquilla straw hat to the German market. The results determined a high demand in the target market and the viability of the project. The importance of developing the project and continuing with the process for exportation.

Keywords: handicrafts, export, financial feasibility, toquilla straw hats, target market

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Chapter I

1.1 Description of product

Straw hats represent a garment of Ecuadorian origin and are recognized as a living element of the Intangible Cultural Heritage of Humanity, according to UNESCO's declaration on December 6, 2012. They are essential for sun protection and an aesthetic element when visiting the beach. In the past, they were more discreet and smaller, but they have evolved into larger models over time. Although initially worn mainly by men, they are now part of women's fashion. Additionally, there are various options for accessories that incorporate toquilla straw into their designs, such as earrings, handbags, berets, baskets, and purses (Go Raymi, 2023).

The production of the Toquilla Straw Hat is not just a cultural activity but also a thriving economic venture that has gained global recognition. Viewing this process as a production chain that generates income for local inhabitants is not only financially significant but also culturally vital. It represents the preservation of a rich heritage of ancestral knowledge that must endure in the historical-cultural memory of Ecuador and Latin America (Herrera, Delgado, & Moreira, 2021).

In the specific context of Ecuador, handicrafts represent a set of knowledge transmitted throughout history, which act as symbolic bearers of the community's traditions, beliefs, rituals, and ways of life. This concept has been interpreted from various perspectives, encompassing the technological, anthropological, and cultural, until its recognition as part of peoples' cultural heritage. It is argued that craft techniques constitute tangible manifestations of intangible heritage and play a crucial role in preserving communities' cultural heritage and worldview (Vásquez, Soledispa, & Chilán, 2021).

The main producers of the toquilla straw hat are located in the province of Manabí, specifically in the cantons of Jipijapa and Montecristi, as well as in provinces like Azuay and Cañar. A wide variety of designs and models can be found, the most common being Classic Fedora Semifino, Classic Fedora,

Borsalino and Golfer. These hats are exported to the European continent, Asian nations, the United States, and Australia, where 99% of the production is directed (Astudillo, 2015).

The process of making the toquilla straw hat involves the use of fibers from a palm tree. Farmers collect these stems and separate the fibers from the bark, subjecting them to a boiling treatment to remove impurities. Then, they proceed to bleach them by

exposure to the smoke of charcoal and sulfur. Once prepared, the weavers begin the laborious task of weaving the crown and brim of the hat. The duration of the process varies significantly, from one day to several months, depending on the quality and fineness of the final product (UNESCO, 2012).

1.2 Raw Material

We use toquilla straw or "Carludovica Palmata" in the making of our hats and crafts. The weavers acquire the straw in bundles of fibers called "eight," each consisting of 42 buds or stems. The first step is to select the straw based on its size and whiteness; subsequently, the fiber is moistened in water to ensure uniform widths throughout its entire length.

1.3 Hat Weaving

The hat consists of three parts: template, crown, and brim. Weaving begins with the template, and molds are used to shape the hat; a leather strap or ribbon is used to adjust the weaving. Once the brim weaving is completed, the finishing is done without cutting the excess fibers, and thus, the hat is commercialized.

Figure 1

Sewing of the hat



Source: Asociación de Tejedoras de Sombreros y Artesanías de Paja Toquilla Sígsig (2023)

Finishing of the hat

The finishing process of the hat involves passing the item through the following stages:

Washing

- Pressing: involves pressing the edge of the hat or article.
- Sulfurizing: bleaching is carried out using sulfur.
- Polishing: done to soften the weave and obtain shine.

Ironing

Figure 2
Ironing



Source: Documental Las Tejedoras del Sígsig (2021)

Pressing

The hat is shaped according to the customer's preferences and size.

- Semi-bleaching: the first phase of bleaching using reagents.
- Decoration: involves the placement of ribbons, grosgrain, bias tape, and bows, among others.

Dyeing

The hat is dyed according to specific needs. (TESYA, 2016)

Figure 3
Hat with horse



Source: Asociación de Tejedoras de Sombreros y Artesanías de Paja Toquilla Sígsig (2023)

Ecuador is distinguished for its economic activities centered around craftsmanship and its derivatives, with the country having a population of 763,637 individuals engaged in official, operational, and artisanal tasks. Among these activities, the weaving of the toquilla straw hat stands out notably. Unlike other artisanal products, this hat is

distinguished by being entirely handmade, which grants it international recognition for its unique designs and meticulous details (Ramos, Tello, & Rodriguez, 2020). It is crucial to highlight that, in Ecuador, the artisanal sector can expand its products to 192 countries around the globe. The economically active population in the province of Azuay is mainly divided into three sectors: commerce, manufacturing industries, and agriculture, representing 18%, 17%, and 16%, respectively. Together, these sectors represent 51% of the economically active population in the province (Central Bank of Ecuador, 2019).

In the province of Azuay, the most prominent cantons in the production of the toquilla straw hat are Chordeleg and Sígsg. At the same time, the city of Cuenca stands out as the leading center for exporting and commercializing these hats. Sígsg, located in the mid-east of the province, has one urban parish and five rural parishes, with most of the population residing in rural areas. Families in Sígsg primarily derive their income from agriculture and crafts, with weaving toquilla straw hats being a particularly prominent activity (INEC, 2010).

Table 1

Percentage of Gross Domestic Product by branch of activity in Azuay

Activity	Percentage
Agriculture, fishing, and livestock farming	16%
Exploitation of stone aggregates and minerals	1%
Industrial manufacturing	17%
Supply of electricity, gas, and steam	0%
Potable water, solid waste, and sewage	0%
Construction	8%
Retail and wholesale trade	18%
Transportation and packaging	4%
Food services	4%
Communications and information	1%
Insurance and financial activities	1%
Real estate	0%
Scientific and technical development	2%
Support and administrative services	2%
Public administration	4%
Education	5%
Health and prevention	3%
Creativity and arts	0%
Others	11%
Total	100%

Source This table indicates the percentage of economically active population by branch of activity in Azuay. Compiled by (INEC, 2010).

In the Sígsg Canton, these hats are manufactured by the Association of Hat Weavers and Handicrafts (TESYA). This organization, comprised of 40 members, was

created to share knowledge and do dignified work. Thus, they ensure that buyers and intermediaries pay a fair price for their products, as they have set a fixed price that is competitive within the market. This has even allowed them to export their products (Vazquez, 2023).

Although the organization does not have a determined production level, these women manufacture according to the number of orders. As they have a small number of members, their production capacity is also reduced. However, in Ecuador until the year 2018, exports of toquilla straw hats to Germany were evidenced up to \$1,252 thousand dollars, representing 6.38% of the country's imports of this type (ProEcuador, 2018).

Therefore, this conducts a financial feasibility study to evaluate the viability of exporting the toquilla straw hats from the Sígsig to the German market from 2021-2022. Three fundamental objectives are proposed to achieve this: to use qualitative methods to gather detailed information about the productive state of the toquilla straw hat in the Sígsig Canton, to propose a feasibility project that supports the productivity that can reflect the export of these hats to the German market.

1.4 Market analysis

Straw hats are traditional within Ecuadorian territory. Their manufacturing is artisanal, and fibers from *Carludovica Palmata* are braided. Most of their manufacturers come from peasant families, who have passed on this knowledge from generation to generation (Go Raymi, 2023).

The export of these hats to the German market is proposed, as in this country, there is no production of the necessary raw material, so there is no national production of this product. Consumers are mainly segmented among adults aged 40 and over, with a medium to high purchasing power. The German market marks the consumption of this product, especially during the summer; the target audience is focused on traditional adults with a sober style since the main manufacturing colors are beige or white. Handmade toquilla straw hats have no direct competitors, and their handcrafted nature makes them a viable export product (ProEcuador, 2018).

"The producers of toquilla straw hats from the Sígsig canton have not been able to position themselves adequately in the national market, with the situation even more critical for the international market." (Ramos et al., 2020). Despite this complication in positioning within the international market, according to Guzmán (2011), the reception and demand for the toquilla straw hat within the European market are high. The European continent appreciates the quality and style of artisanal products. Within this demand, the

Tesya Weavers association has the opportunity to involve its production since it meets the quality and style requirements to position itself in this market.

"Ecuador and Europe have signed the Trade Agreement, which allows free trade to exchange products between these countries. For this reason, taking advantage of the numerous products that our country has, the opportunity arises for us to export our goods without tariffs to the entire European bloc and to be competitive." (Carpio et al., 2020)

Commercial relations between Ecuador and Europe, specifically exports to European Union member countries, have increased over the last 20 years. These are based on the Framework Cooperation Agreement 1993 and the Rome Declaration 1996. Initially, shipments contained Ecuadorian bananas, cocoa, shrimp, and tuna. Later, the offer diversified and gained more strength in the first decade of this century. Nowadays, Ecuador exports chocolate, toquilla straw hats, candies, processed fruits, chemicals, broccoli, coffee, and tea. The main markets of the bloc are in countries like Italy, Spain, Germany, France, the United Kingdom, and the Netherlands. The European Union (EU) constitutes the main market for micro, small, and medium-sized enterprises (MSMEs). Of the total non-oil exports of MSMEs, the EU accounts for 34% (ProEcuador, 2018).

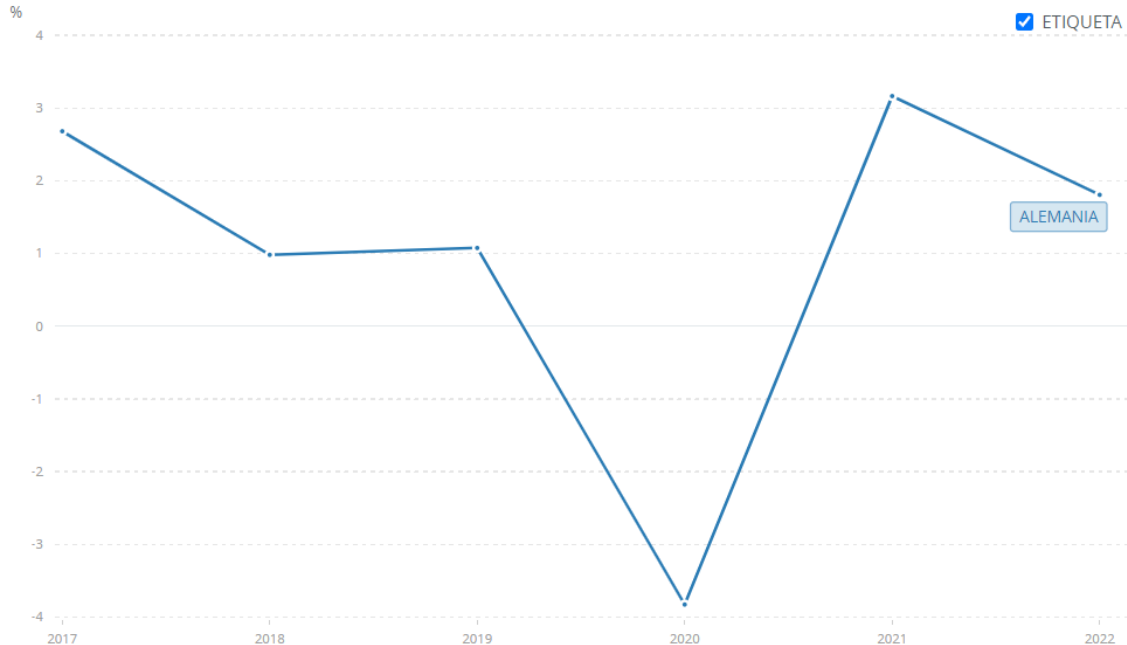
Within the European market, there is commercial participation between Ecuador and Germany. According to Sozoranga (2019), Ecuador has benefitted from import and export activities with Germany over the years, as since 2015, Ecuador has exported more than it imports to this country. The Observatory of Economic Complexity [OEC] (2020) tells us that the export of toquilla straw hats currently represents 0.27% of Ecuador's total exports to Germany. The trade value generated by this commercial activity is \$1.12M annually, according to data collected by the OEC in 2020. This opens up an opportunity for the Tesya association to export its products to the German market and establish a presence.

1.5 Macroeconomic Data of Germany

Germany is considered the leading economy of the European Union, with relevant participation in the global macroeconomic scenario. It is known as the most active and relevant economy in the European system, facing a complex macroeconomic scenario marked by global factors and internal challenges. ICEX (2020) contributes: "Germany, with an area of 357,000 km², ranks as the third largest country in the European Union. In turn, it holds the first place in terms of population, with 83.2 million inhabitants. Strategically located in the heart of Europe" (p.4).

Table 2*Gross Domestic Product in Germany 2017-2022*

Year	2017	2018	2019	2020	2021	2022
GDP	2.7	1.0	0.6	4.9	3.5	1.8

Figure 4*Gross Domestic Product 2017-2022*

Source. Gross Domestic Product Germany. Compiled by: Central Bank of Germany (2023)

The evolution of the German GDP in 2017-2022 indicates growth of 2.7% in the first year. However, the following year shows a slight decrease, which continues in the subsequent year, coinciding with the suspension of productive activities during the COVID-19 lockdown period. However, in 2020, the GDP increased above the standard average, meaning 2%. This trend continues in the following year, with the highest growth between 2020 and 2021 and decreasing in 2022.

Likewise, the behavior of the German GDP in the last five years is shown, demonstrating minimal variation between 2017 and 2018, a significant decrease due to the COVID-19 pandemic, and progressive recovery in the following years, 2020 and 2021. Then, it slightly decreased and became stagnant.

Chapter II

2.1 Feasibility and market

The German market is known for appreciating high-quality and sustainable artisanal products. With their artisanal tradition and sustainability, Straw hats could find a niche in this market, as the demand for Ecuadorian straw hats in the German market has experienced sustained growth in recent years, driven by several factors. Firstly, the growing awareness among German consumers about sustainability and authenticity in products has increased the attraction for artisanal items, and the straw hat, with its handmade craftsmanship and use of natural materials, meets these criteria (ProEcuador, 2018).

Furthermore, the strong cultural connection and extensive tradition behind these hats have generated genuine interest among German consumers. The narrative behind each hat, its hand weaving by Ecuadorian artisans, and its designation as an Intangible Cultural Heritage of Humanity by UNESCO in 2012 add an emotional and cultural value that resonates with German consumers seeking authentic experiences (Castellanos, 2017).

Therefore, the demand for Ecuadorian straw hats in Germany is supported by their authenticity, sustainability, cultural connection, and appreciation of the ethical fashion world. The crucial task for producers is to uphold high-quality standards, a responsibility that will ensure the effective communication of the history and values behind each hat and meet the expectations of a demanding but growing market (Astudillo, 2015).

To analyze the feasibility of the project, it is necessary to examine the export market from Ecuador to Germany. This is required to determine how many items have been shipped according to the tariff subheading, thus allowing the determination of sales levels in both economic values and technical units, which will determine the viability of exports to the country.

Straw hat exports are an important benchmark for the country, so analyzing the export levels and target market is relevant. To do this, the tariff subheading must be determined. The tariff classification system facilitates the identification of products exchanged globally through a unique numerical code. This system, known as the Harmonized System for the designation and coding of goods, assigns specific codes to different types of products (NANDINA, 2015).

In this case, tariff subheading 650200 Hats for hats braided or made by joining strips of any material without forming, finishing, or trimming toquilla straw or mocora straw

will be used in the present analysis. Below, the exportation from Ecuador to the world during the last ten years is detailed.

Table 3

Export of straw hats in thousands of dollars from Ecuador to Germany

AÑO	UNITS	FOB - \$	% OF TOTAL UNITS	% OF TOTAL FOB - \$	UNIT VALUE
2012	18.000,00	165.000,00	11,61%	11,96%	9,17
2013	22.000,00	179.500,00	14,19%	13,01%	8,16
2014	24.500,00	229.000,00	15,81%	16,60%	9,35
2015	24.000,00	228.600,00	15,48%	16,57%	9,53
2016	26.800,00	233.150,00	17,29%	16,90%	8,70
2017	28.000,00	235.000,00	18,06%	17,03%	8,39
2018	28.000,00	235.000,00	18,06%	17,03%	8,39
2019	26.000,00	233.000,00	16,77%	16,89%	8,96
2020	21.000,00	215.500,00	13,55%	15,62%	10,26
2021	23.000,00	222.300,00	14,84%	16,11%	9,67
2022	29.000,00	238.900,00	18,71%	17,32%	8,24

Note. This table presents sales data for straw hats during the period from 2012 to 2022. Compiled by TradeMap (2024).

The table presents the exports of straw hats from 2012 to 2022. The quantity exported in units is shown, and it can be observed that exports have fluctuating values. They started in 2012 with sales of \$165,000, and although sales increased during the years, the last four years indicate a considerable decrease.

In the analysis of 2012, 18,000 thousand units of straw hats were sold for a FOB value of \$165,000. This represented 11.61% of the total units sold during the period and 11.96% of the total FOB value. The average unit value of each semi-processed hat sold was \$9.17, indicating an increase in sales in 2013. From 2014 to 2018, sales remained upward, indicating significant exports. However, in 2019, there was a considerable decrease in sales until 2021. Finally, in 2022, there is a considerable increase.

The table provides an overview of how sales have fluctuated over the years in terms of quantity, value, and average unit price. This can be evidenced in this graph, which shows the trend of the mentioned subheading's exports during the period 2012-2022. Likewise, within the German market, there are various competitors in different countries. The main exporters of hat casings, braided or made by joining strips of any material without shaping, finishing, or lining, are initially Ecuador, followed by China, Italy, Chinese Taipei, and Ireland (TradeMap, 2024).

Table 4

Market share according to exporting countries to Germany

COUNTRY	UNITS IN THOUSANDS	PARTICIPATION
Ecuador	21.856	50%
Italy	15.358	35%
China	4.006	9%
Chinese Taipei	1.564	4%
Ireland	134	0,30%
Netherlands	150	0,30%
Portugal	150	0,30%
United Kingdom	169	0,40%
United States	207	0,50%
France	79	0,20%
Hong Kong	168	0,40%

Note. This table indicates market share by country. Source: ProEcuador (2022).

As can be seen, Ecuador is the country with the highest market share, representing 50% of exports to Germany in terms of straw hat cases, followed by Italy with 35% and China with 9%. Therefore, analyzing the potential market expansion, While Ecuador represents 50% of imports of the subheading under study to Germany, each company internally has a share that adds up to a total of 100%.

Table 5

Participation of main exporters

Main Exporters	Percentage of exportation
Enkador S.A	41%
Francelana S.A	35%
Importadora Y Exportadora Wimasociados Cia. Ltda. - Wimasociados Cia. Ltda	24%
Total	100%

Note. This table indicates the sales forecast for the coming years. Source: Author (2024).

As can be observed, Enkador S.A. is the company with the highest market share. This has been achieved through a lot of effort and internal growth, as per the company's history. This company started with a market share of only 14%, and thanks to the effort of its employees and the making of good decisions, it has increased its market incidence. In 8 years, the company has become the competitor with the highest percentage within the market (Enkador, 2022). Considering this, the possibility has been raised for Tesya to start with a 15% market share, as solid growth is anticipated over time.

Germany stands out as the main economic power in Europe and ranks fourth globally. However, the country experienced serious repercussions due to the conflict between Russia and Ukraine. Before the invasion, Germany depended considerably on Russian gas, oil, and coal, with approximately one-third of its primary energy supply coming from Russia. After a growth of 1.8% in 2022, Germany's GDP decreased by approximately 0.5% in 2023 (according to the IMF, or -0.3% according to the European Commission), as industrial production continued to fall in the third quarter following a slow first half. Additionally, high inflation reduced purchasing power, negatively impacting private consumption, while export volumes decreased due to the economic weakening of Germany's main trading partners. A modest recovery is expected in 2024, driven by increased growth in the domestic consumer services sector, while the manufacturing sector will depend on foreign demand. The IMF estimated that the federal government deficit would be 2.4% of GDP in 2023 (compared to 2.1% the previous year). In 2024, it is expected that the government deficit will decrease to 1.1% of GDP (1.6% according to the European Commission). In addition to the removal of energy-related measures, fiscal consolidation will be supported by strong growth in government revenues (Santander, 2023).

The Multiparty Trade Agreement between the European Union (EU) and Ecuador, which came into effect on January 1, 2017, aims to promote trade and investment between both parties. Among the key components of the Multiparty Trade Agreement are the elimination of tariffs on most products, providing Ecuador with preferential access to the European market for its agricultural and non-agricultural exports, such as bananas, shrimp, flowers, and cocoa. Furthermore, clear rules on product origin are established, protecting geographical indications of traditional products and ensuring that products meet necessary sanitary and phytosanitary standards. This agreement has allowed Ecuador to significantly improve its access to one of the world's largest markets, boosting its exports and attracting foreign investment, while the EU has benefited from a stable and diversified source of agricultural products and natural resources, facilitating European companies' access to the Ecuadorian market on preferential terms (Vice Presidency of the Republic of Ecuador, 2017).

Market conditions are also important, as the target audience in Germany consists of young people between 20 and 40 years old who prefer designs with bright, colorful, and unconventional colors while maintaining the classic hat standard. It is important to

analyze that the German market consumes according to certain seasons of the year due to the seasons that occur in the location (PROECUADOR, 2019).

Similarly, substitute products within the market are important. In this case, there may be direct substitutes, such as the straw hat, which has a similar weave to the straw hat; however, this product has no significant presence in Germany. On the other hand, based on the need, indirect substitutes such as caps, visors, and even hats made of other materials can be considered (Zambrano & Monge, 2021). Additionally, there are various complementary products that can accompany these hats, both to improve their functionality, such as ribbons and hat bands, cases and boxes for storage, care and maintenance accessories, as well as clothing and accessories that can be combined according to the hat's style (Worderland, 2023).

While the product's exports experience significant fluctuations over the years, it is necessary to make a sales projection that determines the feasibility of the project. For this, sales made from Ecuador to the world from 2012 to 2022 and the other mentioned factors were considered.

Table 6
Sales Forecast

SALES PROJECTION	
	UNITS PROJECTED
2023	27.501,82
2024	27.990,00
2025	28.478,18
2026	28.966,36
2027	29.454,55
2028	29.942,73
2029	30.430,91
2030	30.919,09
2031	31.407,27
PROJECTED BASE	28.478,18

Note. This table indicates the sales forecast for the upcoming years. Source: Author (2024).

To obtain the projected base and estimates of future sales, we conducted a projection based on historical years using the Forecast formula within Excel. In this way, based on the primary information, it has been determined that there will be a projected base of 28,478.18 units of products to be exported. Thus, based on this, the total revenue that will be obtained from the exportation can be determined.

Table 7
Sales forecast of the project

	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5
Quantity of sales	28.478	29.333	30.213	31.119	32.052
% of sales	15,00%	16,00%	16,00%	17,00%	18,00%
Sales of project	4.272	4.693	4.834	5.290	5.769
FOB (US\$)	8,60	8,70	8,80	8,90	9,00
INCOME TOTAL	36.736,85	40.830,88	42.539,20	47.082,86	51.924,96

Note. This table indicates the sales forecast for the first 5 years of the project. Source: Information provided by Trade Map and adapted into a graph by the author.

It has been decided to set the FOB price at \$8.60, as it proves to be a competitive price in the market. Likewise, a progressive increase of 0.10 cents annually is foreseen, considering market growth and demand behavior. The country has implemented solid fiscal and monetary policies to provide price stability (Datosmacro, 2024), which is an indicator of growth for the country, especially for the export market.

A steady growth in sales is observed over the five years of the project. In the first year, a total of 4,272 units of straw hats are planned to be sold, with a gradual increase to reach 5,290 units in the fifth year. This increase translates into an increase in total revenue, from \$36,736.85 in year 1 to \$51,924.26 in year 5. Total revenue is calculated by multiplying the total sales quantity by the unit price for each year. A gradual increase in revenue is observed, indicating steady growth in the monetary value of sales over the analyzed period, resulting in a total of \$219,114.76 in total revenue.

2.2 Distribution Channels in Germany

According to a report from PRO ECUADOR issued in 2018, it is concluded that there is no local production of the raw material for the manufacture of straw hats in European territory, which implies the absence of domestic supply in the German market for this product.

The market segment mainly targets adult consumers aged between 40 and 55, who have a purchasing power ranging from high to medium-high. Consumption behavior in the German market is influenced by the seasons, with summer being the peak demand season. In winter, hats made of materials such as wool or cloth are preferred. In this context, straw hats are an attractive option for the festive season (ProEcuador, 2018).

Despite being a unique product, straw hats have substitutes in the market, such as hats with similar designs but made from synthetic materials, mostly originating from Asian countries, with China standing out as one of the main producers.

The target audience for the marketing and positioning of these hats is adults who value the product's properties and cultural significance. Demand is primarily concentrated in specialized hat shops, which exist throughout the country. The most well-known are Gamboa Fashion, El Caballo Monatsangebote, and K. Dorfzaun. Additionally, there is a trend towards the choice of traditional colors such as white or beige, although hats in more diverse shades are offered, with their sales being less representative in comparison.

Germany stands out for its robust economic growth, representing an opportunity for straw hat producers. Additionally, it has a strong economy, and the presence of the Ecuadorian-German Chamber of Industry and Commerce benefits the commercial relationship between both countries, promoting trade exchange. Given its status as a developed economy, Germany enjoys a high standard of living, which is reflected in the significantly high purchasing power of its consumers. This fact makes the German market an attractive target for the export of straw hats. However, it is important to consider that Germany is also a competitor in the sector, as it is one of the main exporters of woven hats globally, highlighting the importance of differentiation and quality to stand out in this competitive market (Datosmacro, 2024).

Germany is shown as a market with the potential for the entry of Tesya association hats, as the trend leans towards a positive outcome in the event of successfully entering this market. Additionally, according to the calculations made for the sales forecast, growth is observed not only in the number of sales but also in the percentage that would be taken at the time of entering the market. Finally, the quantitative elements of the German market support the feasibility of straw hats in this market.

Chapter 3

3.1 Process of elaboration

The process of making straw hats involves multiple phases. The process begins with collecting toquilla straw, where collectors often have to walk for hours to reach the plantations. The ideal climatic conditions for this work involve high humidity, ensuring the maximum quality of the material in terms of color and flexibility and thus preventing damage during transportation (UNESCO, 2012).

Figure 5

Toquilla Straw plantations



Note: This graph indicates a toquilla straw plantation. Source: UNESCO (2010).

Once in the toquilla straw, collectors carefully select the buds that will be precisely cut, thus preserving the health of the tropical forest after a thorough inspection. After the stems arrive at the processing center, they undergo a cleaning process and additional inspection to detect and separate those bruised or with natural cuts. The suitable plant stems are opened and beaten to find the core, which has white or beige tones (Castellanos, 2017).

Figure 6

Selection of stems



Note: This graph indicates the selection of toquilla straw stems. Source: Dascha (2021).

Subsequently, a tool is used to separate the green edges of the fibers and choose the suitable ones for the next step. After this selection, the straw is cooked in a pot with firewood and rolled by hand to immerse it in the hot container for about 90 seconds (Go Raymi, 2023).

Figure 7
Toquilla straw sewing



Note: This graph indicates the cooking of toquilla straw. Source: ModestoHats (2010).

Once cooked, it is spread out on ropes to dry in the sun for 30 minutes. Then, the straw is smoked by placing it in an oven with sulfur for 12 hours to remove impurities and lighten it. This meticulous process is essential to prepare the toquilla straw for making hats and other handmade products (Go Raymi, 2023).

Figure 8
Toquilla straw drying



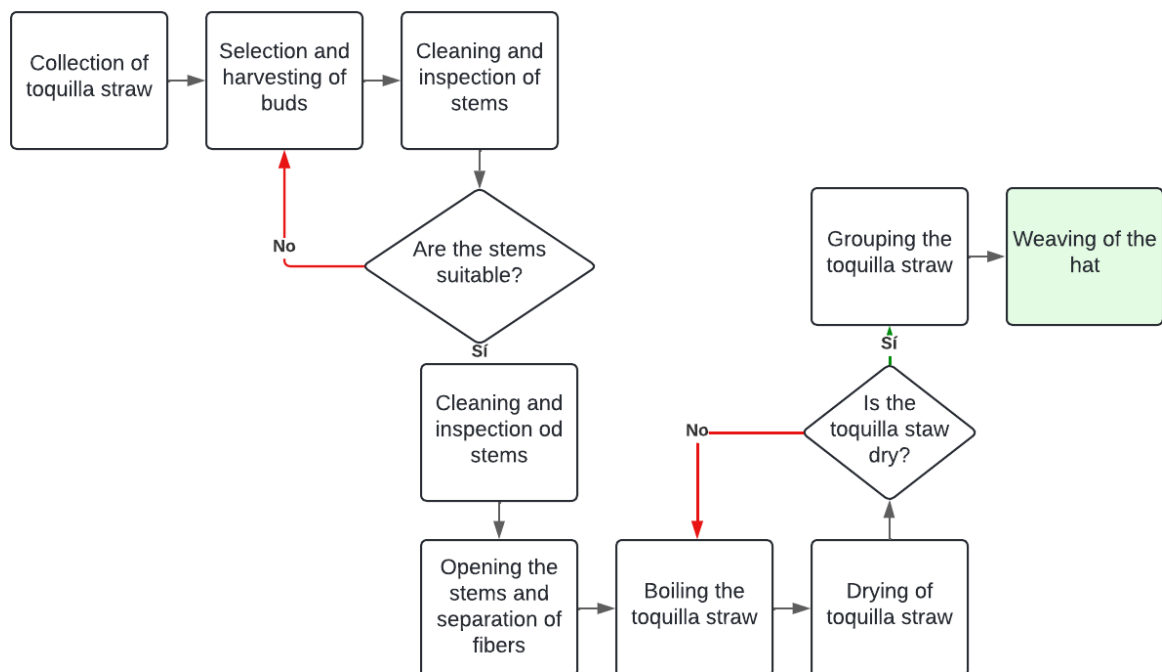
Note: This graph indicates the drying of toquilla straw. Source: Diario Ecuador (2021)

Once the straw is ready, the weaving of the hat begins. It is important to have selected the highest quality fibers, considering aspects such as size, color, and durability. The weaving process of a hat starts in two different ways: the "Crab" weave, which requires eight strands, and the "Mat" weave, which needs 16 strands (traditional weaving). Once this stage is completed, the weave is placed on a wooden mold to begin weaving. The time required to finish a bell-shaped hat, a true artisanal gem, depends on various factors. The fineness of the strands significantly influences it (finer strands require more time) and the size of the brim (if it is shorter, less time is needed).

The season also plays a significant role; in colder climates, weaving can occur for more hours, while in warmer climates, time may be limited. Therefore, producing a Panama hat can take three weeks to six months and even, in some exceptional cases, up to one year. This extended process of completely manual craftsmanship justifies the cost of these hats, which are not mass-produced but result from meticulous and dedicated work (Go Raymi, 2023).

Figure 9

Flowchart of the manufacturing process of the toquilla straw hat



Note: This graph indicates the flowchart of the toquilla straw hat manufacturing process. Source: Author (2024)

3.2 Cooperative Management Model (Tesya).

Tesya is based on a business philosophy of excellence, tradition, and sustainability. Its mission is to produce the highest-quality toquilla straw hats, preserve ancestral artisanal techniques, and promote sustainable development in the communities where it operates. Tesya strives to be an industry leader in terms of the quality of its products and its commitment to the environment and local communities.

At Tesya, quality is valued at every stage of the production process. From the harvesting and preparing of toquilla straw to finishing and quality control of their hats, they maintain the highest standards at all times. Their production team consists of highly skilled and dedicated artisans who work with passion and attention to detail to create each hat as a unique work of art.

Innovation is also a fundamental pillar in the organization. They are constantly seeking new ways to improve their products and processes, whether through research and development of new production techniques or collaborating with designers and artists to create innovative and exclusive hats that meet their customers' needs and expectations.

In terms of corporate social responsibility, Tesya is committed to supporting the local communities involved in producing toquilla straws and promoting sustainable and environmentally respectful practices. Additionally, they actively participate in community and cultural development initiatives, contributing to the well-being and prosperity of the communities where they operate.

Tesya has 150 members, all of whom are women between 40 and 65 years old. Of these, 130 are solely dedicated to the elaboration of toquilla straw hats, while the remaining 20 are also involved in livestock farming. Although the organization maintains its traditional weavings, the most elaborate hats are the fine and the chullado.

Figure 10

Fine Hat



Note: This graph indicates the fine hat. Source: Hat Museum (2021).

It is important to mention that the organization's hat production depends on each member. On average, one person can produce up to four hats per week, indicating a production of 600 hats per week for all members. This totals 2,400 hats per month or a total of 28,800 hats per year, which is their average production capacity.

Table 8
Tesya Exports 2019

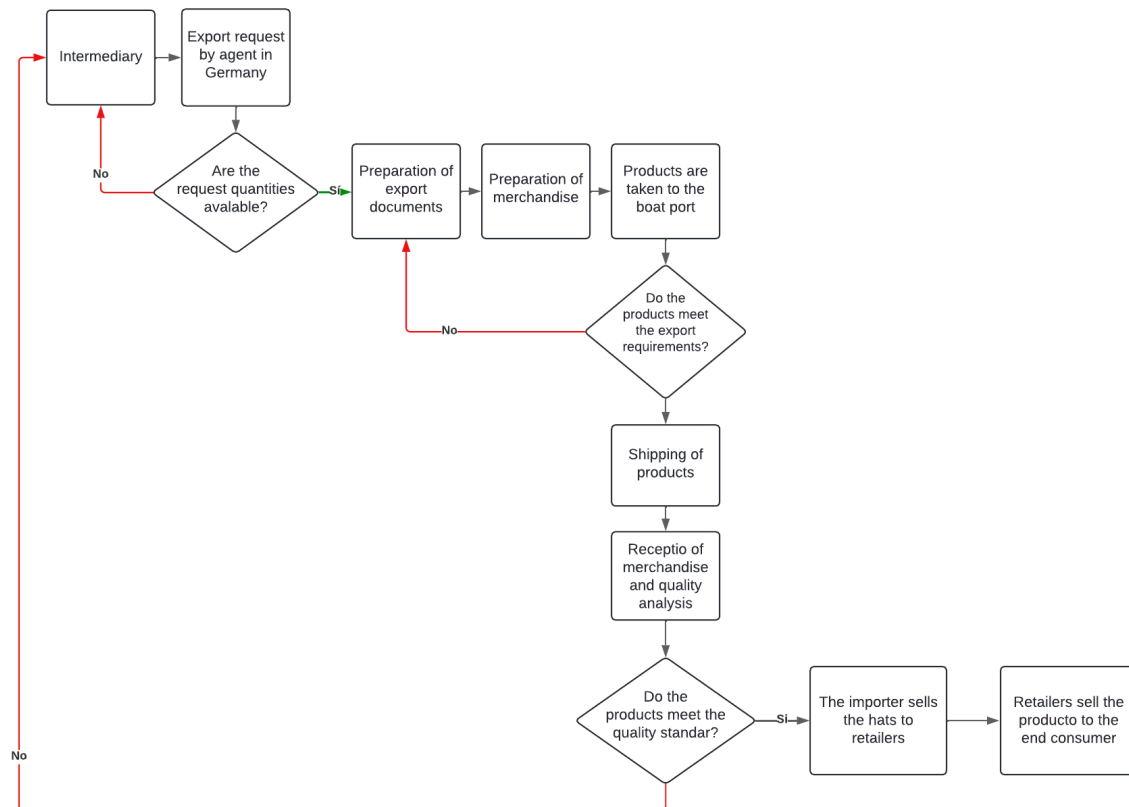
Year	Exportations	%	Variation in \$	Variation %
2015	\$ 51.353,00	12%		
2016	\$ 97.44,00	22%	\$ 46.091,00	10%
2017	\$ 68.070,00	15%	\$ -29.374,00	-7%
2018	\$ 173.866,00	39%	\$ 105.796,00	24%
2019	\$ 54.084,00	12%	\$ -119.782,00	-27%
	\$ 444.817,00	100%		

Note: This table indicates Tesya's exports in 2021. Source: Veritrade (2021).

The organization has 28 customs records, with France being the leading destination. However, the destinations may have varied due to limited information, as the records are issued only during June, July, and August. The primary means of transportation used has been maritime.

3.3 Export process of the product

Figure 11
Export product flowchart



Note. This chart indicates the hat export process. Source: Author (2024)

To initiate the export of hats, Tesya first makes its manufactured products available. An importer in Germany requests the required quantities from Tesya. Subsequently, in Ecuador, the organization is responsible for preparing all necessary documents and coordinating the transportation of the products to the port of embarkation. Once ready, the shipment is sent to Germany, a process that usually takes around 30 days. Upon arrival in Germany, a customs agent inspects the merchandise and proceeds to deliver it to the designated importer. The importer receives the hats, confirms receipt, and conducts a quality check. Subsequently, the products are entered into the importer's stock and distributed to retail companies in Germany. Finally, the retail companies are responsible for delivering these products to end consumers. This process involves a series of coordinated steps to ensure compliance with legal, customs, and quality requirements during the export and import of Tesya's hats to the German market.

Table 9
Administrative expenses

Administrative Expenses					
	1	2	3	4	5
Electric bill	220	220	220	220	220
Water bill	50	50	50	50	50
Telephone bill	80	80	80	80	80
Internet	150	150	150	150	150
TOTAL BASIC SERVICES	500	500	500	500	500
Salaries	\$ 5.400	\$ 5.400	\$ 5.400	\$ 5.400	\$ 5.400
Office Rent	\$ 1.000	\$ 1.000	\$ 1.000	\$ 1.000	\$ 1.000
Warehouse Rent	\$ 800	\$ 800	\$ 800	\$ 800	\$ 800
Office supplies	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100
Cleaning Supplies	\$ 100	\$ 100	\$ 100	\$ 100	\$ 100
Total Administrative expenses	\$ 7.400	\$ 7.400	\$ 7.400	\$ 7.400	\$ 7.400

Note. This table indicates Tesya's administrative expenses

This table represents Tesya's administrative expenses over five years. The electricity costs remain at \$220 from the first year until the fifth year. The water costs are also \$50 during the first year and are expected to remain constant until the fifth year. Following the same logic of activity, the telephone costs remain the same for all years at a price of \$80, and the internet costs are also constant. These services are essential for maintaining company communication and operations.

The salaries and social benefits remain constant during the five years of the project, as two employees are needed to carry out the work as the company grows. Each employee's salary is \$450 monthly. The annual salary expense is \$5,400. The office rent cost is \$1,000 in the first year and remains the same until the fifth year. Similarly, the initial warehouse cost was \$800, which was maintained until last year. The expenses on office supplies and cleaning also remain constant over the 5 years. The total of the administrative expenses is \$7,400.

Table 10
Purchase of hats

Purchase	1	2	3	4	5
Quantity	\$ 4.272	\$ 4.693	\$ 4.834	\$ 5.290	\$ 5.769
Unit Value	\$ 4,25	\$ 4,35	\$ 4,45	\$ 4,55	\$ 4,65
Expenses	\$ 18.154,84	\$ 20.415,44	\$ 21.511,30	\$ 24.070,45	\$ 26.827,90

Note. This table indicates Tesya's purchases

This table reflects the annual expenditure for purchasing hats from the Tesya association. The number of hats purchased will be the same figure as the quantity of hats intended to be sold per year, as reflected in **Table 10**. The association sells each hat to wholesalers at a price of \$4.25. This figure will increase due to inflation within the country. To calculate the total expenses, multiply the quantity of hat purchases by the unit value. The initial total expenses amount to \$18,154.84. As the company continues to grow, the figure in the fifth year will be \$26,827.89 in expenses for hat purchases.

Table 11
Logistic Expenses Incoterm FOB

LOGISTIC EXPENSES	1	2	3	4	5
Travel Expense	\$ 600	\$ 600	\$ 600	\$ 600	\$ 600
INLAND	\$ 650	\$ 700	\$ 750	\$ 800	\$ 850
Customs agent	\$ 2.800	\$ 2.800	\$ 2.800	\$ 2.800	\$ 2.800
TOTAL	\$ 4.050	\$ 4.100	\$ 4.150	\$ 4.200	\$ 4.250

Note. This table indicates Tesya's logistic expenses

This table reflects the annual expenses associated with the customs arrival process of the toquilla straw hats. The company will transport the hats from Cuenca to Guayaquil using its own transportation. In the projected expenses for the five years, fuel consumption is included, with an approximate expense of \$600 annually for trips, as shipments will be made twice a month, transporting approximately 150 hats per trip.

Furthermore, the cost of INLAND (internal transportation) when the hats arrive in Guayaquil shows a constant growth: \$650 in the first year, \$700 in the second, \$750 in

the third, \$800 in the fourth, and \$850 in the fifth. This increase is due to the increase in the number of hats sent annually, as the shipment will be made via sea.

The process also requires the collaboration of a customs agent, with a constant cost of \$2800 annually. Thus, the total annual logistic expenses start at \$4050 in the first year and gradually increase to \$4250 in the fifth year, reflecting an increase in internal transportation costs while travel and customs agent expenses remain constant. This budget shows an initial expense figure of \$4050, growing to \$4250 in the last year.

Table 12
Investment Budget

Year	0
Expenses	
Office equipment	\$ 3.400
Vehicle	\$ 23.000
Telephone	\$ 800
Total Expenses	\$ 27.200

Note. This table indicates Tesya's Investment budget

The table reflects the company's annual expenses, distributed across several categories, including initial investments and recurring maintenance and operating costs. In year 0, the company will invest \$3,400 in the purchase of two computers, \$23,000 in the acquisition of a truck, and \$800 in the purchase of two phones, totaling \$27,200.

Table 13
External financing

P	\$ 23.120,00			
n		5		
i		11,83%		
Initial balance of the loan	Total payment of the installment	Interest payment	Principal payment	Final balance of the loan
\$ 23.120,00	\$ 6.386,72	\$ 2.735,10	\$ 3.651,63	\$ 19.468,37
\$ 19.468,37	\$ 6.386,72	\$ 2.303,11	\$ 4.083,62	\$ 15.384,76
\$ 15.384,76	\$ 6.386,72	\$ 1.820,02	\$ 4.566,71	\$ 10.818,05
\$ 10.818,05	\$ 6.386,72	\$ 1.279,78	\$ 5.106,95	\$ 5.711,10
\$ 5.711,10	\$ 6.386,72	\$ 675,62	\$ 5.711,10	\$ -

Note. This table indicates Tesya's loan amortization schedule

It is necessary to obtain a loan to finance the planned investment; for this purpose, 85% of the investment will be requested, while the remaining 15% will come from own funds. The loan includes fixed installments, with an initial loan amount of \$23,120.00, an annual interest rate of 11.83%, and a repayment period of 5 installments. Each column of the table shows the payment distribution for each period. The 'Initial balance' indicates the outstanding balance at the beginning of each period, while the 'Total payment' column shows the total amount to be paid in each installment, which remains constant over time. The 'Interest payment' represents the portion of the total payment allocated to cover the interest generated during the period, calculated on the initial balance. On the other hand, the 'Principal payment' indicates the portion of the total payment used to amortize the borrowed capital. Finally, the 'Final balance' column shows the outstanding balance at the end of each period after making the total payment. This process is repeated in each period until the loan is fully paid off.

The agreed term for the loan repayment is 5 years. Ban Ecuador grants entrepreneurs a grace period of one year for the payment of their obligations, so the first debt payment will be made starting from the second year of operation. This financing provided by BanEcuador will allow the company to cover the necessary costs for the project's development and facilitate its successful implementation in the export market. The company should opt to apply for the credit from BanEcuador, as this is the most favorable option.

Table 14
Projected cash flow

Cash Flow							
Years	0	1	2	3	4	5	6
INCOME							
Sales		\$ 36.736,85	\$ 40.830,88	\$ 42.539,20	\$ 47.082,86	\$ 51.924,96	
Income from loan	\$ 27.200,00						
Residual value							\$ -
Cash inflow	\$ 27.200,00	\$ 36.736,85	\$ 40.830,88	\$ 42.539,20	\$ 47.082,86	\$ 51.924,96	\$ -
EXPENSES							
INVESTMENT							
Office equipment	\$ 3.400,00						
Vehicle	\$ 23.000,00						
Telephone	\$ 800,00						
OPERATION							
	\$ -	\$ 30.104,84	\$ 32.415,44	\$ 33.561,30	\$ 36.170,45	\$ 38.977,90	\$ -
Purchases		\$ 18.154,84	\$ 20.415,44	\$ 21.511,30	\$ 24.070,45	\$ 26.827,90	
Wages and salaries		\$ 5.400,00	\$ 5.400,00	\$ 5.400,00	\$ 5.400,00	\$ 5.400,00	
Logistic expenses		\$ 4.050,00	\$ 4.100,00	\$ 4.150,00	\$ 4.200,00	\$ 4.250,00	
Other expenses		\$ 2.500,00	\$ 2.500,00	\$ 2.500,00	\$ 2.500,00	\$ 2.500,00	
DEPRECIATION							
Vehicle (20%)	\$ 23.000,00	\$ 4.600,00	\$ 4.600,00	\$ 4.600,00	\$ 4.600,00	\$ 4.600,00	
Equipment (33%)	\$ 4.200,00	\$ 1.400,00	\$ 1.400,00	\$ 1.400,00			
Total		\$ 6.000,00	\$ 6.000,00	\$ 6.000,00	\$ 6.000,00	\$ 6.000,00	
Employee participation			\$ 400,04	\$ 739,85	\$ 904,18	\$ 1.282,90	\$ 1.686,22
Income tax			\$ 566,72	\$ 1.048,12	\$ 1.280,93	\$ 1.817,43	\$ 2.388,81
Debt Service			\$ 6.386,72	\$ 6.386,73	\$ 6.386,74	\$ 6.386,75	\$ 6.386,76
EXPENSES	\$ 27.200,00	\$ 30.104,84	\$ 39.768,92	\$ 41.736,00	\$ 44.742,28	\$ 48.464,95	\$ 10.461,75
PERIOD FLOW	\$ -	\$ 6.632,01	\$ 1.061,96	\$ 803,21	\$ 2.340,58	\$ 3.460,01	\$ 10.461,75
FINAL BALANCE	\$ -	\$ 12.632,01	\$ 13.693,97	\$ 14.497,18	\$ 15.437,76	\$ 18.897,77	\$ 3.836,02
Discount rate	11.83%						
NPV	\$ 51.794,71						
IRR	19%						

Note. This table indicates Tesya's income and expenses.

The table provides a detailed analysis of the cash flow for the project over six years, considering year 0 as the investment year and the others as operational years. In the income section, different sources of cash inflow are observed, including sales and a loan income in year zero. Sales show a gradual growth over time, suggesting an increase in

revenue generated by the main business activity. However, no residual value is recorded at the project's end.

When a company's income and expenses are compared over five periods, total income equals total sales in each period, suggesting that the company has no other sources of income besides sales.

Expenses are divided into different categories: purchases, administrative expenses, logistic expenses, and debt service. The purchases column details costs related to the acquisition of goods for sale, while administrative expenses include costs associated with managing and administering the company. Logistic expenses comprise costs related to product distribution. Lastly, debt service represents payments made to cover the company's financial obligations, such as the loan.

The general pattern observed is that both income and expenses increase gradually in each period. This suggests growth in the company's business operations over time, as sales and associated costs are also increasing. However, it would be important to further analyze the profitability of the company, considering these data along with other factors such as taxes, investments, and depreciation, to get a complete picture of its financial performance.

Depreciation entails the decrease in the value of a company-owned asset due to wear and tear, the passage of time, or obsolescence. According to data provided by the SRI, vehicles, transportation equipment, and mobile machinery depreciate by 20% annually. On the other hand, computer equipment and software depreciate by 33% annually. The total value is added to the final balance of each year.

The Net Present Value (NPV) is a financial measure used to assess the viability of an investment project or investment in general. It represents the difference between the present value of incoming and outgoing cash flows of a project over a specific period of time, in this case, it is positive, suggesting that the project or company generates value.

Additionally, an Internal Rate of Return (IRR) is calculated, which is a financial measure representing the expected rate of return of an investment project or a series of cash flows over time. It is used to evaluate the profitability of a project or investment. With an IRR of 19%, it indicates the viability of the project.

Table 15
Weighted Average Cost of Capital

Total Assets	\$ 27.200,00	
Liabilities	\$ 23.120	85%
Equity	\$ 4.080,00	15%
Interest Rate		11,83%
COST OF CAPITAL		11,83%

Note. This table indicates Tesya's cost of capital

The WACC is a financial measure representing the rate of return a company must generate to cover all its financing costs (debt and equity). This rate is calculated as a combination of the cost of debt and the cost of equity, weighted by their respective shares in the capital structure. The formula is as follows:

$$WACC = \frac{E}{V} \times Re + \frac{D}{V} \times Rd \times (1 - Tc)$$

Where:

E = Market value of equity

V = Total enterprise value ($E + D$)

Re = Cost of equity

D = Market value of debt

Rd = Cost of debt

Tc = Corporate tax rate, which taxes the company's profits (usually corporate tax)

The table provides information on a company's capital structure, along with the calculated weighted average cost of capital (WACC). The amount of liabilities is \$23,120, representing debt financing. Liabilities' share in the capital structure is 85%, indicating that most of the capital comes from debt. The amount of equity is \$4,080, representing financing through shareholders' contribution, resulting in a WACC of 11.83%, indicating the average cost of financing for the company, which is the minimum rate of return that the project or the company must surpass to be considered profitable.

This value indicates the minimum return that a company must obtain from its investments to cover the financing cost of its debt and the expected return for its shareholders. In other words, if a company invests in a project or asset and expects it to generate a return of less than 11.83%, it would be losing value for its shareholders compared to the cost of capital.

Conclusions

The process of exporting straw hats from Tesya in Ecuador to Germany proves to be a well-structured and coordinated operation, covering multiple essential stages to ensure the success of international trade. From the initial production and preparation of necessary documentation in Ecuador to customs management and final distribution in Germany, each phase requires meticulous attention to detail and strict compliance with legal, customs, and quality requirements.

Once the feasibility study is conducted, it can be concluded that the project of exporting straw hats from the Sigsig canton to the German market is financially viable. This is evidenced by the positive Net Present Value (NPV) of \$51,794.71, indicating that the project will generate more value than it will cost in present terms. Furthermore, the Internal Rate of Return (IRR) of 19% is significantly higher than the discount rate of 11.83%. This suggests that the project will not only recoup its initial investment but also generate a significant additional return, surpassing the opportunity cost of capital.

It is important to mention that the cash flow shows significant variations over the analyzed periods. A positive cash flow is observed in the early periods, reaching a peak of \$14,297.77 in the penultimate period—before a significant reduction in the last period, ending with a final balance of \$3,836.02. Since the final balance is positive, the project maintains its viability.

Therefore, it can be mentioned that Tesya's export process not only underscores the viability and potential of the German market for straw hats but also highlights the importance of deepening knowledge of the market and commercial dynamics.

Recommendations

It is advisable for Tesya to export hats to Germany, as it is a potential market that will bring great benefits to the organization.

Likewise, it is recommended that knowledge of the German market be deepened. Future research should conduct more detailed studies to comprehensively analyze German consumer demand and preferences. This will allow for the adaptation of marketing and distribution strategies, thus optimizing the product's impact and success in the market.

Finally, continuous review of distribution channels and export regulations is important, as values may vary, which could jeopardize the viability of the project.

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