

Chapter 3 Consumption condition of Chihuahua type cheese: case study

Capítulo 3 Condición de consumo del queso tipo Chihuahua: estudio de caso

MIRELES-MEDINA, Antonia†*, MIRELES-MEDINA, Elma Alejandra, MIRELES-MEDINA, Manuel Patricio and MIRELES-MEDINA, Jesús

Empresa Villa Guadalupe and Tecnológico Nacional de México (Campus Zacatecas Norte) /Instituto Tecnológico Superior Zacatecas Norte

ID 1st Author: *Antonia, Mireles-Medina* / **ORC ID:** 0000-0001-9773-9108, **CVU CONACYT ID:** 299436

ID 1st Co-author: *Elma Alejandra, Mireles-Medina* / **ORC ID:** 0009-0008-2651-1032, **CVU CONACYT ID:** 1292760

ID 2nd Co-author: *Manuel Patricio, Mireles-Medina* / **ORC ID:** 0000-0002-8179-9752, **CVU CONACYT ID:** 1064500

ID 3rd Co-author: *Jesús, Mireles-Medina* / **ORC ID:** 0009-0000-3258-1944, **CVU CONACYT ID:** 1299679

DOI: 10.35429/H.2023.7.1.33.58

A. Mireles, E. Mireles, M. Mireles and J. Mireles

* mirelesmed_7@hotmail.com

Á. Marroquín, L. Castillo, J. Olivares and N. Olguín Cruz. (VV. AA.) CIERMMI Women in Science T-XXI Biological, Humanities and Social Sciences. Handbooks-©ECORFAN-México, Querétaro, 2023.

Abstract

This study consists of obtaining information regarding the conditions of consumption of Chihuahua type cheese in Río Grande, Zacatecas, México (analysis unit), due to the fact that currently in the municipality in question the information is scarce, so it is necessary to know what the characteristics are (age, sex, socioeconomic level, among others); your consumption and purchase habits; your knowledge of the competition, brands, etc.; in addition to their consumption and purchase habits. The background of the unit of analysis is described, as well as the study of current concepts and research regarding consumption conditions; the type of social, economic, cultural and academic repercussions. Also, a comparative analysis is made with another unit of analysis, which in this case is the colony La Honda, Miguel Auza, Zacatecas, Mexico, establishing the reasons that led to said confrontation. The final result is the profile of the consumer of Chihuahua type cheese in Río Grande, Zacatecas, México, prepared with the case documentation obtained from the analysis of the consumption conditions through the present study, which will support further investigations for the generation of marketing plans, strategies and tactics that will support the producers of Río Grande, Zacatecas, México. The purpose is to establish the bases of the analysis of the consumption condition that exists among the consumers of Chihuahua type cheese in the municipality of Río Grande, Zacatecas, Mexico from the comparative analysis.

Consumer profile, Chihuahua type cheese, Strategies, Consumption

Resumen

Este estudio consiste en obtener información con respecto de las condiciones de consumo del queso tipo chihuahua en Río Grande, Zacatecas, México (unidad de análisis), debido a que en la actualidad en el municipio en mención la información es escasa, por lo que es necesario saber cuáles son las características (edad, sexo, nivel socioeconómico, entre otras); sus hábitos de consumo y compra; su conocimiento de la competencia, las marcas, etc.; además de sus hábitos de consumo y de compra. Se describen los antecedentes de la unidad de análisis, así como el estudio de conceptos e investigaciones actuales con respecto a las condiciones de consumo; el tipo de repercusiones sociales, económicas, culturales y académicas. También, se hace un análisis comparativo con otra unidad de análisis que en este caso es la colonia la Honda, Miguel Auza, Zacatecas, México estableciendo los motivos que llevaron a efectuar dicha confrontación. Se encuentra como resultado final el perfil del consumidor de queso tipo chihuahua en Río Grande, Zacatecas, México, elaborado con la documentación del caso obtenida del análisis de las condiciones de consumo a través del presente estudio, el cual apoyará a posteriores investigaciones para la generación de planes, estrategias y tácticas de mercadotecnia que apoyarán a los productores de Río Grande, Zacatecas, México. La finalidad es establecer las bases del análisis de la condición de consumo que existe entre los consumidores de queso tipo chihuahua en el municipio de Río

Perfil del consumidor, queso tipo chihuahua, estrategias, consumo

3.1 Introduction

Markets today are more challenging and demanding, this leads companies or organizations to seek strategies that allow them to generate competitive advantages over others. (Vázquez, 2012) says that "today the most successful organizations in the world have reached a level of consumer satisfaction, transforming the entire organization to serve them and stay close to them. To achieve this goal, these companies have generated a consumer approach, where they have first determined what they want to be able to design, produce and market products or services with the highest quality and at reasonable prices". In the companies producing chihuahua-type cheese in the municipality of Río Grande, Zacatecas, Mexico, the product is made without having knowledge of the consumer profile, which means that they are less competitive in the market.

(Corona, Paz Gómez, & Camacho Gómez, 2016) mention that in México there are 3,724,019 family businesses throughout the country, of which 49.9% (1,858,550 are concentrated in commerce), services 36.7% (1,367,287) and manufacturing industries 11.7% (436,851) according to information from (INEGI, 2014). A family business is one that has been founded by a family member and has been passed on, or is expected to be passed on, to their descendants. The descendants of the original founder or founders will have ownership and control of the company. In addition, family members work and participate in the company (Mucci, 2008). On the other hand, the dairy agroindustry in Mexico takes on great importance not only because it produces products with nutritional and gustatory benefits for consumers, but also because of the economic value represented by the processing activity, its ability to generate and maintain employment (Gante & Cervantes Escoto, 2011).

Currently, in the municipality of Río Grande, Zacatecas, México there are producers of chihuahua cheese that are characterized by being family businesses, which are characterized by being founded by a family member, and has been transmitted or is expected to be transmitted to their descendants. Where the production activity has been learned and transmitted from generation to generation in an empirical way and is carried out by the members of the families of the producers, due to this situation, the production of is considered as a trade and a tradition.

The industrialization of chihuahua cheese in Río Grande, Zacatecas, México is smaller in scale, because they are family businesses where the lack of business strategies to be more competitive is evident, because, although there is a good product that they market in local establishments and there is a high demand in the regional market, there is a lack of business guidelines. As well, there are producers who have started their family business and due to ignorance of the market in relation to consumption, they have not managed to be competitive, a situation that has led them to failure.

As for the media, advertising and promotion, they are null since the producers make direct sales to the consumer and in local establishments, without seeking that their final consumer differentiates their product from other brands, ignoring consumption habits and how to achieve consumer loyalty towards their brand of cheese they produce.

It is the case that small producers in Río Grande, Zacatecas, México also face competition from transnational and national companies, who do have defined strategies and knowledge of the consumption condition of their market, such as Lala, Chilchota, Alpura, Sigma, as well as dairy producers in the Northern Region of the State of Zacatecas. who stand out with greater knowledge of the market of the dairy sector of chihuahua cheese and consumption factors, among which stand out to mention some Productos Lácteos Pomas S.A. de C. V., Derivados Lácteos Menonitas S.A. de C.V., Tres Estrellas, El Saucito and Quesería San Lorenzo.

The producers of Río Grande, Zacatecas, México do not know what the characteristics of the consumer are, that is, they do not know their age, where they live, when they buy, their sex, their socioeconomic level (purchasing power), among other important characteristics to take actions aimed at exploiting their market opportunities (Consumer Profile).

Therefore, it is important that the producers of Río Grande, Zacatecas, México have knowledge about the factors of consumption, in order to potentiate the dairy sector in the municipality, because these family businesses are generators of employment and contribute to the economic growth of the municipality, state and the country, since these companies give economic sustenance to the producing families, as well as at the same time generating jobs; thereby contributing to the development of the municipality.

As well as, setting precedents on the consumption condition of the dairy sector in the region of Río Grande, Zacatecas, México since there is little information with this sector and in recent years, in the municipality of Río Grande, Zacatecas, México the supply with respect to dairy has increased, thereby generating saturation in the market without there being a market penetration due to lack of knowledge of the consumption condition of the dairy product.

It is important to identify market opportunities, tastes, preferences and consumer profile. This will allow to potentiate the commercial opportunities of dairy products and at some point, position, create or exploit their competitive advantages in the market.

It is because of this, that it is necessary to look for the means or means that allow to take advantage of the commercial opportunities of the chihuahua cheese. However, due to the lack of information regarding the environment and the characteristics of the market, specifically the consumer, it is necessary to know and identify the profile of the consumer, first of all, due to its importance, the tastes and preferences of this and in this way know to whom to direct the efforts of the company.

From the academic point of view, this study represents a challenge, because it is intended to give a practical contribution, according to the knowledge acquired during vocational training and thereby contribute to the analysis of situations that arise day by day in the environment, as the production chain is analyzed, where the lack of business strategies are evidenced, Although you have a good product and there is a high demand in the regional market, there is a lack of business guidelines.

From the cultural point of view, this problem has an impact, since it can be said that the chihuahua-type cheese in the municipality of Río Grande, Zacatecas, has a deep territorial roots and recognition of consumers, because society registers the cultural and historical heritage of the producers and implicitly recognizes the transmission of the knowledge of its elaboration from generation to generation.

3.2 Objectives

"The objectives must be clearly expressed to avoid possible deviations in the research process" (Sampieri, et al., 2014). Every project must have clear and concise objectives, as well as a defined guideline, which allow them to be measurable and above all achievable. Next, the general and specific objectives are stated, by virtue of the wide range of dairy products, the present work delimits the study to only one product, the chihuahua cheese of bovine milk, the above for being the product derived from the milk more produced in the region of Río Grande, Zacatecas, México as stated in this chapter.

3.2.1 General Objective

The general objective "It should reflect the essence of the problem statement and the idea expressed in the title of the research project" (Bernal, 2006). The objective of this project is to:

1. To lay the foundations for the analysis of the consumption condition that exists among consumers of chihuahua cheese in the municipality of Río Grande, Zacatecas, México.
2. Determine the consumer profile of chihuahua-type cheese, in order to contribute to the improvement of the competitive position of chihuahua-type cheese producers in Río Grande, Zacatecas, México.

3.2.2 Specific objectives

"The specific objectives are derived from the general one and must be formulated in such a way that they are oriented to the achievement of the general objective" (Bernal, 2006).

The specific objectives to be achieved in this study are mentioned below:

1. To determine the socioeconomic variables of the consumer of chihuahua cheese from bovine milk such as: age, sex, place of residence, academic level and occupation.
2. To determine the internal variables of the consumer of chihuahua cheese from bovine milk in the city of Río Grande, Zacatecas, México such as: reasons for purchase, perceptions and expectations.
3. Determine external variables of the consumer of chihuahua type cheese from bovine milk: reason why he buys a certain brand of cheese, influence groups, price, purchasing capacity, frequency of consumption.
4. Contribute to the rooting of customs and traditions, since chihuahua cheese represents one of the traditional dairy products, most consumed in the region of Río Grande, Zacatecas, México by preserving an artisanal production of the processed products.

3.3 Justification

The justification of all research consists in the exposition of its reasons (the why? and/or for what? of the study). All research is carried out with a definite purpose (Sampieri et. al., 2014), because as the authors mention it is not a whim of a person, since all research has a purpose; which is sufficient to carry out the investigation. For the above, the reasons for this study are subsequently written:

Dairy producers in Río Grande, Zacatecas, México face a great challenge to be competitive in the face of the globalized economy and the changing desires of the market. Reasons that create the need to maintain a competitive advantage in order to maintain their market share. That is why we are interested in analyzing and studying alternatives to improve the satisfaction of its consumers.

According to (Economía, 2012) the dairy industry is the third most important activity in Mexico within the branch of the food industry, after corn and meat; However, it has shown a higher growth rate in recent decades. Today there is an increase in the concentration of the population in Río Grande, Zacatecas, which causes an increase in the demand for a variety of foods, among which are milk and its derivatives.

For this reason, it is of great importance to know the needs of consumers of dairy products, in order to satisfy them through quality products that meet the expectations of consumers, which will serve to guide the production of the company. The supply of dairy products in Río Grande, Zacatecas, México has been increasing, causing competitiveness among its producers, who often do not know market strategies with which they can be more competitive against their competition, such as knowing the consumer profile of dairy products. The increase in the supply of dairy products in Río Grande, Zacatecas, México is due to population growth, and the lack of opportunities in the labor market, because in search of opportunities by families to have an economic livelihood, small dairy companies are founded, in order to generate their economic sustenance for their family (self-employment); therefore the economic and social importance of this study, because by determining the consumption status of dairy products will be providing information to dairy producers in Río Grande, Zacatecas, México who often only produce their products considering having an income to support the needs of their family, and not having knowledge of the profile of their consumers have not managed to position their product, since not knowing their market end up disappearing.

This research will serve to set a precedent and obtain information on the consumer of dairy products in Río Grande, Zacatecas, México and with them the producers of dairy products, have elements to make decisions regarding the dairy products offered in the market, since dairy producers in Río Grande, Zacatecas, México require more momentum for their growth, otherwise, they can disappear at any time in the face of well-established competition. It is essential to obtain this information for the identification of elements for the generation of marketing plans, sales among others and in this way give a greater boost to the activity, elaboration and commercialization of dairy products.

With this study we will have information on the market and the consumer of dairy products, since there is no current and much less published information in the municipality of Río Grande, Zacatecas. In case of not obtaining this information and in addition to not having sufficient elements to face industrialized competition and if it continues with ignorance of the consumer, it will surely have a failure in the short or medium term. For this reason, we want to address the issue of the consumer profile of dairy products, this being the object of study.

That is why the present study of analysis of the condition of consumption of dairy products of Río Grande, Zacatecas, México aims to strengthen the market through the knowledge of strategies that face the global and competitive environment, and thus contribute to the development of the economic, social and cultural environment of the region of Río Grande, Zacatecas, México since this sector retains a deep territorial roots and recognition of consumers, since society registers the cultural and historical heritage of the producers and the transmission of the knowledge of its elaboration from generation to generation is implicitly recognized.

3.4 Frame of reference

Cheese

The milk of domestic mammals has been an important part of man's food since ancient times. This has been processed into other products that are also relevant in human consumption, one of them is cheese.

The origins of cheese making will never be known with certainty, but it is known that the cheese was consumed in Asia. It was known to the ancient Egyptians, Greeks and Romans. In the first great civilization of which there are detailed indications (Egypt, 4000 years before our era (ANE)), dairy farming arises to reach a high degree of development. In the history of Babylon, 2000 years ANE, reference is made to milk, butter and cheese. In the hymns of the Vedas in India, en el periodo 3000-2000 años ANE, se proclamaba que el matar una vaca era un pecado y se refiere al uso de la leche y la mantequilla como alimento (INAES, Quesos, s.f.). "There is a great variety of cheeses and each class has a specific production technology" (Luna, 1981). For the purposes of this document, chihuahua cheese is considered.

Definition of chihuahua cheese

"It is the product obtained from pasteurized whole cow's milk subjected to coagulation processes, cut, drained, fermented, salted, pressed and matured for a minimum period of 7 days at controlled temperature and humidity; without fats or proteins not derived from milk having been used in its preparation" in accordance with the Mexican Standard NMX-F-209-1985.

Characteristics of chihuahua cheese

Likewise, with respect to the Mexican Standard NMX-F-209-1985, the following characteristics are identified that chihuahua cheese must have, within the sensory characteristics are considered the color, which must be white or slightly yellow; the taste, characteristic free of strange flavors; the smell, free of strange odors and the consistency, semi-hard and slicable.

And as physical, chemical and microbiological characteristics it is said that it must not contain pathogenic microorganisms, microbial toxins, and microbial inhibitors or other toxic substances that may affect the health of the consumer or cause deterioration of the product, therefore it must comply with the following physical and chemical specifications as indicated in Table 3.1:

Table 3.1 Physical and chemical specifications of chihuahua cheese

Specifications	Minimal	Maximum
Humidity in %		45.0
Fat (Butyric), %	26.0	
Protein of lactic origin, in %	22.0	
Total solids, in %	55.0	
pH	5.0	5.5
Total ash in %		6.5
Sodium chloride in%		3.0

Source: Own elaboration of data obtained from the Mexican Standard NMX-F-209-1985

In addition to the physical and chemical specifications, Chihuahua cheese must meet the following microbiological specifications as shown in the Table 3.2:

Table 3.2 Microbiological specifications of chihuahua cheese

Specifications	UFC/g Maximum
Coliformes	10,000
<i>Staphylococcus aureus</i>	100
<i>Escherichia coli</i>	1,000
<i>Salmonella</i> en 25 g	Negative

Source: Authors, data consulted in the Mexican Standard NMX-F-209-1985

Additives for chihuahua cheese

The additives allowed by the Ministry of Health and Assistance according to the Mexican Standard NMX-F-209-1985, are:

1. Lactic cultures
2. Sodium chloride
3. Vegetable or animal rennet
4. Annatto (annatto seed and carotene in proportion with greater than 0.06%).
5. Calcium chloride (CaCl₂) in a proportion not greater than 0.02%.
6. Sorbic acid or its sodium or potassium salts 1 g/kg.
7. Sodium or potassium nitrate in proportion not greater than 0.03%.
8. Pimaricin in a maximum concentration of 300 mg/kg in the solution.

Another important aspect with respect to cheese is consumption, this occurs at all socioeconomic levels, and reaches the amount of 2.8 kg per capita per year average according to (Huezo & Durán Lugo, s.f.).

In México, according to figures from the (Secretaría de Agricultura y Desarrollo Rural, 2019) that the annual production of bovine milk in the period from 1999 to 2018, is as shown in the Table 3.3.

Table 3.3 Annual production of bovine milk

Year	Production	Annual growth (%)
2018	12,008,239	2.0
2017	11,767,556	1.4
2016	11,608,400	1.9
2015	11,394,663	2.4
2014	11,129,622	1.5
2013	10,965,632	0.8
2012	10,880,870	1.5
2011	10,724,288	0.4
2010	10,676,695	1.2
2009	10,549,037	-0.4
2008	10,589,481	2.4
2007	10,345,982	2.6
2006	10,088,550	2.2
2005	9,868,302	0.0
2004	9,864,302	0.8
2003	9,784,355	1.3
2002	9,658,279	2.0
2001	9,472,293	1.7
2000	9,311,444	4.9
1999	8,877,314	6.8
1998	8,315,711	6.0
1997	7,848,105	3.4
1996	7,586,422	2.5
1995	7,398,598	1.1
1994	7,320,213	-1.1
1993	7,404,078	6.3
1992	6,966,210	3.7
1991	6,717,115	9.4
1990	6,141,545	10.1

Source: Authors, information consulted in (Secretaría de Agricultura y Desarrollo Rural, 2019).

From the table above, it can be noted that the dairy sector in the last decade year after year, has shown a growth in its production, since for the year 2018 the production of bovine milk was 12,008,239 with 2% compared to 2017.

At the end of 2018, the production of dairy derivatives and ferments such as cheese, cream and yogurt, reached a volume of one million 150 thousand tons, with a value of 52 thousand 104 million pesos. For its part, the cheese industry produced 418 thousand 650 tons with a market value of 21 thousand 293 million pesos as can be seen in the Table 3.4:

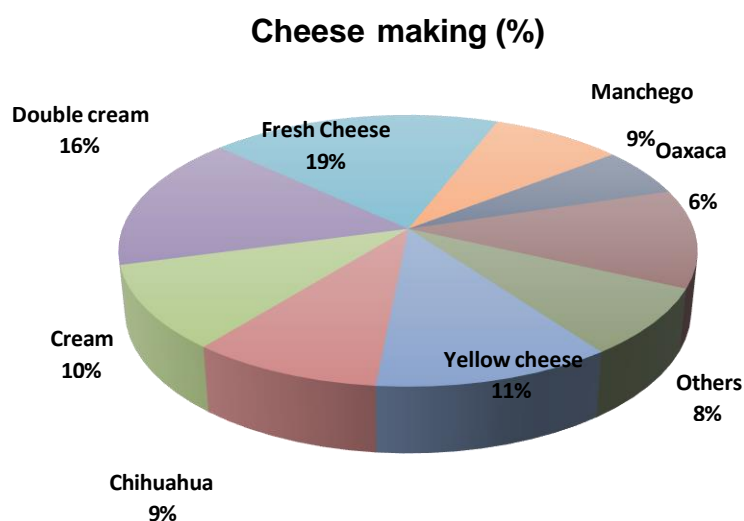
Table 3.4 National cheese production

Year / Month	Cheese making (Tons)									Total
	Yellow	Chihuahua	Cream	Double cream	Cheese Fresh	Manchego	Oaxaca	Panela	Other	
2018	48,254	38,625	41,965	67,597	79,279	35,799	24,427	48,947	33,757	418,650
January	4,047	3,438	3,943	5,188	5,590	3,075	2,097	3,887	2,465	33,730
Febr	3,675	3,231	2,809	5,138	5,970	2,839	1,921	4,030	2,599	32,212
March	4,068	3,405	3,458	5,682	6,565	2,960	2,112	4,334	2,996	35,580
April	4,168	3,353	3,470	5,513	6,329	2,948	2,036	4,009	2,799	34,625
May	4,016	3,296	3,449	5,640	6,613	3,195	2,059	4,208	2,821	35,297
June	3,848	3,253	3,663	5,593	6,475	3,109	1,951	4,240	2,819	34,951
July	4,039	3,303	2,722	6,089	7,042	2,806	2,056	4,159	2,857	35,073
August	4,080	3,199	3,575	5,743	6,795	2,827	2,154	4,085	3,016	35,474
September	4,014	3,010	3,342	5,568	6,664	2,864	1,959	4,214	2,906	34,541
October	4,122	2,949	4,306	5,791	6,891	2,990	2,002	4,003	2,869	35,923
November	4,104	3,045	3,526	5,453	6,594	2,864	1,981	3,847	2,793	34,207
December	4,073	3,143	3,702	6,199	7,751	3,322	2,099	3,931	2,817	37,037

Source: Authors, information from the (Secretaría de Agricultura y Desarrollo Rural, 2019)

Graphic 3.1 shows the share of cheese production by type, for the period January-December 2018 according to the analysis of the data in the table above, which shows that Chihuahua-type cheese represents nine percent with respect to other cheeses.

Graphic 3.1 Share of cheese production



Source: Authors, information from the (Secretaría de Agricultura y Desarrollo Rural, 2019).

"In México, dairy products such as cheeses and yogurts, as well as industrialized milks: pasteurized, ultra-pasteurized and powdered, occupy the first places of commercialization, manifesting a tendency towards the supply of urban areas, since these have accessible communication routes and concentrate groups with higher income levels. in contrast to non-urban areas, where dairy consumption is mainly limited to raw milk and artisanal products" according to (Ministry of Economy, 2012).

(Castro Castillo & others, 2013) mention that cheese production in the country is an important activity within the food industry; (Almanza-Rubio et al., 2013) They say that "the lack of a denomination of origin that protects Chihuahua cheese has motivated the large cheese factories in México and abroad to imitate the cheese produced by the Mennonites."

Chihuahua cheese is made with whole cow's milk with a minimum fat content of 3%, standardized, pasteurized and added lactic ferments such as *Streptococcus lactis* and *Streptococcus cremoris*. Its elaboration requires the use of pasteurized milk, management of lactic cultures, additives such as calcium chloride and potassium nitrate, pressing and maturing of the product according to (Montañez et al., 2006).

Consumer definition

The consumer according to (Hernández & Méndez, 2020) is a person who satisfies one of his needs by using until its end and destroying a product or a good. It is the one who has the purchasing power (money) to be able to buy or acquire goods and services (food, electricity, clothing, etc.). Each existing person is a consumer, who has different tastes and preferences according to each of their personal characteristics that they have been acquiring or were becoming part of themselves as time went by from birth to death.

Types of need

(Soto Dueñas & Mafaldo Rengifo, 2018) consider human needs to be states of perceived lack. These can be of different types:

1. Physical needs: food, clothing, warmth and security.
2. Social needs: these refer to affection and belonging to a group.
3. Individual needs: these are those of knowledge and oral expression.

Concept of desire

As they point out (Kotler & Armstrong, 2013) desires are forms that human needs take, which have been determined by: culture, the individual personality of the consumer and the society to which he belongs. In a more concrete and clear way, it can be said that they are objects that manage to satisfy needs, which become demand when there is a financial capacity to acquire these objects. It is said that by acquiring objects that can satisfy needs, the consumer obtains various benefits thanks to the attributes that these objects have, which causes the consumer to give him a greater or lesser value and satisfaction.

Demand

There are several criteria when defining demand, according to marketing experts it is a preponderant factor in the life of companies, so for (Kotler & Keller, Marketing Management, 2012) it is a human desire that is determined by a specific purchasing power.

According to (Fischer & Espejo, 2011) demand refers to the amount of product that consumers are willing to buy at possible market prices.

Consumer behavior

To talk about consumer behavior, reference must be made to customers called final consumers, that is, those who use the product at the end of the day. End customers are those who acquire goods and services for their personal consumption. This group of consumers is called the consumer market. All consumers, around the world vary according to their age, income, educational level and tastes, therefore, depending on each of these aspects their behavior of each one is different. Taking into account (Kotler & Keller, Marketing Management, 2012) the analysis of consumer behavior is the study of how individuals, groups and organizations choose, buy, use and dispose of goods, services, ideas or experiences to satisfy their needs and wants. In addition, (Delgado Estrada et al., 2018) mention that consumer buying behavior is influenced by cultural, social and personal factors.

(Arteaga Cabrera & Herrera Vargas, 2018) taking into account Jorge Elicier address the classification of consumer behavior according to four theories:

1. Psychological theories: These theories indicate that consumer behavior is dominated by psychological motivations, instinctive impulses, and other emotional and physiological issues with little relation to rational or logical aspects.
2. Learning theories: For these theories, consumers choose based on previous consumer experiences without taking into account the price of products as is the case with consumers with brand loyalty (for example, consuming only Adidas sneakers).
3. Sociological theories: This set of theories indicates that what defines consumer behavior is mostly determined by the pressures of context and other social relations that lead the individual to act according to dominant social standards. For example, consumption for the purpose of belonging to a community or following a fashion.
4. Economic Theories: These theories are based on the assumption that consumers seek to achieve their maximum level of personal satisfaction of a good or services conditional on their purchasing power or budget constraint.

(Arteaga Cabrera & Herrera Vargas, 2018) from the point of view of Schiffman and Kanuk, the four sets of theories provide different perspectives to explain consumer behavior that can be used to have a better understanding of the purchasing decisions of individuals. On the side of psychological theories there are several aspects to highlight. The authors propose motivations and personality as an important psychological component of the formation of consumer behavior. Motivation is understood as all those forces within an individual that make him decide to take a particular action. Generally, this inner force occurs as a result of a need that has not been fully satisfied.

Demand

There are several criteria when defining demand, according to marketing experts it is a preponderant factor in the life of companies, so for (Kotler & Keller, Marketing Management, 2012) it is a human desire that is determined by a specific purchasing power.

According to (Fischer & Espejo, 2011) demand refers to the amount of product that consumers are willing to buy at possible market prices.

Consumer behavior

To talk about consumer behavior, reference must be made to customers called final consumers, that is, those who use the product at the end of the day. End customers are those who acquire goods and services for their personal consumption. This group of consumers is called the consumer market. All consumers, around the world vary according to their age, income, educational level and tastes, therefore, depending on each of these aspects their behavior of each one is different. Taking into account (Kotler & Keller, Marketing Management, 2012) the analysis of consumer behavior is the study of how individuals, groups and organizations choose, buy, use and dispose of goods, services, ideas or experiences to satisfy their needs and wants. In addition, (Delgado Estrada et al., 2018) mention that consumer buying behavior is influenced by cultural, social and personal factors. (Arteaga Cabrera & Herrera Vargas, 2018) taking into account Jorge Elicier address the classification of consumer behavior according to four theories:

1. Psychological theories: These theories indicate that consumer behavior is dominated by psychological motivations, instinctive impulses, and other emotional and physiological issues with little relation to rational or logical aspects.
2. Learning theories: For these theories, consumers choose based on previous consumer experiences without taking into account the price of products as is the case with consumers with brand loyalty (for example, consuming only Adidas sneakers).

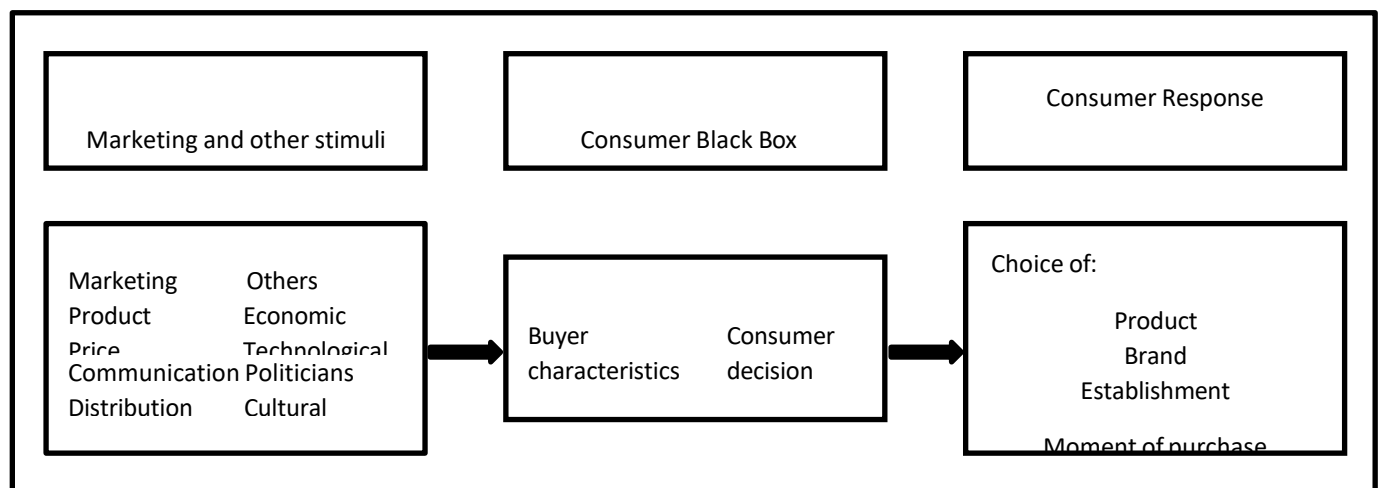
3. Sociological theories: This set of theories indicates that what defines consumer behavior is mostly determined by the pressures of context and other social relations that lead the individual to act according to dominant social standards. For example, consumption for the purpose of belonging to a community or following a fashion.
4. Economic Theories: These theories are based on the assumption that consumers seek to achieve their maximum level of personal satisfaction of a good or services conditional on their purchasing power or budget constraint.

(Arteaga Cabrera & Herrera Vargas, 2018) from the point of view of Schiffman and Kanuk, the four sets of theories provide different perspectives to explain consumer behavior that can be used to have a better understanding of the purchasing decisions of individuals. On the side of psychological theories there are several aspects to highlight. The authors propose motivations and personality as an important psychological component of the formation of consumer behavior. Motivation is understood as all those forces within an individual that make him decide to take a particular action. Generally, this inner force occurs as a result of a need that has not been fully satisfied.

Factors influencing consumer decisions

To understand a little about the decision-making that a client presents, (Kotler & Armstrong, 2013) suggest that it is necessary to take into account the aspects that affect the purchase decision of a consumer, which are highlighted in Figure 3.1.

Figure 3.1 Consumer behavior model



Source: Own elaboration (2023), information consulted in (Kotler & Armstrong, Fundamentals of Marketing, 2013)

From the previous model, it can be identified that the consumer's purchase decision is influenced by different aspects, of which some of them can be noticed in the previous figure, are denominated as marketing stimuli and others such as marketing, the physical product itself (colors, flavors, presentations, etc.); the price (whether it is cheap or expensive compared to the competition); its advertising (both of the brand that is to be chosen and that of the competition), whether or not there is a purchase of it (distribution); whether you have the purchasing power (economic stimuli); whether it is the most current or modern version of the product (technological stimuli); or even if the product is used normally or if it is used or known to use or consume (cultural stimuli).

However, the existence of these stimuli intervene the characteristics of the consumer such as age, sex and socioeconomic level, all this causes him to start and be affected his purchase decision, to finally be able to reach an end in his reasoning. In addition, the consumer's purchase decision is also affected by various factors among which are aspects related to the culture acquired or taught, the society in which it operates, personal aspects and psychological aspects that are part of each of the consumers.

Culture

Citing (Fischer & Espejo, 2011) culture is considered as the representation of a series of factors such as: knowledge, beliefs, values, art, morals, laws, customs and habits acquired by man as a member of a society.

Because this aspect varies from country to country, as well as from neighborhood to neighborhood, it is considered a more complex aspect than it seems, therefore, it is necessary that companies adapt to these situations and aspects, so you must be aware of the changes that are suffered in this aspect since consumers can modify tastes, Wants, preferences and needs in consequence of cultural changes.

Subculture

As expressed (Kotler & Armstrong, 2013) each culture has small cultural groups inside, that is, groups that share common values and experiences, so they include: nationalities, religions, racial groups and geographical regions. In the same way, we must be attentive to these aspects since they are part of the characteristics of the consumer and therefore of his purchase decision.

Social class

As noted (Kotler & Armstrong, Fundamentals of Marketing, 2013) the members of this relatively permanent and orderly division of society share similar values, interests and behaviors (social stratification).

In the case of Mexico, it is determined and identified as socioeconomic level, which is made up of groups of people with similar characteristics to each other, and according to the (Mexican Association of Market Intelligence and Opinion Agencies (AMAI), 2018), there are 7 socioeconomic levels considering the following six characteristics of the household:

1. Schooling of the head of household.
2. Number of bedrooms.
3. Number of full bathrooms.
4. Number of employed persons aged 14 and over.
5. Number of cars.
6. Internet tenure.

Family

As they say (Kotler & Keller, 2012) the family is the most important consumer purchasing organization in society, and its members constitute the reference group with the greatest primary influence.

This group can have a great influence on the consumer's purchasing decision. Each member of the family can have a different influence on buyers, this depends largely on the product or product category that is intended to buy, as well as the changes that are taking place in the lifestyle of each of the members.

They point out (Fischer & Espejo, 2011) that there are two special situations in the family, but very common in the Mexican family: the extended family and the composite family. The extended family is one that has in its bosom, in addition to father, mother and siblings, a blood relative, it can be a cousin who came to study in the city, or the beloved grandmother. The composite family is one that has within its bosom a friendship living temporarily, it can be the godson who came to try his luck in the city and while he is placed he lives in the house of the godparents.

Personal factors

Based on (Kotler & Keller, Marketing Management, 2012) purchasing decisions will also be influenced by issues such as age, the phase of the life cycle that the consumer is living, profession, economic situation, lifestyle, personality and self-concept.

Lifestyle

Kotler & Armstrong, (2013) argue that lifestyle is the pattern that follows his life of a person, expressed according to his psychographics, that is, considering activities, such as: work, entertainment, shopping, sports, social activities; interests such as food, fashion, family, leisure, etc.; opinions about themselves, social and commercial matters and products.

Psychological factors

In the words of (Kotler & Armstrong, 2013) a person's purchasing choices are further influenced by four psychological factors: motivation; perception; learning and beliefs; and attitudes. Those described below:

Motivation

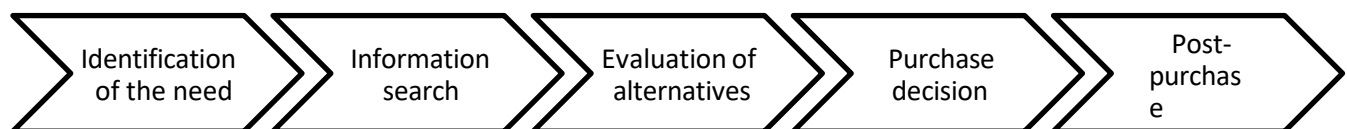
Everyone has needs, these can be biological, due to states of tension such as hunger, thirst or some type of discomfort, some are psychological due to the need for recognition, appreciation or belonging. He states (Kotler & Armstrong, (2013) that a need can become a motive when the intensity is sufficient. Pursuing a need on the part of a person is when the need is compelling enough and therefore is a motive. Mention (Kotler & Armstrong, 2013) that the theories about the needs of Abraham Maslow and Sigmund Freud are the best known. That is why only his theories are addressed below:

1. Sigmund Freud said that people are not aware of what motivates them to behave in one way or another, in the same way he thought that each person suppressed various impulses, which causes these to grow which were not eliminated only "kept a little in control", but emerged in dreams, that is, in lapsus linguae, in neurotic and obsessive behaviors, that is, in psychosis. So a person doesn't really understand his own motivation.
2. The techniques to study the motivation of a consumer can range from completing sentences, interpreting ink stains, to describing the typical users of a brand or creating a family about brands or purchase situation.

The purchase decision - process

The purchase decision process may vary depending on the author, however, according to (Kotler & Armstrong, Fundamentals of Marketing, 2013) this process basically consists of five phases as shown in Figure 3.2:

Figure 3.2 Purchase decision process



Source: Own elaboration (Kotler & Armstrong, 2013)

In normal purchases, consumers skip some of the phases or change the order. Each of the points mentioned above in the figure is described in the following points.

Definition of segmentation

As expressed (Kotler & Armstrong, Fundamentals of Marketing, 2013) is called the division of market into smaller groups of buyers with common needs, characteristics or behaviors that might need specific products or marketing combinations, that is, similarities and combinations between age, sex, purchasing power, lifestyle, etc. Taking into account (Kotler & Armstrong, 2013) the four main steps of designing a customer-oriented marketing strategy are the following:

1. **Market segment.** It is a group of consumers who respond in a similar way to a given series of marketing stimuli, that is, their reactions to advertising, samples, etc. are similar between one consumer and another because their characteristics (age, sex, attitudes, etc.) are the same or very similar to each other.
2. **Target audience.** It is the process through which the evaluation of the attractiveness presented by each market segment and selection of one or more segments to which the company is going to be directed is carried out, that is, it is that group of consumers to whom the product is directed and that have characteristics well defined by the company.
3. **Positioning.** It is the establishment of the competitive position of the product and creation of a detailed marketing mix or, in other words, it is the place that a brand occupies in the mind of the consumer.
4. **Competitive advantage.** It is that advantage that you have over competitors that is obtained by offering consumers a greater value, for example: through low prices or generating greater benefits that justify higher prices. In short, they are those attributes or benefits that distinguish a product above all others, especially from its direct competition.

Market segmentation

(Foullon Inzunza, 2020) citing (Bonta, 2016) mentions that "Market segmentation can be called the way in which an organization divides the market, determining this in small portions, taking into consideration the characteristics that help the organization to comply with all the proposed plans, when the respective segmentation process is carried out, all the resources can be directed talking about marketing focused on that segment and with this obtain information from customers".

Consumer market segmentation

Taking into account (Kotler & Armstrong, 2013) there is no single method to segment a market, so the variables must be identified, independently or together, to find the best way to visualize the structure of the market. Because of this, we can talk about four main groups to be able to segment: geographically, demographically, psychographically and behaviorally. The seven socioeconomic levels according to AMAI (Mexican Association of Market Intelligence and Opinion Agencies) are described below in Table 3.5.

Table 3.5 Socioeconomic levels according to AMAI

A/B	The socioeconomic level A / B is made up mostly of households in which the head of the family has professional or postgraduate studies (82%). 98% of households have fixed internet in the home. It is the level that invests the most in education (10% of spending) and the one that devotes the least to spending on food (28%).
C+	87% of households at this level have at least one transport vehicle and 93% have access to fixed internet in the home. In relation to expenditure, just under a third (32%) is spent on food purchases and 28% on transport and communication.
C	83% of households at this level are headed by a head of household with primary education and 77% have a fixed internet connection in the home. Of the total expenditure in these households, 35% is devoted to food and 7% to education.
C-	About three out of four households (74%) at this level have a head of household with a higher education than primary school. Just over half (52%) have a fixed internet connection in the home. In relation to spending, 38% is dedicated to food and spending on transport and communication reaches 24%.
D+	In just over 6 out of 10 households at this level (62%), the head of household has education beyond primary school. Only 22% of households have a fixed internet connection in the home. Spending on food increases to 42% and spending on education is 7%.

D	In 56% of households at this level, the head of household has education up to primary school. Internet access in the home in these households is very low, only 4%. About half of the expenditure (46%) is dedicated to food and only 16% to transport and communication.
E	The vast majority of households at this level (95%) are headed by a head of household with education up to primary school. The possession of fixed internet in the home is practically zero (0.2%). Just over half of household expenditure (52%) is spent on food and only 11% is used for transport and communication, a percentage similar to that allocated to housing.

Source: Own elaboration according to (Mexican Association of Market Intelligence and Opinion Agencies (AMAI), 2018)

The determination of a social class, is not limited to income, also intervene: education, material possessions, characteristics of the home, among others. For this reason, each social class has differences between their tastes and preferences for products, brands and services.

Results: Conditions of consumption of cheese and its dairy products according to research (Kotler & Gary, 2001) the consumer profile "is the starting point to understand the buyer, it is the stimulus-response model. Environmental and marketing stimuli enter the buyer's consciousness, the buyer's characteristics and the decision process lead to certain purchasing decisions. The role of the marketer is to understand what happens in the buyer's consciousness between the arrival of the external stimulus and the buyer's purchasing decisions."

In addition, they mention (Kotler & Gary, 2003) that the factors that influence consumer behavior are: cultural (culture, subculture, social class); social (reference groups, family, roles and status); personal (age, stage of the life cycle, occupation, economic situation, lifestyle and personality) psychological (motivation, perception, learning, beliefs and attitudes).

Likewise, (López-Díaz & Martínez Ruiz, 2018) point out that the variability in the physicochemical parameters of Chihuahua cheese affects its sensory profile and with it, consumer preferences, which can determine the acceptance or rejection of the product against the consumer

Table 3.6 Conditions of consumption obtained from research

Who buys?	<ul style="list-style-type: none"> - Cheese is regularly consumed by both men and women. - Emphasizing women are those who regularly occur to make purchases for household consumption. - Regarding the activity carried out by people who buy, it was found that employees, housewives, students, professionals, teachers, activities in the field, so it can be said that cheese is consumed by the majority of the population. - When making consumption strata based on the income of the economically active population, the stratum with the highest purchasing power shows low consumption for medical reasons and the stratum with the lowest purchasing power does so for economic reasons.
Where do you buy?	<ul style="list-style-type: none"> - Department or self-service stores, but cheese belongs to large companies (strata with higher income). - Stores specializing in the sale of dairy products (strata with higher income). - Market. - Directly to the producer (cheese factories). - Grocery stores (the lowest strata).
What brand do they buy?	<ul style="list-style-type: none"> - The most consumed is the type and brand of cheese of the region. - Followed by nationally recognized brands. - The strata with greater purchasing power include in their diet more refined (mature) cheeses.
Factors they take at the time of purchase. Mentioned according to their degree of importance.	<ul style="list-style-type: none"> - Flavor (flavor is given by the physicochemical profile and sensory profile of the cheese). - Price. - Recognized brand. - Container. - Availability. - Properties and reliability. - Hygiene. - Nutritional property. - Caducity.

How often and how much do you buy?	<ul style="list-style-type: none"> - Consumption is daily, twice a week, and once a week. The purchase is on average, weekly and is acquired around half a kilo because 36% of respondents indicated that they buy the product, while 34% acquire in the same period less than one kilo and 28% of the people surveyed from one to two kilos per week. - The amount you buy is given by the frequency of purchase.
Consumption use	<ul style="list-style-type: none"> - It is used in a wide variety of dishes, either more elaborate or in those that are prepared quickly or served to calm cravings. The main prepared dishes that require cheese, according to the survey are: enchiladas, quesadillas, chiles rellenos, burritos, etc.

The Honda Mennonite, is conformed, by thirty-four Mennonite camps, integrated by more than seven thousand inhabitants; and that among its main activities highlights agriculture, livestock, industry and commerce, among others (Bergen, 2015). The livestock to be one of the most important in the colony of the Honda, Miguel Auza, Zacatecas, México is distinguished by the raising of cattle of bovine milk, where the production is stabled, because in each household there is its small stable, taking advantage of the competitive advantage of being producers of fodder for the sustenance of their stables. Derived from the raising of dairy cattle, it is necessary that the Mennonites are producers of milk, and that, in search of commercializing and giving added value to milk, said production is destined to cheese factories producing Chihuahua cheese that are located within the Mennonite fields, which are part of this case study. where the condition of consumption of Chihuahua cheese is identified, among which the following currently stand out:

Pomas company: According to information obtained from (Pomas dairy products, 2015), Pomas is a company specialized in the production of high quality cheeses, our wide range of products, as well as more than 50 years of experience in the market. Legally constituted company, with logo and brand recognized in the region of origin of Mennonites. The production starts from the breeding and feeding of the cattle, making a selection and rotation of this, ensuring with this, a high quality raw material. The Las Pomas stable is located in Campo 20, today this stable has 7,368 heads, milking 2,875 and a total of around 140 workers, the majority of Mexican origin, from the surrounding ranches. It has the most advanced technology and highly qualified personnel trained in quality and hygiene standards. The distribution of this producer is wholesale. It processes around 50,000 liters of milk daily. Within its production are the following products:

1. Pomas: Chihuahua cheese.
2. Pomas: Cheddar type.
3. Pomas: Grill.
4. El Trébol: Chihuahua cheese.
5. La Maravilla: Chihuahua type.
6. Grienthal: Chihuahua cheese.
7. La Carreta Menonita: Chihuahua cheese.
8. El Arcon: Chihuahua cheese
9. Del Campo: Manchego cheese.
10. Universal: Chihuahua cheese
11. Fiesta: Chihuahua cheese.
12. Yogurt
13. Crema Pomas
14. Base for ice cream, aguas frescas and Pomas popsicles

The cheese is marketed mainly in the following cities: Torreón, Coahuila; Durango, Durango; Ciudad Juárez, Chihuahua; Monterrey, Nuevo León; Mexico City; with a distribution branch in each of them. The brands of the line of cheeses distributed in Monterrey, Nuevo León are: Grienthal, la Maravilla, del Campo, Pomas Asadero, Pomas Cheddar, Mennonite cheese, Carreta Menonita distributed mainly in Soriana stores (Pomas dairy products, 2015). As well as it is distributed in shopping centers and department stores in the State of Zacatecas. It offers its products on an internet platform, such as Mercado Libre. It segments its market, focusing each of its products, to a different market, such as:

1. Cheese "Pomas" type chihuahua. It is the cheese marketed in the municipality of Rio Grande, it is the chihuahua type pomas cheese, which is distributed in establishments specialized in the sale of dairy products (creameries), in presentation of bar of 1.3 kilograms. Brand that is also distributed by internet companies as a free market; and distributed in department stores and self- service as Chedraui.
2. "Carreta Menonita" type chihuahua. It is aimed at the consumer of department stores and self-services, with different product quality and at different prices, such as Chedraui, Wal-Mart, etc.
3. Quesería Derivados Lácteos Menonitas. According to the information of the portal (Derivados lácteos menonitas, s.f.), derivados lácteos menonitas is a producer of Mennonite origin, bring the authentic Mennonite flavor of the north of the country to the entire Mexican Republic, offering quality products that help its customers to differentiate themselves in their businesses or tables by the taste and quality of their products; Producer of dairy products that is legally constituted as a company, its products are distributed wholesale, with distribution channel also, to the final consumer.

It had its beginnings in the year of 1970, with the Dyck family that was dedicated to the elaboration of cheeses at home. Over the years and with the increase in production, Don Cornelio Dyck Thiessen decides to take charge of the business. In its beginnings the small company only produced chihuahua- type cheeses with the magical touch of the Mennonite tradition, which was simply called "La Quesería". In 1980 it was until when Don Cornelio (always with a vision of growth and drive), ventures into the great dream of forming a corporation; this is how Productos Lácteos was born. In 2009 After more than 25 years of constant struggle, for strategic reasons we changed our corporate name to Derivados Lácteos Menonitas S.A. de C.V. name that it retains to date (Derivados lácteos menonitas, s.f.).

Derivados Lácteos Menonitas S.A de C.V., located in field 5 of Colonia la Honda, in its beginnings the production was about 500 kilos of cheese per day, today its production is (8) eight to (10) ten tons per day, in its beginnings three employees worked, while today they currently deal with eighty to (120) one hundred and twenty employees (Derivados lácteos menonitas, s.f.).

The production is not focused on a single product, since among its range of products are the following (Derivados lácteos menonitas, s.f.).

The raw material is not produced by the producer, as it is compared to the various Mennonite camps of the Honda. It has distribution branches in Mexico City, Monterrey, Nuevo León and Gómez Palacio, Durango. And its products are focused on customers who have food establishments, since its market is focused on the production of raw materials from restaurants or food establishments, also having brands focused on the final consumer (Derivados lácteos menonitas, s.f.). Cheese factory the Honda. (Bergen, 2015) in its magazine History of the "Mennonites in Zacatecan lands", narrates that this cheese factory, is located in Field 10 of the Honda, was founded in 1985, where about 8 thousand tons of cheese are produced per day, and in case they have milk left without curdling, they sell it to Liconsá de Río Grande, Zacatecas. The products already have a regionally recognized brand and logo.

Distribution is wholesale, retail and final consumer. Its range of products is focused on chihuahua cheese and cream. The product is distributed in the municipalities of the northern part of the state mainly. The raw material is not produced, it is bought from milk producers in the Mennonite camps. Its elaboration process is through unsophisticated technology. The presentation of the product is in bar with an approximate weight of 0.900 kilograms to 1.2 kilograms. In its production process they employ more than ten people. El Saucito Cheese Factory. Producer of Mennonite origin, which is located in field number 16, the distribution of cheese is to wholesaler, also distributing to retailers, and final consumer. The product is distributed in the municipalities of the northern part of the state mainly. The raw material milk is purchased from the producers of the Mennonite camps, it has little technology for the cheese making process. It focuses only on chihuahua-type cheese. The presentation of the product is in bar with an approximate weight of 0.900 kilograms to 1.2 kilograms according to (Bergen, 2015).

Quesería el Saucito is a business located in the colony Ex Hacienda la Honda, Miguel Auza, Zacatecas, offers products / services such as cheese, milk, yogurt and its main activity is wholesale of milk and other dairy products. It started its activity on July 16, 2016, has around 20 employees (Las empresas México, 2021).

Cheese factory San Lorenzo. Producer of Mennonite origin that is located in Field 15, legally constituted as a company, the distribution of its products is wholesalers, retailers and final consumers. The product is distributed in the municipalities of the northern part of the state mainly. They have little technology for the processing and elaboration of Chihuahua-type cheese. Production is focused only on Chihuahua cheese. The presentation of the product is in bar with an approximate weight of 0.900 kilograms to 1.2 kilograms according to (Bergen, 2015).

With respect to the characteristics of the producers of chihuahua-type cheese in the colony La Honda, Miguel Auza, Zacatecas analyzed above, the following table of consumption conditions is obtained, see Table 3.7:

Table 3.7 Characteristics of Chihuahua cheese producers in Colonia la Honda, Miguel Auza, Zacatecas, México

Segmentación	Pomas	Derivados lácteos menonitas	La Honda	San Lorenzo	Saucito
Geographic	<p>Number of cities: Torreón, Coahuila, Durango, Ciudad Juárez, Chihuahua, Monterrey, Nuevo León, México, D.F.</p> <p>Regional Level: North of the State of Zacatecas, Sombrerete, Miguel Auza, Juan Aldama, Francisco R. Murguía and Río Grande.</p>	<p>Number of cities: Distribution branches in Mexico City, Monterrey, Nuevo León and Gómez Palacio, Durango.</p> <p>Regional Level: It sells its products in self-service stores as "Alsuper" multiregional chain with presence in the state of Chihuahua, Chihuahua; Torreón, Coahuila and Gómez Palacio, Durango, counting "Alsuper" with 69 stores and 16 seats, example of the brands sold in this self-service are the brands "Los Nogales" and D'Chihuahua.</p>	<p>Presence in the states of Coahuila and Durango.</p> <p>Regional Level: North of the State of Zacatecas, Sombrerete, Miguel Auza, Juan Aldama, Francisco R. Murguía and Río Grande.</p>	<p>Presence in the states of Coahuila and Durango.</p> <p>Nivel Regional: Norte del Estado de Zacatecas, Sombrerete, Miguel Auza, Juan Aldama, Francisco R. Murguía y Río Grande.</p>	<p>Presence in the states of Coahuila and Durango.</p> <p>Regional Level: North of the State of Zacatecas, Sombrerete, Miguel Auza, Juan Aldama, Francisco R. Murguía and Río Grande.</p>

Demographic	Household consumption Tertiary food processing sector	Household consumption Tertiary food processing sector	Household consumption	Household consumption	Household consumption
Psicográfico	Social class: High, medium and low. They stratify their products by creating different brands for each stratum.	Social class: High, medium and low. They stratify their products by creating different brands for each stratum.	Social class: High, medium and low	Social class: High, medium and low	Social class: High, medium and low
Socioeconomic	Occupation: Occupations in general. Income: Consumption is differentiated by brands for each stratum and region. Education: Basic onwards. Socioeconomic stratum: 1-7 AMAI, variety of chihuahua cheese brands for each stratum Life cycle: Children, youth, adults, marital status in general.	Occupation: Occupations in general. Income: Consumption is differentiated by brands for each stratum and region. Education: Basic onwards. Socioeconomic stratum: 1-7 AMAI, variety of chihuahua cheese brands for each stratum Life cycle: Children, youth, adults, marital status in general.	Occupation: Occupations in general. Income: In general, cheese is suitable for everyone's consumption. Education: Basic onwards. Socioeconomic stratum: 1-7 AMAI, variety of chihuahua cheese brands for each stratum Life cycle: Children, youth, adults, marital status in general.	Occupation: Occupations in general. Income: In general, cheese is suitable for everyone's consumption. Education: Basic onwards. Socioeconomic stratum: 1-7 AMAI, variety of chihuahua cheese brands for each stratum Life cycle: Children, youth, adults, marital status in general.	Occupation: Occupations in general. Income: In general, cheese is suitable for everyone's consumption. Education: Basic onwards. Socioeconomic stratum: 1-7 AMAI, variety of chihuahua cheese brands for each stratum Life cycle: Children, youth, adults, marital status in general.
Behavioral	Purported benefits: satisfaction of quick cravings made with cheese and preparation of dishes. Differentiate yourself in your business or tables.	Purported benefits: satisfaction of quick cravings made with cheese and preparation of dishes. Differentiate yourself in your business or tables.	Beneficios Pretended: satisfaction of quick cravings made with cheese and preparation of dishes.	Purported benefits: satisfaction of quick cravings made with cheese and preparation of dishes.	Purported benefits: satisfaction of quick cravings made with cheese and preparation of dishes.

Source: Own elaboration (2021)

Acknowledgment

The present research that corresponds to a case study was funded by the company Villa Guadalupe to whom we thank widely for its economic and intellectual support to carry it out. Likewise, the Instituto Tecnológico Superior Zacatecas Norte (TecNM campus Zacatecas Norte) and the Tecnológico Nacional de México (TecNM) have collaborated in part of its development.

Funding

This research has been funded by the company Villa Guadalupe de Río Grande, Zac., one hundred percent.

Conclusions

Once the general analysis of the information obtained with respect to the conditions of consumption of chihuahua cheese from the perspectives of other research carried out in other cities by various authors and the contrast of analysis of the conditions of consumption in the colony La Honda, Miguel Auza, Zacatecas; as well as the study of each of the chapters of the present investigation, it can be concluded the following, see Table 3.8

Table 3.8 Consumer behavior model of chihuahua cheese

Marketing stimuli	Consumer Box	Consumer Response
<p>Marketing: Diversity of brands of chihuahua cheese, with different quality and prices in the market according to the social stratum, income of consumers.</p> <p>Product: 1. The most consumed is the type and brand of cheese of the region. 2. Followed by nationally recognized brands. 3. The strata with greater purchasing power include in their diet more refined (mature) cheeses.</p> <p>Price: 1. The price may vary depending on the social stratum and place of purchase. 2. The price may vary depending on the quality and diversity of products.</p> <p>Communication: Electronic media. 1. Website. 2. Facebook. Word of mouth marketing.</p> <p>Distribution: 1. Department or self-service stores, but cheese belongs to large companies (strata with higher income). 2. Stores specializing in the sale of dairy products. (Strata with higher income) 3. Market 4. Directly to the producer (Cheese Factories). 5. Grocery stores (the lowest strata). 6. Internet platforms: free market, Facebook.</p>	<p>Characteristics: 1. Men and women. 2. Consumption is familiar. 3. Occupations in general. Consumed by: employees, housewives, students, professionals, teachers, activities in the field. 4. NSE 1-7 AMAI consume it, variety of cheese for each stratum. 5. Social class: high, medium and low. 6. Consumed by children, youth and adults.</p> <p>Decision process: Purchased: 1. Flavor (flavor is given by the physicochemical profile and sensory profile of the cheese). 2. Price. 3. Recognized brand. 4. Container. 5. Availability. 6. Properties and reliability. 7. Hygiene. 8. Nutritional properties. 9. Expiration in order of importance.</p> <p>Emphasizing that women are the ones who regularly occur to make purchases for household consumption.</p>	<p>Product: In the region the most consumed cheese is chihuahua cheese.</p> <p>Brand: The most consumed brands are those of the region, there are about 15 brands in Río Grande.</p> <p>Establishment: 1. Department or self-service stores, but cheese belongs to large companies (strata with higher income). 2. Stores specializing in the sale of dairy products. (Strata with higher income) 3. Market. 4. Directly to the producer (Cheese Factories). 5. Grocery stores (the lowest strata).</p> <p>Time of purchase: It is bought: for satisfaction of quick cravings made with cheese and preparation of dishes; or it is accompanied in saucers. It is consumed with the family.</p> <p>Frequency of purchase: Consumption is daily, twice a week, and once a week. The amount you buy is given by the frequency of purchase.</p>

The consumer of chihuahua cheese, decides: (Consumer response)

1. Consume chihuahua-type cheese from local producers (region).

Buy at:

- a) Department or self-service stores.
 - b) Stores specializing in the sale of dairy products.
 - c) Market.
 - d) Directly to the producer (Cheese Factories).
 - e) Grocery stores (the lowest strata).
2. It is bought: for satisfaction of quick cravings made with cheese and preparation of dishes; or it is accompanied in saucers. It is consumed with the family.

3. Being the daily consumption, twice a week, once a week, being conditioned
4. How much you buy by the frequency of purchase.

Due to various factors, such as: (Consumer Black Box)

1. Their characteristics, such as: age, sex, social stratum (NSE (socioeconomic level), social class, etc.
2. To your decision process which is affected by the reasons for buying chihuahua cheese, which are mentioned below, according to their order of importance such as:
 - a) Flavor (flavor is given by the physicochemical profile and sensory profile of the cheese).
 - b) Price.
 - c) Recognized brand.
 - d) Container.
 - e) Availability.
 - f) Properties and reliability.
 - g) Hygiene.
 - h) Nutritional properties.
 - i) Expiration in order of importance.

Emphasizing that women are the ones who regularly go to make purchases for household consumption, being they the potential buyers of the product.

However, despite the characteristics of the consumer, as well as the different aspects that he considered for the decision to purchase Chihuahua-type cheese, this decision is favorable or unfavorable due to: (Marketing stimuli).

1. To the marketing that is handled, the large number of varieties of product that exist, the fair price that handles, and the large existing distribution.

Table 3.9 Variables de segmentación del consumidor del queso tipo chihuahua

Segmentation	Characteristics
Geographic	Río Grande City, Zacatecas, Mexico.
Demographic	Men and women. Household consumption Tertiary food processing sector
Psychographic	Social class: High, medium and low. They stratify their products by creating different brands for each stratum.
Socioeconomic	Occupation: Occupations in general. Income: Consumption is differentiated by brands for each stratum and region. In general, cheese is suitable for everyone's consumption. Education: Basic onwards. Estrato socioeconómico: 1-7 AMAI, Variety of Chihuahua cheese brands for each stratum Life cycle: Children, youth, adults, marital status in general.
Behavioral	Purported benefits: Satisfaction of quick cravings made with cheese and preparation of dishes. Differentiate yourself in your business or tables.

Source: Own elaboration (2021)

Each of these segmentation variables are those that must be considered in the future for the realization of marketing plans and are a large part of the conditions of consumption of chihuahua cheese.

Taking into account these considerations, it can be said that the consumer profile of chihuahua cheese is:

1. Men and women.
2. Consumed by children, youth and adults. Emphasizing that women are the ones who regularly go to make purchases for household consumption.
3. Consumption is familiar.
4. Occupations in general. Consumed by: employees, housewives, students, professionals, teachers, activities in the field.
5. NSE 1-7 AMAI They consume it, variety of cheese for each stratum.
6. Social class: high, medium and low.
7. It is bought: for satisfaction of quick cravings made with cheese and preparation of dishes; or it is accompanied in saucers.
8. Consumption is daily, twice a week, and once a week. The amount you buy is given by the frequency of purchase.
9. For the purchase of Chihuahua cheese, the following factors are taken into account, such as: Flavor (the flavor is given by the physicochemical profile and sensory profile of the cheese), price, recognized brand, packaging, availability, properties and reliability, hygiene, nutritional properties and expiration.

It should be noted that the tables of the behavior model of the Chihuahua type cheese consumer, as well as the table of segmentation variables of the Chihuahua type cheese consumer, were carried out under the approach of Kotler & Armstrong, (2013) mentioned within the frame of reference, while the consumer profile is presented based on some aspects collected in the present investigation and also that they belong to each of the aforementioned tables.

The evidence presented above shows that the producing, but above all commercial activity of chihuahua-type cheese, has many market opportunities that can be exploited in its favor, such is the case of the producers of Río Grande, Zacatecas, México since in the present study general information was obtained regarding the conditions of consumption of chihuahua-type cheese, which can be considered to direct your different efforts, not only marketing, but efforts in general.

In response to these considerations, in this study the conditions of consumption of chihuahua-type cheese were determined, since the establishment of socioeconomic variables, internal and external to the consumer, will contribute to improving the competitive position of producers of chihuahua-type cheese in Río Grande, Zacatecas, México.

By way of closing, it is highlighted that this research established the bases of the consumption analysis that exists among consumers of chihuahua-type cheese in the municipality of Río Grande, Zacatecas, México. As well as the determination of the consumer profile of chihuahua-type cheese, supporting the contribution of the rootedness of customs and traditions, since chihuahua-type cheese represents one of the traditional dairy products, most consumed in the region of Río Grande, Zacatecas, México.

References

1. Almanza-Rubio, J. L., Gutiérrez, N., Orozco-Mena, R. E., & others. (2013). Assessing consumer preference toward Chihuahua cheese and Chihuahua-type cheese. *Tecnociencia Chihuahua*, 7(3), 123-131. <https://doi.org/10.54167/tch.v7i3.654>
<https://vocero.uach.mx/index.php/tecnociencia/article/view/654>
2. Arteaga Cabrera, M. C., & Herrera Vargas, M. P. (2018). *Factores culturales y psicologicos que influyen en el comportamiento de compra de maquillaje en las mujeres de la ciudad de Santiago de Cali*. <https://red.uao.edu.co/bitstream/handle/10614/10740/T08374.pdf?sequence=5>
3. Asociación Mexicana de Agencias de Inteligencia de Mercado y Opinión (AMAI). (2018). Niveles socioeconomicos (AMAI). Recuperado el 23 de Julio de 2020, de <https://nse.amai.org/niveles-socio-economicos-amai/>
4. Bergen, P. T. (2015). Menonitas en tierras zacatecanas. *Menonitas en tierras zacatecanas*, 1-89.
5. Bernal, C. A. (2006). *Metodología de la Investigación*. México: Prentice Hall.
6. Castro Castillo, G. & others. (2013). *Caracterización de la microflora de tres quesos tradicionales mexicanos: Chihuahua, Cinchoy Oaxaca*. <http://ri.uaemex.mx/handle/20.500.11799/59210>
7. Chavarín Rodríguez, S., Gómez Ortega, K., Navarro Medina, G., Quesada Ruíz, A., Rodríguez García, A., & Villarreal Bañuelos, E. (2013). Estudio de mercado de productos lácteos en el municipio de Santiago Ixcuintla, Nayarit. *Revista mexicana de Agronegocios*, 32, 205-219. Recuperado el 7 de Julio de 2020, de <http://www.redalyc.org/articulo.oa?id=14125584005>
8. Corona, L. L., Paz Gómez, C. A., & Camacho Gómez, M. (2016). Plan de sucesión en empresas familiares, el caso de una panificadora. 114-139. <https://revistas.ujat.mx/index.php/hitos/article/view/1845>
9. Delgado Estrada, S., Villacis Aveiga, W. H., & Chávez Garcés, A. M. (2018). Análisis del comportamiento de compra en servicios intangibles. *Revista universidad y sociedad*, 10(3), 125-133. http://scielo.sld.cu/scielo.php?pid=S2218-36202018000300125&script=sci_arttext&tlng=en
10. Derivados lácteos menonitas. (s.f.). Derivados lácteos menonitas. Recuperado el 20 de Julio de 2020, de <https://lacteosmenonitas.com/>
11. Durán Meléndez, E. (2016). Estudio del consumo de leche y sus derivados en el municipio de Oaxaca de Juárez, México. *Revista Mexicana de Agronegocios*, 39, 441-450. Recuperado el 10 de Julio de 2020, de <http://www.redalyc.org/articulo.oa?id=14149188007>
12. Economía, S. d. (Marzo de 2012). *economía*. Recuperado el 2020 de Julio de 2020, de http://www.economia.gob.mx/files/comunidad_negocios/industria_comercio/informacionSectorial/analisis_sector_lacteo.pdf
13. Fischer, L., & Espejo, J. (2011). *Mercadotecnia* (Cuarta ed.). México, D.F.: Mc Graw Hill.
14. Foullon Inzunza, J. J. (2020). Segmentación de mercado [Universidad de Guadalajara, Sistema de Universidad Virtual]. <https://repositorio.upse.edu.ec/bitstream/46000/6178/1/UPSE-TAE-2021-0081.pdf>
15. Gante, A. V., & Cervantes Escoto, F. (Diciembre de 2011). Obtenido de http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S0188-45572011000200006

16. Huevo, M. E., & Durán Lugo, R. (s.f.). Hablemos Claro. Recuperado el 24 de Marzo de 2016, de http://www.hablemosclaro.org/Temas/4/28/Los_Quesos_de_M%C3%A9xico_y_del_Mundo#.VvStE-LhDIU
17. INAES. (s.f.). Quesos. México. Recuperado el 24 de Marzo de 2016, de http://www.inaes.gob.mx/doctos/pdf/guia_empresarial/quesos.pdf
18. Hernández, Y. I. P., & Méndez, R. V. M. (2020). Importancia de la cultura de estudios de mercado en mipymes de Tejupilco. *Observatorio de la Economía Latinoamericana*, 2, 29. <https://ojs.observatoriolatinoamericano.com/ojs/index.php/olel/article/view/187/176>
19. Kotler, P., & Armstrong, G. (2013). *Fundamentos del Marketing (decimoprimer ed.) México*. Prentice Hall.
20. Kotler, P., & Armstrong, G. (2013). *Fundamentos de Marketing (Décimo primera ed.) México*: Pearson. Recuperado el 10 de Julio de 2020
21. Kotler, P., & Gary, A. (2001). *Marketing*. México: Pearson Educación.
22. Kotler, P., & Gary, A. (2003). *Fundamentos de Marketing (6° ed.) México*: Pearson Prentice Hall.
23. Kotler, P., & Keller, K. (2012). *Dirección de Marketing (Décima cuarta ed.) México*: Pearson Education. Recuperado el 10 de Mayo de 2023
24. Kotler, P., & Keller, K. (2012). *Dirección de Marketing (Décima cuarta ed.) México*: Pearson Education. Recuperado el 20 de Julio de 2020
25. Las empresas México. (2021). *El Saucito*. <https://lasempresas.com.mx/el-saucito/>
26. López-Díaz, J. A., & Martínez Ruiz, N. D. (2018). Perfil sensorial y fisicoquímico del queso chihuahua considerando las preferencias del consumidor. *Agrociencia*, 52, 361-378. Recuperado el 1 de Julio de 2020, de http://www.scielo.org.mx/scielo.php?script=sci_arttext&pid=S1405-31952018000300361&lng=es&tlng=es.
27. Luna, F. O. (1981). *Taller de leche*. México: Trillas.
28. Montañez, C. D. A., Lozano, M. S. R., Espinosa, F. N., & Morales, R. A. A. (2006). Detección de Salmonella spp y Listeria monocytogenes en quesos frescos y semimadurados que se expenden en vía pública en la ciudad de México. *Veterinaria México*, 37(4), 417-429. <https://www.redalyc.org/pdf/423/42337402.pdf>
29. Mucci, O. O. (2008). *Empresas Familiares: Funcionamiento e identidad*. Argentina: Universidad Nacional de Mar del Plata. https://books.google.es/books?hl=es&lr=&id=2JM-Nb_kfyYC&oi=fnd&pg=PA34&dq=%22Empresas+Familiares:+Funcionamiento+e+identidad.Argentina:+Universidad+Nacional+de+Mar+del+Plata.%22&ots=dzxD_gy4dF&sig=Mo0LK55KnWwPjtHkhHF3bmXvCbA#v=onepage&q=%22Empresas%20Familiares%3A%20Funcionamiento%20e%20identidad.%20Argentina%3A%20Universidad%20Nacional%20de%20Mar%20del%20Plata.%22&f=false
30. Productos lácteos Pomas. (2015). Recuperado el 1 de Julio de 2020, de <https://www.pomas.com.mx/prductos.html>
31. Sánchez Carlos, O. A., & Bautista Flores, E. (2017). La producción quesera en el noroeste de Chihuahua: el queso tradicional menonita. (V. Orozco, Ed.) Chihuahua hoy. doi:<http://dx.doi.org/10.20983/chihuahuahoy.2017.15.11>

32. Secretaría de Agricultura y Desarrollo Rural. (2019). *Boletín de leche*. <http://infosiap.siap.gob.mx/opt/boletlech/Bolet%C3%ADn%20de%20Leche%20enero-marzo%202019.pdf>
33. Secretaría de Agricultura y Desarrollo Rural. (Marzo de 2019). Recuperado el 17 de Julio de 2020, de <http://infosiap.siap.gob.mx/opt/boletlech/Bolet%C3%ADn%20de%20Leche%20enero-marzo%202019.pdf>
34. Secretaría de Economía. (2012). *Análisis del sector lácteo en México*. https://www.economia.gob.mx/files/comunidad_negocios/industria_comercio/informacionSectorial/analisis_sector_lacteo.pdf
35. Soto Dueñas, M., & Mafaldo Rengifo, D. (2018). *Plan de negocio Eco Lodge Tsamuna SAC, año 2018*. <http://repositorio.ucp.edu.pe/handle/UCP/492>
36. Vazquez, G. C. (2012). *Comportamiento del consumidor*. México: Red Tercer Milenio S.C.