

Entrepreneurship (T3181)



Brewegreen Business Plan

Tutor –

Prof. Dr. rer. nat. Dr. h.c. Ulrich Daldrup

Prepared by –

Juan Salvador Topete Nunez 11136069 (Group Leader)

Aman Jan 11135805

Ronak Rakesh Shah 11132196

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I. Description of the Business

Brewegreen S.A. de C.V. is an establishment that fits into the “micro-brewery” concept, due to the fact that the production is planned to reach 700 Hl (70,000 l) per year. The aim of the company is to produce three varieties of beer using the surplus of fresh bread that could not be sold coming from local bakeries and first quality ingredients such as locally harvested barley and malts, fairly traded hops and fresh water treated within the brewery facilities located at Querétaro, Mexico.

At Brewegreen, we are aware of the high adverse impact of the traditional brewing process on nature, that is why we implement techniques based on sustainability and circular economy. We implement an upgraded method for brewing, taking advantage of the power of the sun for generating both thermal and electrical energy, ingredient surplus for the brewing recipes; the distribution of the product is made in barrels to local costumers and consumers, and we treat the water needed in the factory.

Mission

To brew products based on the legendary “Reinheitsgebot”, the German beer purity law (Die Deutschen Brauer, 2014); introducing innovative concepts of circular economy, resource and energy efficiency and sustainability, ensuring high quality craft beers in a friendly environmental and social way.

Vision

To become a model in the craft beer production in Mexico based on the engagement of its employees to the community values and the environment.

II. Market Study

In this section, we analyse the market for craft beer in Mexico to find opportunities and threats for our business idea.

Overview of Beer Industry in Mexico

a. Per capita beer consumption

Mexico is one of the largest alcohol consuming country in the world. Yearly per capita consumption of alcohol in 2016, measured in pure alcohol, varies from 6 to 8 liters (Figure 1). In 2014 Mexicans consumed around 3 to 4 litres of pure alcohol in Beer (Ritchie & Roser, 2020).

Beer consumption per person, 2014

Average annual per capita beer consumption, measured in liters of pure alcohol.

Beer contains around 5% of pure alcohol per volume so that one liter of beer contains 0.05 liters of pure alcohol.

This means that 5 liters of pure alcohol equals 100 liters of beer.

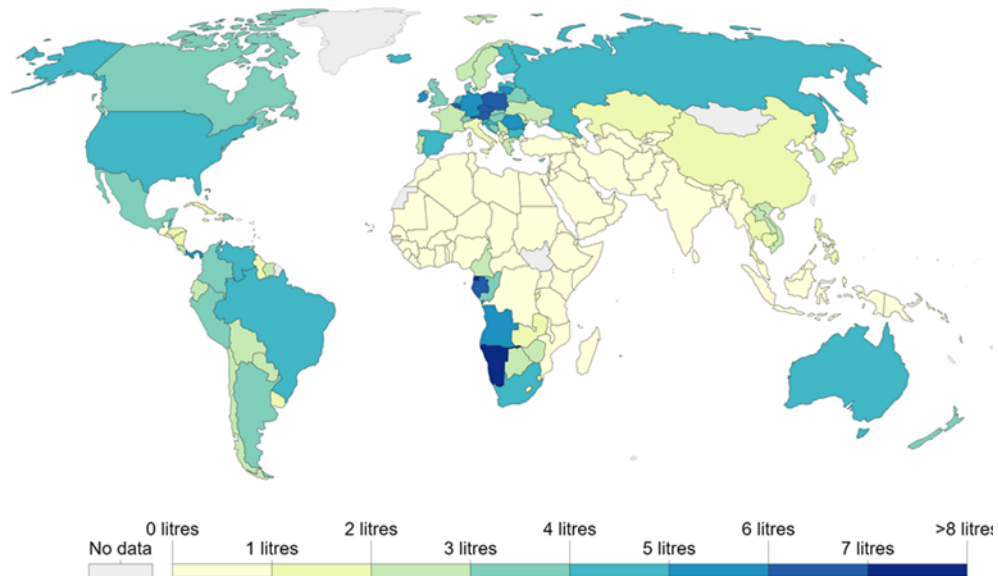


Figure 1 Beer consumption per person (Source; Ritchie & Roser, 2020)

b. Favourite alcoholic drink in Mexico

Industrial beer is the most preferred alcoholic drink in Mexico (Figure 2). Craft beer is the second favourite beverage. In fact, the craft beer industry is a growing sector in the country (Euromonitor International, 2016).

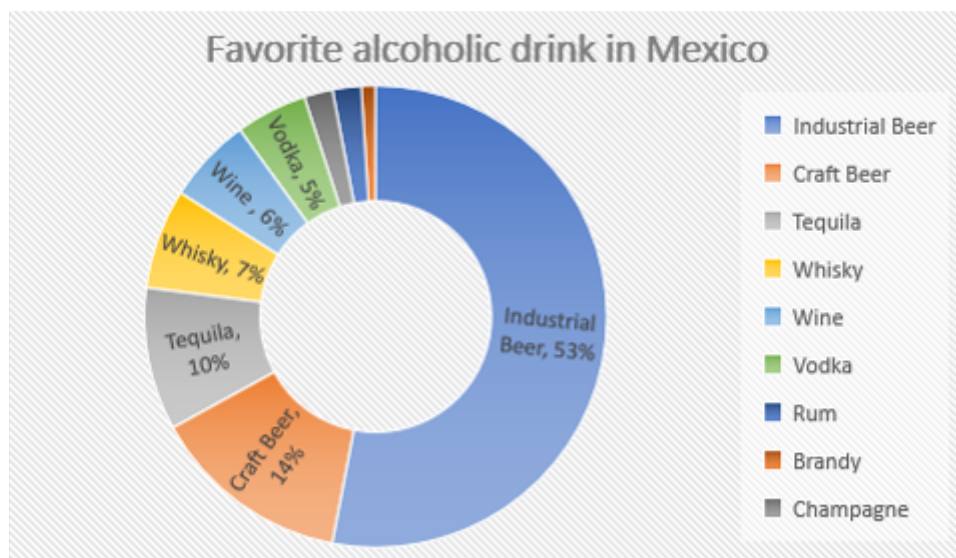


Figure 2 Mexico's favourite alcoholic drink (Source: Euromonitor International, 2016)

c. Beer as a Share of total Alcohol Consumption

Beer as a share of total alcohol consumption, 2010

Beer as a share of total alcohol consumption, as measured by the share of total pure alcohol intake.

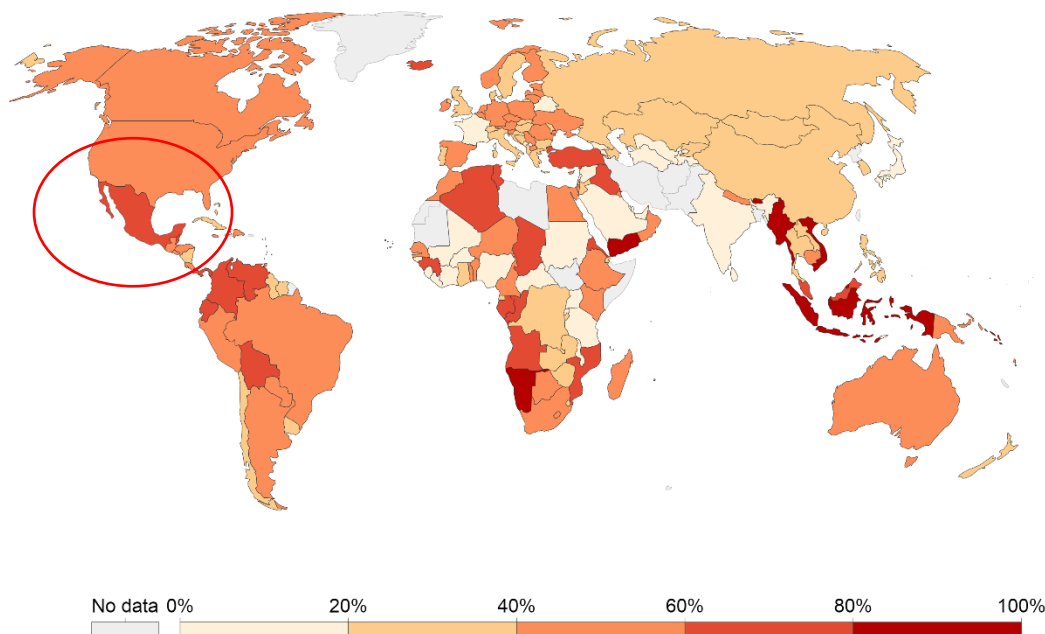


Figure 3 Beer as a share of total alcohol consumption (Source: Ritchie & Roser, 2020)

Beer is the favourite alcoholic drink in Mexico. It counts for 60 to 80 percent of the total alcohol consumed in Mexico (Figure 3).

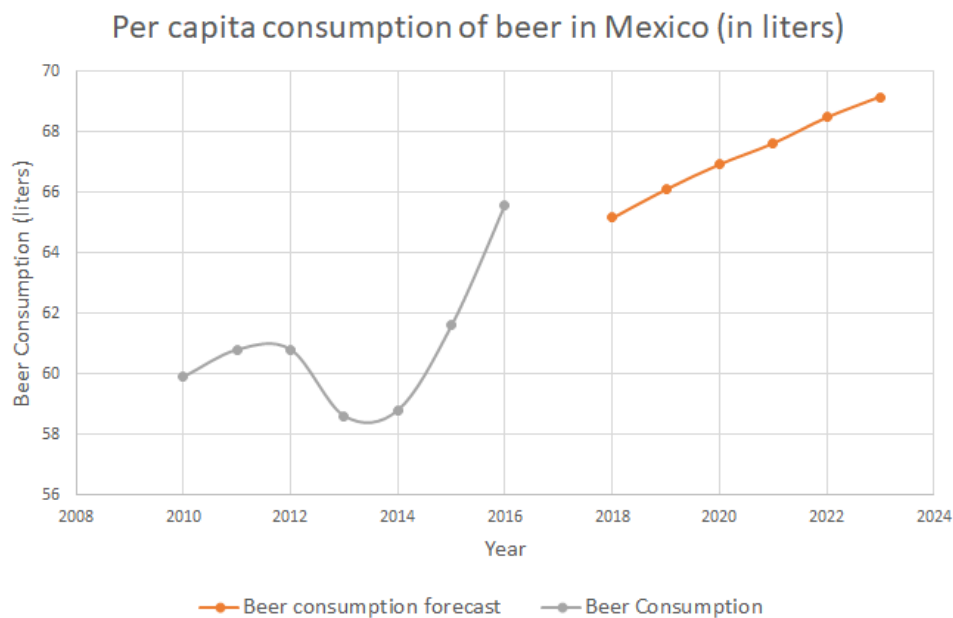


Figure 4 Actual beer consumption and forecast for next years. (Source; Forecast: Statista, 2019, Beer consumption: World Health Organization, 2018)

Per capita beer consumption in Mexico reached around 66 litres in the year 2016 (World Health Organization, 2018). Statist (2019) forecast shows that beer consumption per person is expected to reach around 69 litres by 2023.

Sector Growth

a. Number of breweries in Mexico

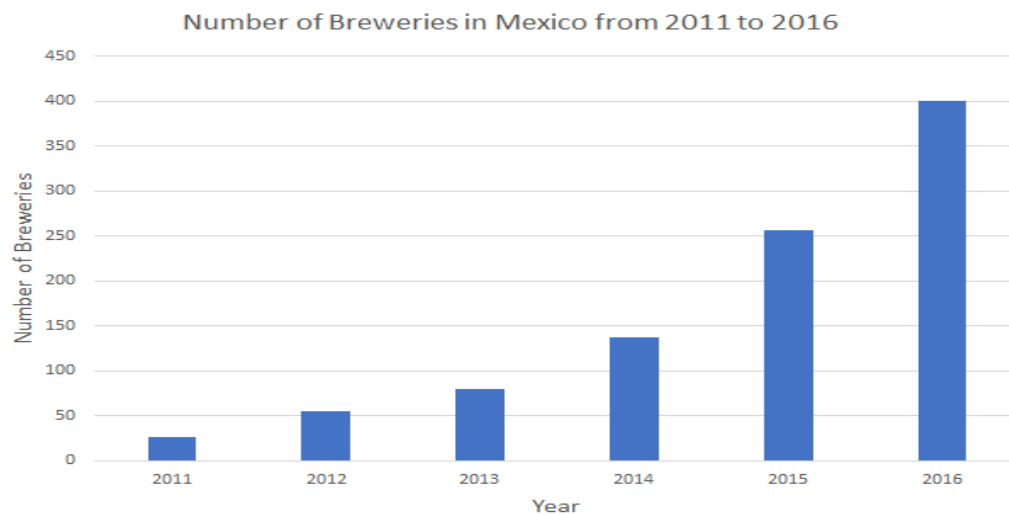


Figure 5 The number of breweries in Mexico (Source; ACERMEX, 2018)

Brewing industry is a growing industry in Mexico (Deloitte, 2017). As shown in the figure 5, there were only a few breweries in Mexico until 2011. However, the number of breweries rose to around 400 by 2016.

b. Revenue contribution of beer industry



Figure 6 Revenue growth and forecast (Source; Statista, 2019)

As shown in figure 6, the revenue contribution of the beer industry is considerable in Mexico and is growing continuously. The industry contributed around 11,000 million USD in 2010 and is projected to contribute around 28,000 million USD by 2023 (Statista, 2019).

c. Contribution of beer Industry to employment

The beer industry provides an estimated 55 thousand direct jobs and 2.5 million indirect jobs in Mexico (Deloitte, 2017). 4.5% of the total tax collected in Mexico comes from beer industry only (ibid). Furthermore, around 1 million beer outlets are registered in the country (ibid).

Craft Beer in Mexico

a. Craft beer sales and growth rate

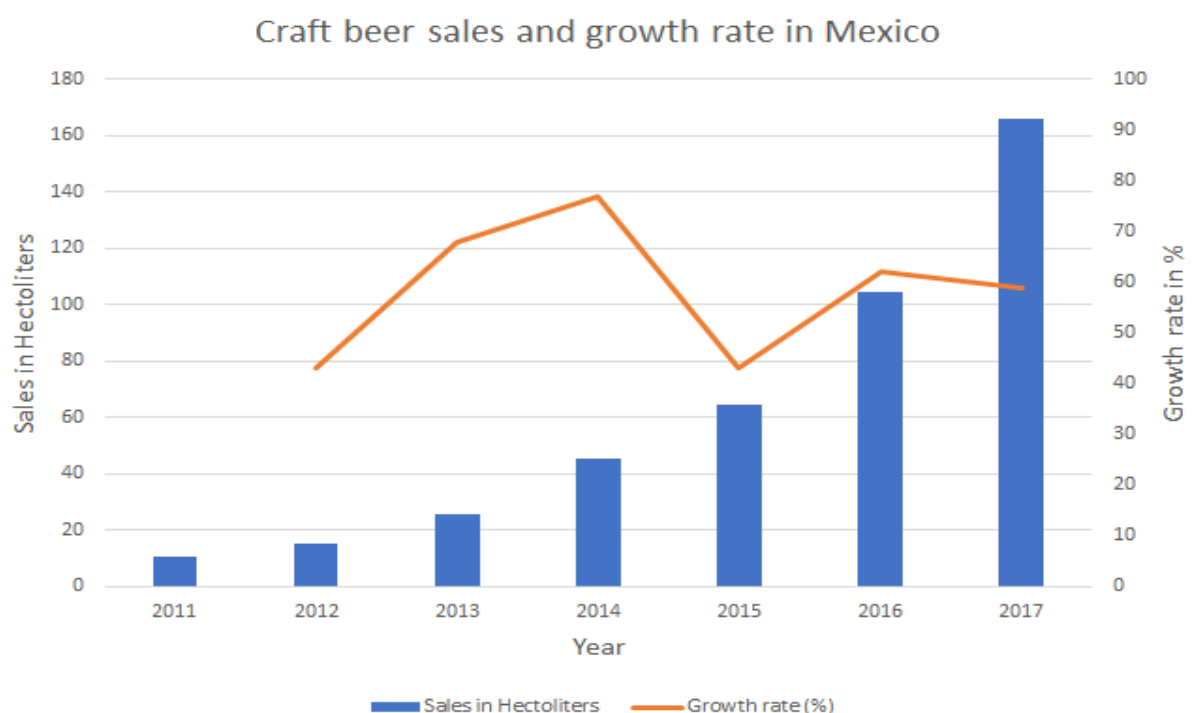


Figure 7 Craft beer sales and growth rate in Mexico (Source; Deloitte, 2017)

As shown in figure 7, the craft beer industry is a flourishing market in Mexico. The growth rate of the industry reached around 60% in the year 2017. According to Euromonitor International (2016) the craft beer is the favourite beer of 14% of the total beer consumers in Mexico.

b. Reasons for consuming craft beer in Mexico

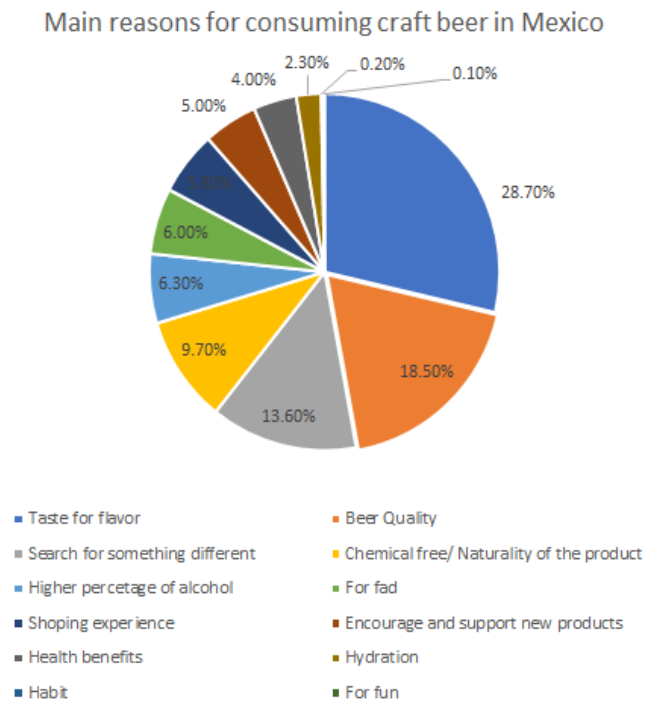


Figure 8 Reasons for consuming craft beer in Mexico (Source; Deloitte, 2017)

The consumers like craft beer because of four main reasons: Craft beer has a better quality than industrial beer, consumers like the taste and the flavour of the beer, they want to drink something different and they value the naturality of the product (Deloitte, 2017).

c. Barriers to craft beer consumption

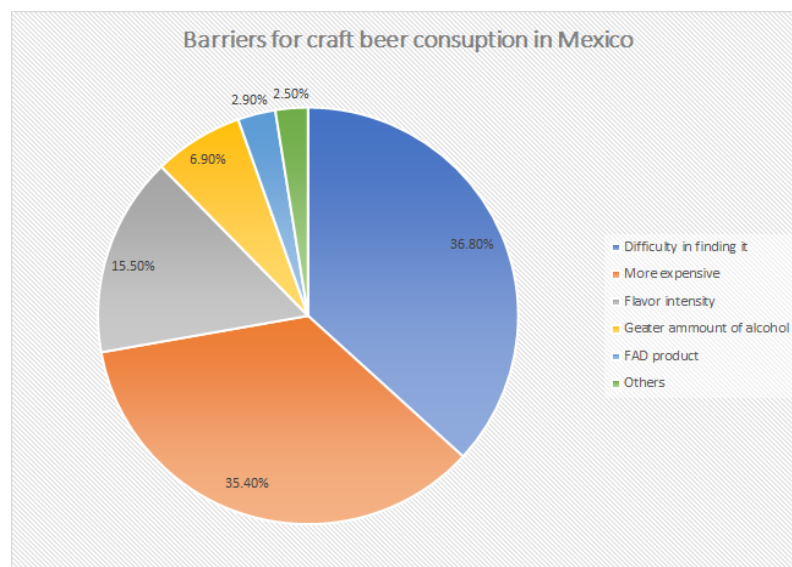


Figure 9 Barriers to craft beer consumption in Mexico (Deloitte; 2017)

36.80% of the beer consumers in Mexico believe that craft beer is difficult to be found. A further 35.40% believe that it's more expensive than the industrial beer (Deloitte, 2017).

d. Factors to consider when choosing craft beer

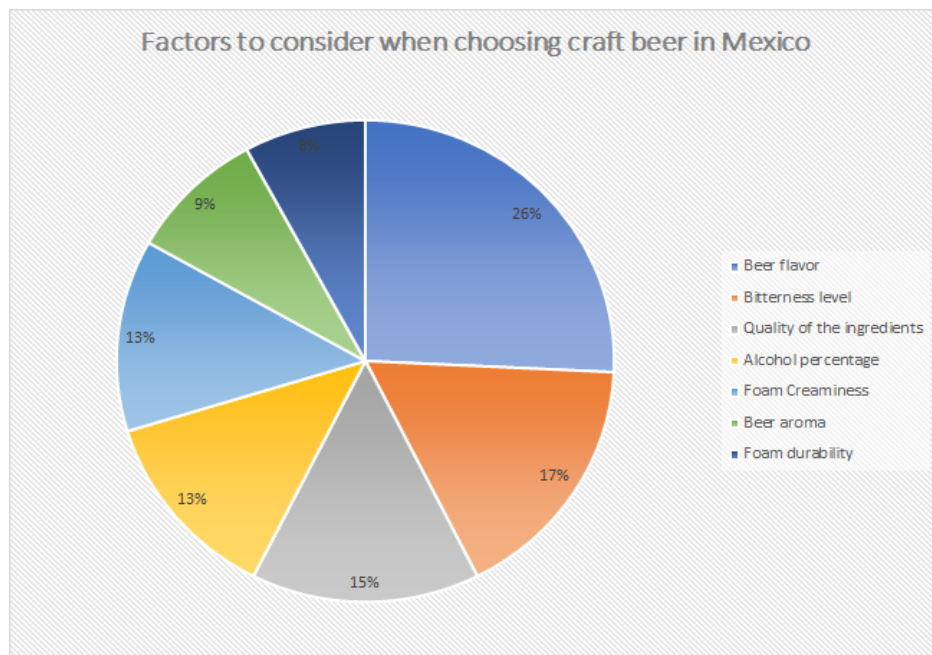


Figure 10 Factors to consider when choosing a craft beer in Mexico (Source; Deloitte, 2017)

The craft beer consumers in Mexico indicate that the taste, level of bitterness and the quality of the ingredients are the main factors they consider when choosing craft beer (Figure 10).

e. Age range distribution of craft beer consumers

Beer consumption age range distribution in Mexico

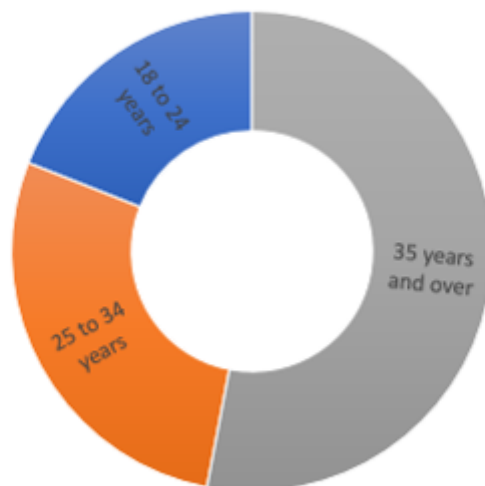


Figure 11 Age range distribution of Beer consumers in Mexico (Source – Deloitte; 2017).

Craft beer is more popular among the people aged 35 and older (53%). People aged 25 to 35 years constitute 28% of the total craft beer consumers. Younger people aged between 18 to 24 years constitute 19% (Deloitte, 2017).

Competitors

The company will be established in the City of Querétaro, in the Bajío Region of the country. It is an attractive niche for the sector of micro-breweries because it is a highly populated city and metropolitan area (1.2 million inhabitants), the region is considerably industrialized and with a good level of income, close to Mexico City, Guadalajara and San Luis Potosí as possible target markets and also close to local barley producers from the neighbour states of Hidalgo and Guanajuato.

a. Production of craft beer in Querétaro

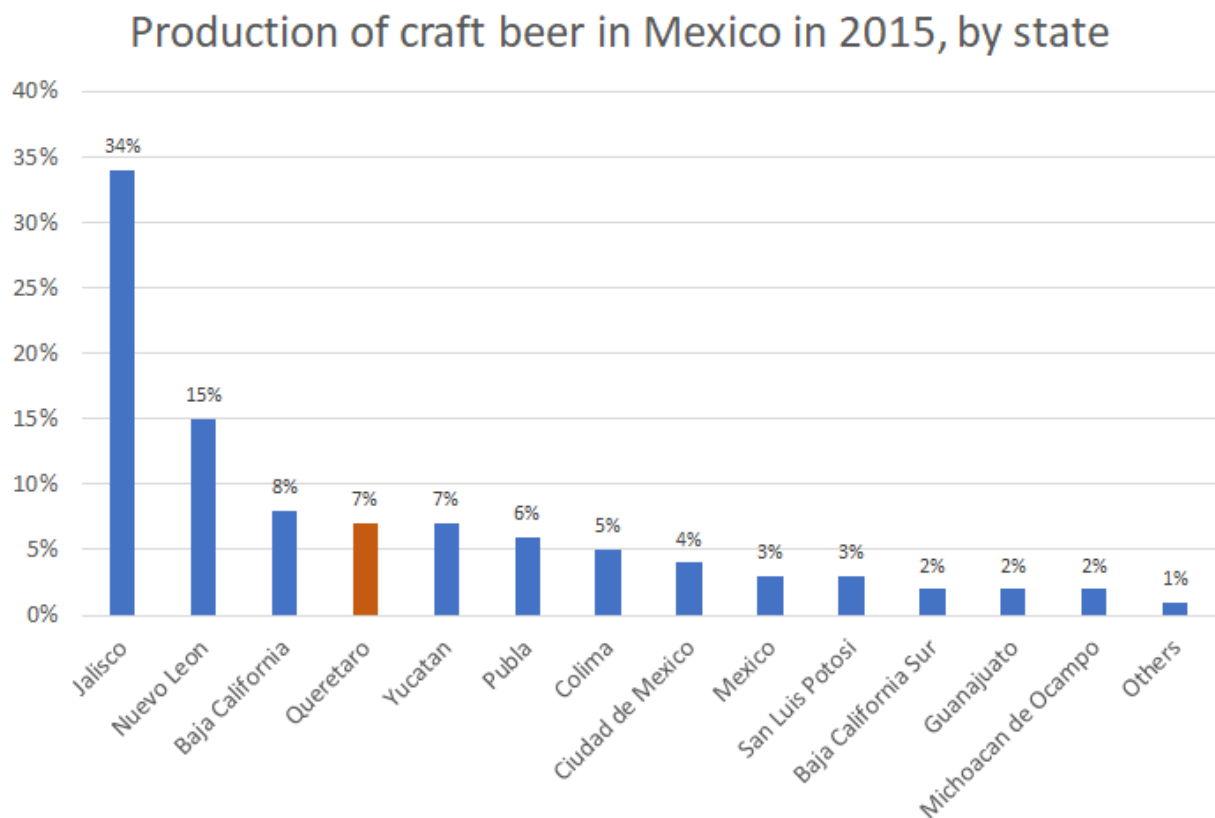


Figure 12 Production of craft beer in Mexico by states (RateBeer, 2020)

Querétaro is the fourth largest craft beer producing state in Mexico (Figure 12). 7% of the total craft beer produced in Mexico is produced in the state of Querétaro (RateBeer, 2020).

b. Microbreweries in Queretaro

No.	Name of Brewery	Date of Establish-ment	Beer Types	Popular Brands	Price per litre (Euro)
1	Brewer Gastropub	2018	5	Saisan	7.5
				Red Ale Irish	6.8
2	Grupo Gastronomico Gracias a Dios	2017	1	Stout	6.9
3	Cerveceria Rios	2017	5	Porter	6.4
4	Ocana Brewing	2016	1	Pale Ale	8.1
5	Spicy Frog Brewery	2015	4	Stout - Imperial	9.5
				Dark Lager - Dunkel / Tmavý	6.3
6	Cerveza Artesanal Tecolote	2015	5	Blonde Ale	8.3
				Red Ale Irish	6.8
7	Espiga Local Brewing	2015	7	Pale Ale	8.1
				Belgian Ale	10.7
8	Cerveceria Artesanal Don Javier	2015	3	Belgian white Ale	6.1
				Amber Ale	8
9	Cervecera Hercules	2014	37	Stout - Imperial	9.5
				Pale Ale	8.1
10	Cerveceria Josefa	2013	1	Porter	6.4
11	Cervecera Regional	2010	1	Amber Ale	8

Table 1 Details about Microbreweries in Queretaro, their products and selling price (Source - <https://www.ratebeer.com/breweries/mexico/0/133/>)

There are a total of 11 microbreweries in Querétaro State. Most of the breweries were established after 2014, producing a variety of craft beers (RateBeer, 2020).

Opportunities

Mexico is the fourth largest beer producing country in the world (Wisconsin Economic Development Corporation, 2017). The craft beer industry is a growing market in the country (ACERMEX, 2018). The sale of the craft beer increased to 166,069 hectolitres in 2017 compared to 10,594 hectolitres in 2011 (Deloitte, 2017). The growth rate of the industry reached around 60% in 2017. According to Euromonitor International (2016) craft beer is the favourite beer of 14% of the total beer consumers in Mexico.

Craft beer is liked and consumed by all age groups in Mexico. However, 53% of the total consumers are aged 35 years and older. 28% are aged between 25 and 35 years. The younger people aged between 18 to 24 years constitute 19% of total craft beer consumers (Deloitte, 2017).

Furthermore, the contemporary environmental concerns of the people are of great importance around the world. Particularly, the younger generation is very concerned about the greenhouse gas emissions, wastewater dumping into the environment, and waste of food

and energy. As a brewer states “Consumers are getting smarter about the products they choose to buy and want to vote with their dollars. I think that we have a lot of folks who buy our beer because of what we do on the environmental side.” (Hubbell, 2019).

III. Product Description

What Constitutes our Beer?

Beer is a fermented beverage that, according to the Reinheitsgebot (Deutscher Brauer-Bund e.V., 2018), can only be based on four ingredients: water, barley or malts, hops and yeast. The innovative process that Brewegreen will introduce, takes advantage of the surplus bread, whose principal ingredient is cereal, representing a minor modification of the traditional elements.

How Do We Produce Our Beer?

The following figure summarises our entire beer production process.

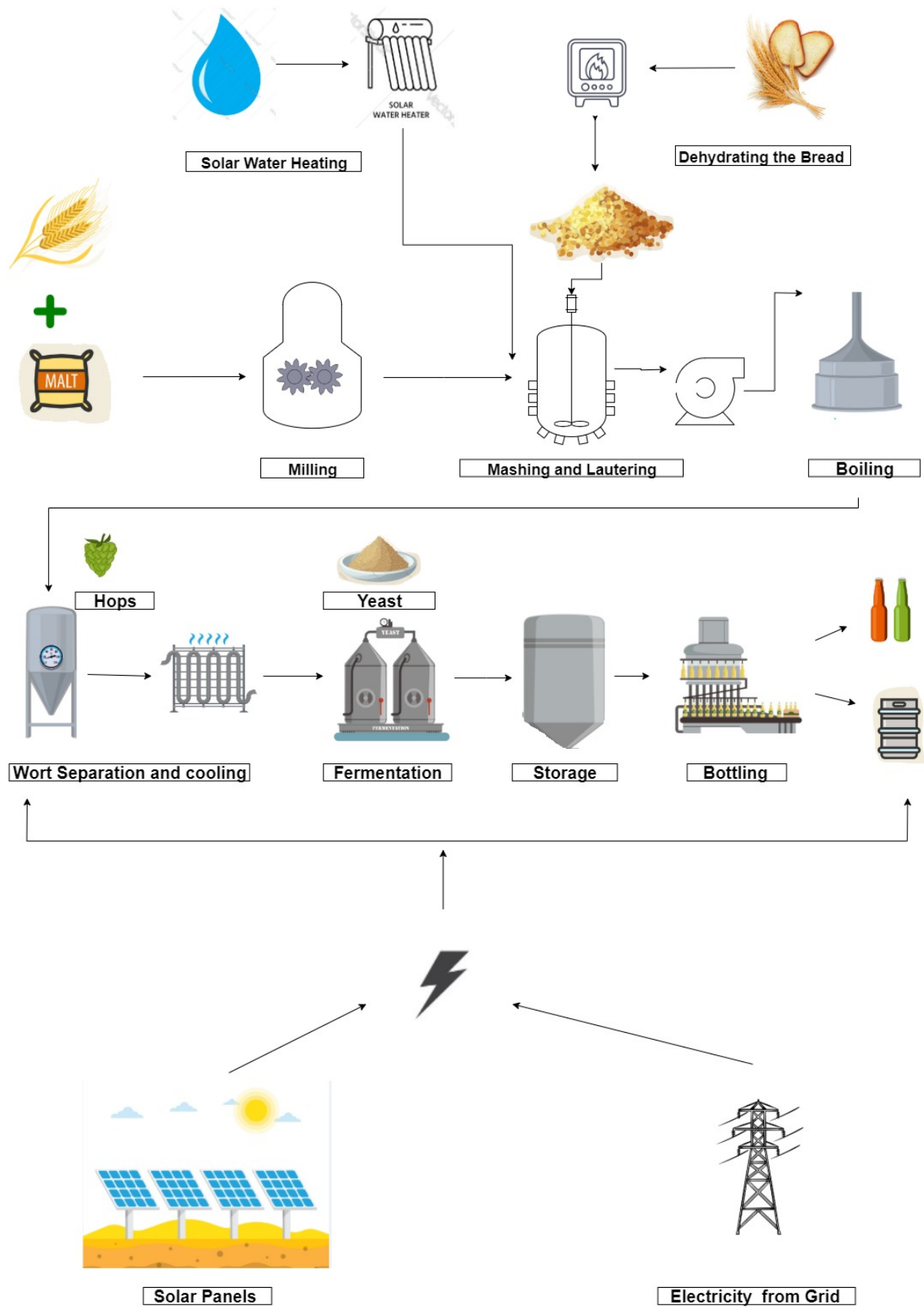


Figure 13 Beer Production Process in a nutshell at Brewegreen (Own Creation)

The brewing process starts with the milling of malt and barley. They are crushed to extract the fermentable sugars. At the same time, the surplus bread from the bakeries is crushed and crumpled and fed into the oven for baking. Both the ingredients are brought to the mashing and lautering tank where it is further mixed with hot water. It is then pumped into another vessel and boiled to perfection. The hot sweet liquid called “wort” is separated from the grain husks. The “hops” are then added to the mixture followed by cooling of the hot liquid. Now the yeast is added which converts the sugars into alcohol. The mixture is then pumped into the storage tank (Willaert, 2007). After some rest period, our beer is ready to be packed in our bottling machine. Our beers are served in kegs and in 330ml glass bottles. To supply our facility with electricity, we have two sources: Solar photovoltaic panels, and electricity from the grid. Around 47% of the electricity will be generated by the solar panels, with an installed capacity of 7 kWp and the remainder is covered from the grid. The solar water heater is used as an auxiliary device to pre-heat the incoming water, thereby cutting on the use of natural gas. By doing so, we aim to manufacture products of a prime quality and in a sustainable way, keeping a low carbon footprint.

Types of beer

We have three different varieties of beer: White Loaf Ale, Dark Toast Porter and Whole Grain Amber Ale.

General description of the qualitative characteristics of beer (Burnham et al., 2018):

- Original gravity (OG)* – specific gravity of unfermented beer.
- Final gravity (FG)* – specific gravity of fermented beer.
- Alcohol by volume (ABV) - percentage volume of alcohol per volume of beer.
- International bitterness unit (IBUs) - 1 bitterness unit = 1 milligram of isomerized (exposed to heat) hop alpha acids in one litre of beer

1. White Loaf Ale.

Refreshing and crispy with notes of citric hops, ideal for sharing with friends on a typical warm afternoon.

ABV: 4.5%

OG: 1046

FG: 1010

IBU: 28



Figure 14 White Loaf Ale

* Usually taken as the ratio of density of wort to the density of water (1000 kg/m³)

2. Dark Toast Porter

With a toasted and rich flavour, coffee and chocolate taste and lightly bitter notes our porter style would make you want to drink our sustainable beer the whole year.

ABV: 5.5%

OG: 1050

FG: 1013

IBU: 30



Figure 15 Dark Toast Porter

3. Whole Grain Amber Ale

Fine notes of caramel accompanied with the right bitterness level, gives this beer the balance between a strong character beer and a refreshing feeling.

ABV: 4.5%,

OG: 1040

FG: 1010

IBU: 30



Figure 16 Whole grain amber ale

The final production of our plant is sized for 700 Hl a year. As we will brew three different types of products, the share of every style was based upon the market analysis. So, in this way, 40% of our final production will go to the Dark Toast Porter, 35% to the White Loaf Ale and 25% to the Whole-Grain Amber Ale.

IV. Equipment

A bakery oven is selected for the pre-treatment of the surplus bread before adding it to the mashing/lautering tank. The selection of the brewing equipment was based on the final production that the company aims to cover, being 700 Hl a year. Most of the components for the process will be acquired from local suppliers. From the variety of products and providers, a module with a capacity of 750 l is proposed. This module BrewersPro 750l includes the necessary equipment for the first steps in the brewing process. Besides this, three fermenters and storage tanks of the same volume capacity (750 l) (Inoxi México, 2019) are required for the final steps or three sorts of products; as well as a chiller, bottle and keg fillers, sanitation equipment and a refridgerator for in-site selling.



Figure 17. Brewery equipment BrewersPro 750l (Inoxi México, 2019)

Brewery Equipment	Quantity
BrewersPro 750l	1
Fermenter 750l	3
Storage tank 750l	3
Chiller	1
Bottle filler and labeler	1
Keg washer and filler	1
Sanitation equipment	1
Mill	1
Oven	1
Fridge	1

Table 2 Brewery Equipment List

V. Articles of Association

Part 1: Name and address of the company

Article - 1. Name of the company

The name of the company is Brewegreen Sociedad Anónima de Capital Variable, or Brewegreen S.A. de C.V.

The company can also carry business under the following secondary name: Brewegreen Ltd.

Article - 2 Address of Company

The address of the company is Bosques de Mezquite 100, 76113 Santiago de Querétaro, Mexico.

Article - 3 Objective of the Company

The objectives for which the company is established are the production, distribution and sale of numerous types of fermented beverages originated by brewing process.

Article – 4 Financial Year

The financial year should be the calendar year

Article – 5 Foreign clause.

Any foreigner who, in the act of the Constitution or at any later time, acquires shares of the Company shall be considered by the simple fact as Mexican with respect to one and the other and it shall be understood that he agrees not to invoke the protection of his government, under penalty, in case of missing his agreement, of losing said interest or participation for the benefit of the Mexican Nation.

Part – 2 Capital and Shares

Article – 6 The capital

The company has a minimum share capital of two hundred and fifty thousand euros (250,000.00 €), divided into five (5) shares, with a nominal value of fifty thousand euros each. The capital shares have been completely paid by the partners to the company in cash, as follows:

Name	Share	Capital
Ronak Shah	1	50,000.00 €
Aman Jan	1	50,000.00 €
Salvador Topete	1	50,000.00 €
Ulrich Daldrup	1	50,000.00 €
Sudeh Dehnavi	1	50,000.00 €
Total	5	250,000.00 €

Table 3 Distribution of share capital

Article – 7 Liability

The personal liability of members is limited to the amount of their contributions

Article – 8 Increasing and decreasing the capital

The increasing of the capital, as well as the decreasing to the fixed minimum value, must be agreed by the Ordinary Shareholders Meeting.

Article – 9 Free shares exchange

The shareholders will be free to transfer their shares, in case the shareholder is a natural person to other shareholders or their descendants, ascendants or spouses, in the case the shareholder is a company, the transfer to companies controlled by said shareholder will be free.

Article – 10 Death or disability of a Shareholder

The company is not dissolved by the death of one of its shareholders, will continue in the exercise and development of its purpose with the heirs of the deceased shareholder and the surviving shareholders, without involving or modification of the company, or creating a new one.

In case of disability established by the Law of one of the shareholders, the company shall continue with their heirs. The surviving spouse and the heirs shall appoint, from among themselves, who should represent them in society as the succession process is terminated or disability, as appropriate.

Article – 11 The register of shares

The company will keep a book (physical and/or digital) of shares, in which they will register, within the ninety days following the date in which they are carried out, all the subscription, acquisition or transfer operations of which the actions that form the share capital are subject.

Any share transfer that may have been made without this register would not be recognized.

Article – 12 The shares as a document

The titles of the shares numbered progressively will contain the requirements set forth in article 125 of the General Law of Commercial Companies and the waiver referred to in article five of these Statutes; they will protect one or more shares and will have attached coupons for the payment of dividends.

The provisional certificates or certificates will be signed by the Manager

Article – 13 Rights and obligations of the shareholders

The shares give the owners' equal rights and obligations.

The ownership of shares implies the acceptance of these bylaws and the resolutions approved by the Shareholder's Meeting, the Board of Directors or the Sole Administrator.

Part – 3 Shareholders Meeting

Article – 14 The Meetings

The General Shareholder's Meeting is the supreme organ of the company and is regulated by these Statutes and Articles and, what is not been foreseen, by the General Law of Commercial Companies. The general shareholders meeting shall be held at the headquarters of the Company, at least once a year.

Article – 15 The records

A record will be drawn up of each Meeting signed by all the Shareholders involved.

Article – 16 The voting rights

The voting rights of the shareholders are measured in accordance with their initial contribution. A shareholder is permitted to be represented by a fellow shareholder or by a third party. A power of attorney in writing is required therefore.

Part – 4 Management of Company**Article – 17 Management of company**

The Management Board can comprise the same members as the Company's shareholders.

The Management of the Company will be in charge of one or more temporary and revocable agents, who may be partners or persons outside the company.

Article – 18 Terms of office

The Manager position can have a term of three years, with the possibility of being re-elected.

Part – 5 Balances**Article – 19 Annual Balance**

After every year, a balance will be done with the intervention of all the Shareholders, according to the calendar year.

Article – 20 Profit and loss share

Shareholders will participate in profits in proportion to the number of shares they represent, corresponding in any case an equal amount for each share.

They will be responsible for losses in the same proportion but limited their liability to the nominal value of their shares.

Part – 6 Dissolution of the company

Article – 21 The company shall dissolve under following conditions

- I. Due to the expiration of the term established in the contract;
- II. Due to the impossibility of continuing to carry out the main purpose of the company;
- III. By agreement of the partners taken in accordance with the social contract and the Law;
- IV. Because the number of shareholders becomes less than the minimum established by the Law, or because the parties of interest meet in one person;
- V. For the loss of two thirds of the share capital.

VI. Financial Data (Cash flow)

Year	1	2	3	4	5	6	7	8	9	10
Utilization Rate	60%	75%	90%	100%	100%	100%	100%	100%	100%	100%
Sales profit	2,78,523.00	3,30,041.25	3,96,049.50	4,40,055.00	4,40,055.00	4,40,055.00	4,40,055.00	4,40,055.00	4,40,055.00	4,40,055.00
Depreciation Costs	37,758.65	25,446.22	25,446.22	25,042.00	16,942.00	16,942.00	16,942.00	16,942.00	16,942.00	16,942.00
Financing Costs	94,823.98	85,341.58	75,859.18	66,376.78	56,894.39	47,411.99	37,929.59	28,447.19	18,964.80	9,482.40
Labour Costs	1,21,004.52	1,21,004.52	1,21,004.52	1,21,004.52	1,21,004.52	1,21,004.52	1,21,004.52	1,21,004.52	1,21,004.52	1,21,004.52
Raw Material Cost	32,014.59	37,257.88	44,709.46	49,677.18	49,677.18	49,677.18	49,677.18	49,677.18	49,677.18	49,677.18
Packaging	3,610.91	4,513.64	5,416.36	6,018.18	6,018.18	6,018.18	6,018.18	6,018.18	6,018.18	6,018.18
Energy Cost	1,409.36	1,761.70	2,114.04	2,348.93	2,348.93	2,348.93	2,348.93	2,348.93	2,348.93	2,348.93
Sum of Costs	2,90,622.00	2,75,325.54	2,74,549.78	2,70,467.59	2,52,885.20	2,43,402.80	2,33,920.40	2,24,438.00	2,14,955.61	2,05,473.21
Loss carried forward		- 12,099.00	-	-	-	-	-	-	-	-
Profit before tax	- 12,099.00	42,616.71	1,21,499.72	1,69,587.41	1,87,169.80	1,96,652.20	2,06,134.60	2,15,617.00	2,25,099.39	2,34,581.79
Tax (30%)	-	12,785.01	36,449.91	50,876.22	56,150.94	58,995.66	61,840.38	64,685.10	67,529.82	70,374.54
Profit after tax	- 12,099.00	29,831.70	85,049.80	1,18,711.18	1,31,018.86	1,37,656.54	1,44,294.22	1,50,931.90	1,57,569.58	1,64,207.25
Cash-flow (net profit + depreciation)	25,659.64	55,277.91	1,10,496.02	1,43,753.18	1,47,960.86	1,54,598.54	1,61,236.22	1,67,873.89	1,74,511.57	1,81,149.25
Credit repayment	39,509.99	39,509.99	39,509.99	39,509.99	39,509.99	39,509.99	39,509.99	39,509.99	39,509.99	39,509.99
Reinvestment										
Dividend	- 13,850.35	15,767.92	70,986.03	1,04,243.19	1,08,450.87	1,15,088.55	1,21,726.23	1,28,363.90	1,35,001.58	1,41,639.26

Table 4 Cash flow for 10 years

Note: details of labour costs, as well as the contract of the Manager are provided in the Appendix

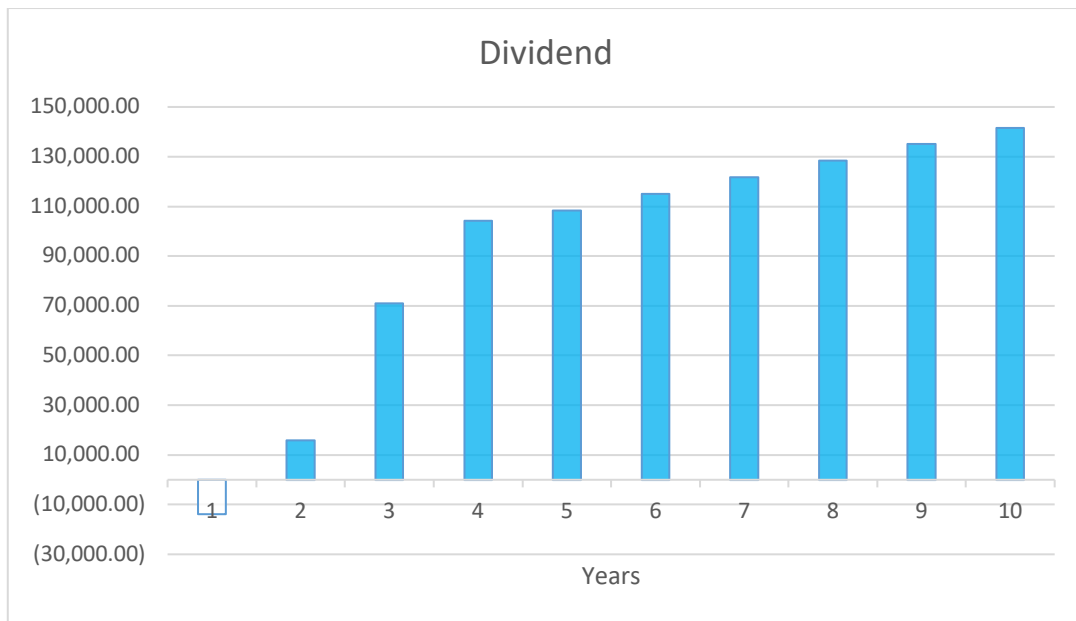


Figure 18 Graph showing the dividend



Figure 19 Return on Investment

VII. Marketing Strategy

We will use the following strategies to market our product

1. Local SEO (Search Engine Optimization).
2. Social media platforms such as Facebook, Twitter, Instagram etc.
3. Displaying posters in the city.
4. Displaying posters in other business places which are not our competitors (e. g. in gyms, general shops etc.) and in return displaying their advertisement at our brewery.
5. Occasionally offering special prices for our products.
6. Giving special offers during city events.

VIII. Distribution Strategy

Our final product will be offered in two ways, 0.33 l bottles and 20 l kegs due to the fact that these are the most common types in the Mexican market. When referring to the shares of our end production, we decided to distribute the products giving a 60% to reusable kegs, distributed among local bars, restaurants, nightclubs, etc. The remaining 40% will go to the bottle presentation for local supermarkets, beer stores and on site sale. With this we ensure the optimisation of the resources by using kegs that can be reused many times around a year. The company will distribute its products by its own mini truck. The emptied bottles and barrels will be recollected as well.

IX. Appendix

Appendix I: Detailed Cost Information

Equipment Costs

Brewery Equipment

Brewery Equipment	Price MXN	Price EUR	Depreciation years	Depreciation cost €
BrewersPro 750l	697,237.00	33,521.01	12.5	2,681.68
Fermenter 750l (3)	475,521.00	22,861.59	12.5	1,828.93
Storage tank 750l (3)	419,142.00	20,151.06	12.5	1,612.08
Chiller	92,395.00	4,442.07	12.5	355.37
Bottle filler and label	321,082.00	15,436.63	12.5	1,234.93
Keg washer and filler	-	11,250.00	12.5	900
Sanitation equipment	87,840.41	4,223.10	12.5	337.85
Mill	17,887.00	859.95	12.5	68.8
Oven	26,500.00	1,274.04	12.5	101.92
Fridge	35,116.00	1,688.27	12.5	135.06
Installation cost (estimate)	10,000.00	480.77		
Total	2,182,720.41	116,188.48	Total depreciation/year	9,256.62

Administrative Equipment

Administration	Price MXN	Price EUR	Depreciation years	Depreciation cost €
Desk Manager	3,860	185.58	10	18.56
Computer manager	13,999	673.03	3.33	201.91
Chair manager	2,489	119.66	10	11.97
Chair visitor (2)	3,646	175.29	10	17.53
Desk Sells	3,860	185.58	10	18.56
Computer Sells	13,999	673.03	3.33	201.91
Chair sells	2,489	119.66	10	11.97
Chair Sells visitor (2)	3,646	175.29	10	17.53
Archivist (2)	9,448	454.23	10	45.42
Board	1,121	53.89	10	5.39
Total	58,557	2,815.24	Total depreciation/year	550.74

Renewable Energy Equipment

Renewable energy generation	Price MXN	Price EUR	Depreciation years	Depreciation cost €
PV system, 7kWp equipment	206,898.46	9,947.04	1	9,947.04
Solar thermal	49,200.00	2,365.38	1	2,365.38
Total	256,098.46	12,312.43	Depreciation/year	12,312.43

Land Cost

Land	Price MXN	Price EUR	Depreciation years	Depreciation cost
Property 900m ² , to 289 €/m ²	5,400,000.00	259,615.38	0	0
Additional expenses (notary, registration, etc.)	53,254.80	2,560.33	0	0
Total	5,453,254.80	262,175.71	-	-

Building Cost

Building	Price MXN	Price EUR	Depreciation years	Depreciation cost
Construction of 400m ² in general	3,120,000.00	150,000.00	20	7,500.00 €

Vehicles Cost

Vehicle Type	Model	Price in Euro
Forklift	Toyota 8FGU30	8,000
Pickup Truck	2020 Chevrolet Silverado 1500	24,400

(Pearl Motor Company, n.d.; Ritchie Bros., n.d.)

Depreciation and Investment Costs

Investment Cost	Investment Expenditure in Euro	Depreciation Rate (Years)	Depreciation Rate %	Depreciation Costs p.a in Euro
Brewery Equipment	116,188.48	12.5	8	9,295.08
Administration	1,469.18	10	10	146.9
Computers	1,346.06	3.33	30.03	404.2
Renewable Energy Equipment	12,312.43	1	100	12,312.4
Land	262,175.71	0	0	0.0
Building Construction	150,000.00	20	5	7,500.0
Vehicles	32,400.00	4	25	8,100.0
Unexpected	11,618.85	0	0	0.0
Circulating Capital	57,589.19	0	0	0.0
Total	645,099.90			37,758.65 €

Labour Cost

Position	Salary to be paid/month in MXN	Annual Salary	Annual Salary in Euro
Manager	37,678.38	489,818.99	23,511.31
Operations Chief	30,193.02	392,509.21	18,840.44
Fermentation Operator	28,357.90	368,652.67	17,695.33
Malt House Operator	22,775.46	296,080.94	14,211.89
Mashing and Lautering Operator	22,775.46	296,080.94	14,211.89
Packaging Operator	21,100.72	274,309.42	13,166.85
Distributor	17,193.02	223,509.21	10,728.44
General Assistant	13,843.55	179,966.18	8,638.38
		Total	121,004.52€

Financing Cost

Concept	€
Total investment	645,099.9
Own capital	250,000
Outside investment	395,099.9
interest rate	24%
time period	10
Capital per shareholder	50,000

Year	Balance of debt	Interest rate	Interest cost per year	Refunding bank loan
1	395,099.90	24%	94,823.98	39,509.99
2	355,589.91	24%	85,341.58	39,509.99
3	316,079.92	24%	75,859.18	39,509.99
4	276,569.93	24%	66,376.78	39,509.99
5	237,059.94	24%	56,894.39	39,509.99
6	197,549.95	24%	47,411.99	39,509.99
7	158,039.96	24%	37,929.59	39,509.99
8	118,529.97	24%	28,447.19	39,509.99
9	79,019.98	24%	18,964.80	39,509.99
10	39,509.99	24%	9,482.40	39,509.99
	Sum interest		521,531.86	
	Sum repaid to bank			395,099.90

Raw material Cost/ Consumption Cost for 1 Hl

White Loaf Ale

S. No	Concept	Quantity	Total Cost €
1	Pale Malt kg	14.00	22
2	Dried crumbed bread kg	6.00	0.00
3	CaraMalt kg	0.60	2.20
4	Munich maltk kg	0.60	1.00
5	German hallertau tradition hops kg	0.02	1.00
6	Cascade hops kg	0.14	2.53
7	Centenial hops kg	0.08	5.60
8	Bramling hops kg	0.10	3.60
9	Cascade hops kg	0.24	4.34
10	Bramling cross hops kg	0.14	5.07
11	Safale US-05 rehydrated yeast kg	0.046	13.38
12	Water Hl	1.78	2.00
	Total cost		62.27

(Brawmarkt, n.d.)

Dark Toast Porter

S No.	Concept	Quantity	Total Cost €
1	2-row pale ale malt kg	7.60	38.00
2	Dried crumbed bread kg	6.60	0.00
3	Munich malt kg	4.74	28.42
4	Crystal malt kg	2.37	14.21
5	black malt kg	0.59	3.537
6	English fuggles hops kg	0.28	11.86
7	Nottingham yeast kg	0.06	8.673
8	Water Hl	1.49	0.46
	Total cost		105.16

(Brawmarkt, n.d.)

Whole Grain Amber Ale

S No.	Concept	Quantity for	Total
1	Wiener malt kg	11.5	20.60
2	Dried crumbed bread kg	6.50	0.00
3	Melanoidin malt kg	2.11	12.60
4	Caramalt pils kg	0.79	4.74
5	Sauermalt kg	0.53	1.16
6	Nordbrauer hops kg	0.05	3.15
7	Perle hops kg	0.06	2.60
8	Irish Ale (Wyeast Labs #1084) Litres	0.06	4.15
9	Water Hl	1.45	0.46
	Total for 1 Hl in €		49.47

(Brawmarkt, n.d.)

Entrepreneurship (T3181)

Self-Cost Calculation

White Loaf Ale – 35% of Total Production

Year	1	2	3	4	5	6	7	8	9	10
Utilization of Capacity	60%	75%	90%	100%	100%	100%	100%	100%	100%	100%
Quantity Sold Hl	147	183.75	220.5	245	245	245	245	245	245	245
Depreciation Costs	13,215.53	8,906.18	8,906.18	8,764.70	5,929.70	5,929.70	5,929.70	5,929.70	5,929.70	5,929.70
Financing Costs	33,188.39	29,869.55	26,550.71	23,231.87	19,913.03	16,594.20	13,275.36	9,956.52	6,637.68	3,318.84
Labour Costs	42,351.58	42,351.58	42,351.58	42,351.58	42,351.58	42,351.58	42,351.58	42,351.58	42,351.58	42,351.58
Raw Material Cost	9,153.81	11,442.27	13,730.72	15,256.36	15,256.36	15,256.36	15,256.36	15,256.36	15,256.36	15,256.36
Packaging	1,263.82	1,579.77	1,895.73	2,106.36	2,106.36	2,106.36	2,106.36	2,106.36	2,106.36	2,106.36
Energy Cost	493.28	616.59	739.91	822.13	822.13	822.13	822.13	822.13	822.13	822.13
Sum of Costs	99,666.41	94,765.95	94,174.83	92,533.00	86,379.16	83,060.32	79,741.48	76,422.64	73,103.81	69,784.97
Production Cost Euro/Hl	678.00	515.73	427.10	377.69	352.57	339.02	325.48	311.93	298.38	284.84
Production cost Euro/l	6.78	5.16	4.27	3.78	3.53	3.39	3.25	3.12	2.98	2.85
Cost including IEPS 26.5%	8.24	6.27	5.19	4.59	4.28	4.12	3.95	3.79	3.63	3.46
Selling price €/l	6.49									
VAT included	7.5284									
Revenue	95,403.00	1,19,253.75	1,43,104.50	1,59,005.00	1,59,005.00	1,59,005.00	1,59,005.00	1,59,005.00	1,59,005.00	1,59,005.00

Entrepreneurship (T3181)

Dark Toast Porter – 40% of Total Production

Year	1	2	3	4	5	6	7	8	9	10
Utilization of Capacity	60%	75%	90%	100%	100%	100%	100%	100%	100%	100%
Quantity Sold Hl	168	183.75	220.5	245	245	245	245	245	245	245
Depreciation Costs	15,103.46	10,178.49	10,178.49	10,016.80	6,776.80	6,776.80	6,776.80	6,776.80	6,776.80	6,776.80
Financing Costs	37,929.59	34,136.63	30,343.67	26,550.71	22,757.75	18,964.80	15,171.84	11,378.88	7,585.92	3,792.96
Labour Costs	48,401.81	48,401.81	48,401.81	48,401.81	48,401.81	48,401.81	48,401.81	48,401.81	48,401.81	48,401.81
Raw Material Cost	17,666.26	19,322.47	23,186.97	25,763.30	25,763.30	25,763.30	25,763.30	25,763.30	25,763.30	25,763.30
Packaging	1,444.36	1,805.45	2,166.55	2,407.27	2,407.27	2,407.27	2,407.27	2,407.27	2,407.27	2,407.27
Energy Cost	563.74	704.68	845.61	939.57	939.57	939.57	939.57	939.57	939.57	939.57
Sum of Costs	1,21,109.23	1,14,549.53	1,15,123.10	1,14,079.46	1,07,046.50	1,03,253.55	99,460.59	95,667.63	91,874.67	88,081.71
Production Cost Euro/Hl	720.89	623.40	522.10	465.63	436.92	421.44	405.96	390.48	375.00	359.52
Production cost Euro/l	7.21	6.23	5.22	4.66	4.37	4.21	4.06	3.90	3.75	3.60
Cost including IEPS 26.5%	8.76	7.57	6.34	5.66	5.31	5.12	4.93	4.74	4.56	4.37
Selling price	6.9									
VAT included	8.004									
Revenue	1,15,920.00	1,26,787.50	1,52,145.00	1,69,050.00	1,69,050.00	1,69,050.00	1,69,050.00	1,69,050.00	1,69,050.00	1,69,050.00

Whole Grain Amber Ale – 25% of Total Production

Year	1	2	3	4	5	6	7	8	9	10
Utilization of Capacity	60%	75%	90%	100%	100%	100%	100%	100%	100%	100%
Quantity Sold Hl	105	131.25	157.5	175	175	175	175	175	175	175
Depreciation Costs	9,439.66	6,361.55	6,361.55	6,260.50	4,235.50	4,235.50	4,235.50	4,235.50	4,235.50	4,235.50
Financing Costs	23,705.99	21,335.39	18,964.80	16,594.20	14,223.60	11,853.00	9,482.40	7,111.80	4,741.20	2,370.60
Labour Costs	30,251.13	30,251.13	30,251.13	30,251.13	30,251.13	30,251.13	30,251.13	30,251.13	30,251.13	30,251.13
Raw Material Cost	5,194.52	6,493.14	7,791.77	8,657.53	8,657.53	8,657.53	8,657.53	8,657.53	8,657.53	8,657.53
Packaging	902.73	1,128.41	1,354.09	1,504.55	1,504.55	1,504.55	1,504.55	1,504.55	1,504.55	1,504.55
Energy Cost	352.34	440.42	528.51	587.23	587.23	587.23	587.23	587.23	587.23	587.23
Sum of Costs	69,846.37	66,010.06	65,251.85	63,855.13	59,459.53	57,088.93	54,718.33	52,347.73	49,977.13	47,606.53
Production Cost Euro/Hl	665.20	502.93	414.30	364.89	339.77	326.22	312.68	299.13	285.58	272.04
Production cost Euro/l	6.65	5.03	4.14	3.65	3.40	3.26	3.13	2.99	2.86	2.72
Cost including IEPS 26.5%	8.08	6.11	5.03	4.43	4.13	3.96	3.80	3.63	3.47	3.31
Selling price	6.4									
VAT included	7.424									
Revenue	67,200.00	84,000.00	1,00,800.00	1,12,000.00	1,12,000.00	1,12,000.00	1,12,000.00	1,12,000.00	1,12,000.00	1,12,000.00

CONTRATO DE TRABAJO POR TIEMPO DETERMINADO

Contrato Individual de Trabajo por Tiempo Determinado que celebran, por una parte (Nombre del empleado), para el puesto de Gerente general a quien en lo sucesivo se denominará “**El (La) Trabajador (a)**”, y por la otra la empresa **Brewegreen S.A. de C.V.**, del cual el Sr. Ronak Rakesh Shah es el representante legal y a quien en adelante se denominará “**El Empleador**” conforme a las siguientes declaraciones y cláusulas:

DECLARACIONES

I. Declara **El Empleador**:

Ser una persona moral, debidamente establecida y registrada conforme a la legislación Mexicana con domicilio en Bosques de Mezquite 100, 76113 Santiago de Querétaro, Mexico y con registro federal de contribuyentes BRWGN200115UD8.

II. Por su parte **el trabajador** manifiesta:

Llamarse como ha quedado escrito y ser de nacionalidad _____, tener _____ años de edad, ser su estado civil _____, con domicilio particular _____.

CLAUSULAS

PRIMERA: “**El Empleador**” contrata a “**El Trabajador**” por tiempo determinado, y por un período de _____ días, mismo que queda comprendido del día ____ del mes de ____ del año ____ al día ____ del mes de _____ de _____, para que le preste sus servicios con el puesto y/o categoría de _____.

SEGUNDA: “**EL EMPLEADOR**” se reserva el derecho de fijar unilateralmente una pena convencional que deberá de cumplir en caso de averías o daños ocasionados por negligencia comprobable y/o mal uso en los equipos que se proporcionen para el desarrollo de las actividades de él “**EL TRABAJADOR**” ó “**EMPLEADO**” entendiéndose como equipos los siguientes: Equipo de cómputo, instalaciones energéticas, instalaciones de manejo de agua y en general en todo el equipo que se le proporcionen a “**EL TRABAJADOR**” ó “**EMPLEADO**”. Esta pena convencional será exigible por “**EL EMPLEADOR**” sin necesidad de declaración judicial.

TERCERA: El presente contrato obliga a lo expresamente pactado, conforme a lo dispuesto por el artículo 31 de la Ley Federal del Trabajo en vigor, y por lo tanto, la duración del mismo será estrictamente la que se señala en la cláusula anterior, por lo que al vencerse su término las partes lo darán por concluido en forma definitiva con apoyo en el aludido precepto legal, en directa correlación con los artículos 35, 37, fracción Y, 53, fracción III, y demás relativos y aplicables de la citada ley laboral, sin ninguna responsabilidad para “**EL EMPLEADOR**”.

Appendix II: Mexican contract example

CUARTA: “El Trabajador” se obliga a prestar sus servicios en el domicilio de la empresa o en cualquier otro lugar que ésta le indique dentro del municipio de Santiago de Querétaro, México y/o cualquiera otra entidad de la República Mexicana.

QUINTA: La jornada semanal de trabajo será de 8 horas diarias mediante un horario de labores de “**El Trabajador**” que quedará comprendido de las 9:00 horas, a las 17:00 horas. Con una jornada semanal de Lunes a Viernes de cada semana, con descanso el día Sábado y Domingo.

SEXTA: “El Trabajador” recibirá un salario (mensual) de \$ 27,549.99 (Veintisiete mil quinientos cuarenta y nueve Pesos 99 /100 M.N.), mismo que le será cubierto por “**El Empleador**” en el domicilio de ésta o en su caso, en el lugar donde éste preste sus servicios, los días 15 y 30 o 31 de cada mes, en el cual se encuentra incluida la parte proporcional, correspondiente a los séptimos días y/o días de descanso semanal de cada período devengado.

Del mismo modo, “**El Trabajador**” está de acuerdo en que “**El Empleador**” realice por cuenta de éste, las deducciones legales correspondientes, particularmente las que se refieren al pago del Impuesto sobre la Renta, Seguro Social, cuotas sindicales ordinarias y extraordinarios, etc.

SÉPTIMA: “El Trabajador” no podrá laborar tiempo extraordinario de trabajo, sin previa autorización por escrito que “**El Empleador**” le otorgue, por conducto de sus representantes.

OCTAVA: “El Trabajador” se obliga en términos de la fracción X del artículo 134 de la Ley Federal del Trabajo a someterse a los reconocimientos y exámenes médicos que “**El Empleador**” le indique.

NOVENA: “El Trabajador” se obliga a observar y respetar las disposiciones del Reglamento Interior de Trabajo que rigen en “**El Empleador**”.

DÉCIMA: “El Trabajador” disfrutará de la parte proporcional, del período vacacional anual de 6 días hábiles, con pago de prima vacacional del 25%, sobre la cantidad que le corresponda por el primer concepto en mención; así como la proporción en iguales términos de un aguinaldo anual de 15 días de salario por el tiempo de los servicios prestados a “**El Empleador**”.

DÉCIMA PRIMERA: Lo no previsto por este contrato se regirá por las disposiciones de la Ley Federal del Trabajo vigente al momento de la firma de este contrato, así como por el Reglamento Interior de Trabajo que rige con “**El Empleador**”.

DÉCIMA SEGUNDA: Las partes contratantes manifiestan en términos de lo dispuesto por el artículo 39 de la multicitada ley laboral: estar de acuerdo en que si vencido el término fijado en la cláusula primera subsiste la materia de trabajo, la relación laboral se prorrogará únicamente por el tiempo que produce dicha circunstancia y consecuentemente terminada ésta, terminará también el contrato y/o relación individual de trabajo existente entre las partes contratantes.

DÉCIMO TERCERA: “El Trabajador” solo podrá dar por terminada la presente relación laboral y sus acuerdos con **“El Empleador”** luego de entregar una notificación escrita 15 días laborales antes del término de su labor.

“El empleador” puede dar por terminada la presente relación laboral y sus acuerdos, sin necesidad de notificaciones previas en caso de infracciones graves al presente contrato o reglamento interno de **“El empleador”**.

“El Trabajador” esta obligado a regresar todo material y equipo que sea propiedad de **“El empleador”** al momento del término del contrato.

Leído que fue el presente contrato por quienes en éste intervienen lo ratifican en todas y cada una de sus partes a su más entera conformidad y lo suscriben por triplicado, entregándose copia del mismo al **“El Trabajador”** para los fines legales que a éste convengan.

Santiago de Querétaro, Querétaro, México a los _____ días del mes de _____
del año _____.

“TRABAJADOR” o “EMPLEADO”

Declaro Que Recibí Copia
Del Presente Contrato

(Nombre)

“EL ESTABLECIMIENTO”

Sr. Ronak Rakesh Shah

TESTIGO

TESTIGO

Nombre

Nombre

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