



Method for market research: estimation of the target market, demand and sales in investment projects. Application to the honey market

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Abstract

The estimation of the target market and demand is one of the main challenges in the formulation of investment and entrepreneurship projects, due to the limited availability of information and the absence of methodological processes that allow quantifying the markets. The objective of this study is to propose a method for market studies that facilitates the estimation of the target market, demand and sales through the integration of segmentation criteria, secondary information and market research. This research is descriptive and was developed from a review of the literature complemented by the comparative analysis of project formulation methodologies and their application to the Colombian honey market. As a result, a procedure is presented that includes the analysis of the attractiveness of the market, the quantification of the niche, the estimation of demand, the determination of the market share and the projection of sales. The application of the method showed that it is possible to transform qualitative segmentation variables into quantitative estimates of the potential market, offering an alternative for contexts where there are not enough historical series and to apply traditional econometric models. It has become a useful tool for the formulation of market studies in investment projects and business plans; providing a structure adaptable to different economic sectors.

Keywords: marketing, market segmentation, investment projects, business plan, market demand

Introduction

Calculating demand for a specific segment is a significant challenge for those conducting market research or developing business plans. The difficulty lies in obtaining accurate historical information on a specific product and the lack of a proven method that guarantees quantifying such demand in monetary terms or in units. This lack leads to inaccuracies and improvisation in market studies, which often have to be based on assumptions that do not always align with economic logic. One of the main problems is that most books on project preparation focus on the theoretical support of concepts such as demand and target market, providing tools such as statistical and econometric methods that require historical data that are generally aggregated and not very relevant to niche contexts. Even when such information is available, regression and correlation models are imprecise when dealing with aggregated data, so they can only be considered as a reference when analyzing a specific segment.

On the other hand, the texts that guide market research, marketing, and business plans (understood as investment projects) focus on providing scientific support, but not practical. This prevents students or professionals with little experience in economics or management from calculating the demand for a given niche or segment.

Despite the extensive development of the literature on market research, segmentation and formulation of investment projects, there is still a methodological gap related to the quantitative estimation of the target market in contexts where there are not sufficient historical data or where the available information corresponds only to national aggregate data, most methodologies privilege the conceptual analysis of segmentation or propose econometric models whose Application requires historical information that is difficult to obtain. Therefore, there is still a need for methodological procedures that integrate secondary and primary information to produce consistent estimates of the potential market and specific demand.

In response to this limitation, this study proposes a methodological model that articulates market segmentation, market research and demand analysis through a sequential procedure that allows estimating the market niche, demand and projected sales. The main contribution is to transform variables traditionally analyzed into quantifiable and replicable procedures to support the formulation of investment projects and business plans.

The proposed methodology is summarized in the identification and quantification of customers, the calculation of demand and the valuation of the potential market through revenue. This procedure is based on the methodological development presented by Castro (2018), which has been enriched through the integration of recent theoretical contributions and the articulation of information from primary and secondary sources, this allows simple, clear and valid results to be obtained.

The originality of the study lies in proposing an integrated methodological procedure that operationalizes concepts widely used in companies through a set of equations and slide rules applicable in scenarios with limited information, unlike traditional approaches based exclusively on historical series and econometric models, the methodology developed can be implemented using primary information from market research and with official statistical sources, thus expanding its applicability in

entrepreneurship processes, project formulation and research in small and medium-sized enterprises.

Theoretical framework

The literature review included topics on market research, segmentation, and demand theory.

Market research

Market research is a process that comprises the collection and analysis of data related to market trends, customer preferences, and competitor activities in order to understand your target market and make informed decisions (Dašić, et al., 2023). This systematic and objective approach seeks to clarify marketing problems and find effective solutions through different techniques of information collection and analysis such as market ethnography, where the behavior of the individuals that make up a specific market is delved into, which, although it is a detailed method that requires specific skills, It provides valuable information. Trust plays a crucial role in the relationships between suppliers and users of the information obtained from market research, since the quality of the information collected has a direct impact on decision-making (Moorman et al., 1992), in the same sense, Malhotra indicates that market research connects the consumer, customer or general public with the entrepreneur through the information that allows him to offer products suitable for the market. your needs, that is, market research provides the information that the entrepreneur needs to identify opportunities or marketing problems that need to be solved. (Osuagwu, 2021)(Kozinets, 2002)(2008)

The usefulness of market research in the preparation of investment projects or business plans lies in its ability to provide key information that guides business strategies. In the context of real estate investing, for example, market research not only involves studying the physical location, but also thoroughly understanding the market participants, institutions, risks and socio-economic factors that affect the viability of the investment, in this way, for an investment project to be successful, it is essential to conduct detailed market research to ensure its viability and profitability.(Chukwuma, 2020)(Nworah, 2019)

The evolution of market research has led to a more sophisticated and rigorous approach in the field of marketing, where the accumulation of knowledge is essential to support business practice. Market research plays a central role in the legitimacy and usefulness of academic research and for managers in decision-making (Morgan et al., 2019) in order to have excellent applicability in real business environments.

The relationship between a company's market research function and the use of market research information influences strategic decision-making and the decision whether or not to implement a business plan. Understanding how market research data is used, whether instrumentally, conceptually, or symbolically, is crucial to maximizing its impact on decisions. Likewise, marketing research has evolved to address emerging issues and current trends, such as sustainability and ethical issues that must be considered in projects. (Bode & Geiger, 2021)(Malhotra & Peterson, 2001)

In the educational field, the teaching of market research has evolved to prepare marketing professionals with analytical and soft skills necessary to perform effectively in the field (Reavey et al., 2021), so it is necessary for many of the contents to be aligned with practice, which constitutes a constant challenge in the educational literature on the subject, Therefore, the inclusion of market studies in research projects has the practical content they require for comprehensive training.(Nunan & Di Domenico, 2018)

Market Segmentation

Market segmentation is a process in which a market is divided into homogeneous groups of consumers with similar characteristics and needs. This approach allows companies to adapt their marketing strategies more effectively, by targeting specific groups or niches with personalized products and messages, optimizing their resources, maximizing their reach, and increasing the effectiveness of their commercial actions and customer satisfaction (Boateng et al., 2018). Market segmentation is critical to better understanding consumers and offering them products and services that fit their specific preferences and needs.(Chen, 2007)

As can be seen, segmentation is a very important process for companies and should also be so for investment projects or business plans, which focus on a target market, understood as "the totality of a preferential space where supply and demand converge for the exchange of goods and services" and which is made up of segments or niches. in such a way that those with the greatest purchase potential will be chosen as they have needs that have not been fully covered by the market suppliers. (Ruiz, 2014)

To identify the market niche, the segmentation technique is used, in which the total market is taken and subdivided into homogeneous groups according to certain criteria or characteristics that are of interest to the businessman or entrepreneur, however, although the author shows the criteria and variables used, he does not expose a methodology to calculate the niche and remains in the description. (Céspedes, 2008)

In the same way, Kotler and Armstrong expose the theoretical basis of segmentation with some qualitative examples, but they fall short in recommending concrete tools to determine it, however they specify that the strategy consists of "dividing markets into significant groups of customers (market segmentation) [...] and] select the groups of customers to serve (determination of target markets)" (p. 163). (2008)

In accordance with the above, segmentation serves to identify the characteristics that potential and actual consumers of the product would have, which consider geographical, demographic, psychographic, and behavioral dimensions. The Ministry of Commerce, Industry and Tourism, although it does not set out a procedure, mentions as important variables for choosing the target segment: "its size, its growth rates, its ability to satisfy its needs through the purchase of a product or service, and its sensitivity to a differentiated offer" (p. 21), all of which are quantifiable and addressed in this chapter.(2010)

Market demand

Demand for a product in a business plan is defined as the quantity of goods or services that consumers are willing and able to purchase at a specific price and in a given period. To understand and estimate the demand for a product, it is crucial to consider factors such as price, availability of substitute products, consumer preferences, advertising, and economic situation. Market research and data analysis are key tools for assessing potential demand and adjusting marketing strategies based on consumer needs and behaviors (Boateng et al., 2018).

Authors such as Parkin and Loria and Pindyck and Rubinfeld emphasize that demand depends on many factors, but especially on price, income, prices of substitute and complementary products, tastes and expectations, so that market research and its quantification must consider these variables. (2010) (2009)

For the calculation of the quantities demanded, Contreras proposes to assess the demand based on historical behavior and regression and correlation analysis, which is the method recommended in statistics texts for businesses such as the one published by Webster and that Sapag and Sapag affirm that they are convenient for their handling and validity. (1998)(2005)(2008)

In the literature on budgets, in addition to the statistical methods of regression and moving averages, Burbano and Ortiz present the diffusion method that takes into account consumer reactions at each of the stages of a product's life cycle, especially when it is being introduced, where sales are still very low. then it is followed by increasing sales by followers and finally ends with slow growth sales due to market saturation and imitation by the competition. (2001)

The authors do not explain how to obtain the data, nor how to develop the equation, since they use statistical methods in the calculations.

$$S_t = pm + (q - p)yt - \frac{q}{p}yt [1]$$

Source: Adapted from Burbano and Ortiz (2001).

In the equation, pm is the number of producers who will test the product when it has been introduced to the market (p is the coefficient of innovation or possibility of the customer to buy it, m are the potential buyers); $(q-p)yt$ is the purchase by those who rely on the information provided by those who have already tested the product (q is the coefficient of imitation or replacement rate by other producers, and is the number of firms that will buy the product to sell it at time t); and $yt(q/p)$ is the progressive decrease in sales due to the shrinking number of buyers.

For his part, Miranda recommends quantifying the current demand ($D(2008)_0$) based on the segmentation of the market, since it classifies it into criteria or attributes that lead to determine the number of demanders, for which it exposes the apparent consumption function as a basis for determining demand with historical data. Although this author does not mention it, apparent consumption can be used to calculate national per capita consumption and, through deduction, determine the consumption of a specific niche.

$$CA = Q + M - X + \Delta E [2]$$

Source: Adapted from Miranda (2008)

In this case, CA is apparent consumption, Q is domestic production, M imports, X exports, and ΔE is the change in inventories (omitted in many cases). Aggregated historical data can be obtained from union or institutional databases.

Ruiz (2016) also recommends the formula of apparent consumption and per capita consumption to calculate demand, although it does not present the way to make the calculations or obtain the data, while Sapag and Sapag (2008) talk about the convenience of qualitative methods when historical information does not adequately explain the behavior of the variable. when historical data are not sufficient or because they do not exist; among the methods they recommend are Delphi and market research. The latter is the proposal of this document and would be convenient for business plans, given its flexibility to collect data from a representative sample and its possibility to use it in the calculation of demand.

For demand projection, Miranda (2008) recommends using the extrapolation of historical trends, technical coefficients, internal and international comparisons, econometric methods and qualitative methods such as Delphi or scenarios, however, one of the most recommended formulas is population growth, since demand is determined by the number of consumers and their growth.

$$D_n = D_0 (1 + d)^n [3]$$

Source: Adapted from Miranda (2008)

Since n is the projection year, the current demand (D_0) is required to make the respective calculations (to be explained later), while d can be easily calculated with the formulas set out below, although it can also be replaced by the growth rate of the sector, as established by Burbano and Ortiz (2001).

In the case of obtaining a calculation of the point demand in a given year (D_0), such as that exposed by apparent consumption or that determined by market research, the projection involves determining a rate at which the figures should grow.

Álvarez and Sánchez present a growth rate that considers the relationship between the demand for a product, income and the growth of the number of consumers that they specify in an econometric model expressed in the following formula: (2014)

$$d = \Delta p + [E I * \Delta I] [4]$$

Source: Adapted from Álvarez and Sánchez (2014)

Where d is the growth rate of demand for a product, Δp is the decimal growth of the population, ϵI corresponds to the income elasticity, and ΔI is the increase in the income of the population.

As analyzed, demand first needs to determine a specific value of the units acquired by consumers in an initial year (D_0) and be projected by statistical projection or with the population growth formula.

Methodology

The research is descriptive and is based on a bibliographic review and a proven method as a tool for project, entrepreneurship, market research and marketing with students from different universities, since in these courses it is necessary to find the target market and calculate the demand for particular products. Three stages were taken into account in the research process:

The first stage consisted of the bibliographic review to find the methods proposed by different authors for the identification of the segment and the calculation of the demand and sales of market studies in investment projects, so that the proposed methodology presents theoretical support in texts of preparation and evaluation of projects. likewise, it was verified that it was in line with what was recommended by SENA for business plans that wish to access resources from the Entrepreneurship Fund. The second stage consisted of comparing the different methods with each other and against the development of the pedagogical process of the teaching experience, since the methodology has been used as a research tool for different undergraduate, specialization and master's degree projects in educational centers such as Santo Tomás, Pedagogical and Technological University of Colombia -UPTC-, University of Boyacá, University of San Gil, Industrial University of Santander, Rey Juan Carlos University, among others, always showing their convenience and flexibility to adapt to the needs of the business plan proposed by each institution.

In the third stage, the methodology is presented with a practical example of a consumer product, so it is presented in a didactic way through formulas and tables that can be used in the teaching-learning process.

With the process of evaluating the consistency of the procedure, the methodology was contrasted with the approaches of classical and contemporary authors on market research, segmentation and demand estimation, verifying the coherence between each stage of the methodological process. Subsequently, the model was applied to the Colombian honey market as a case study, allowing to verify the articulation of segmentation, demand and sales. This strategy seeks to demonstrate the operational feasibility of the method and its potential for replication in other sectors.

Results

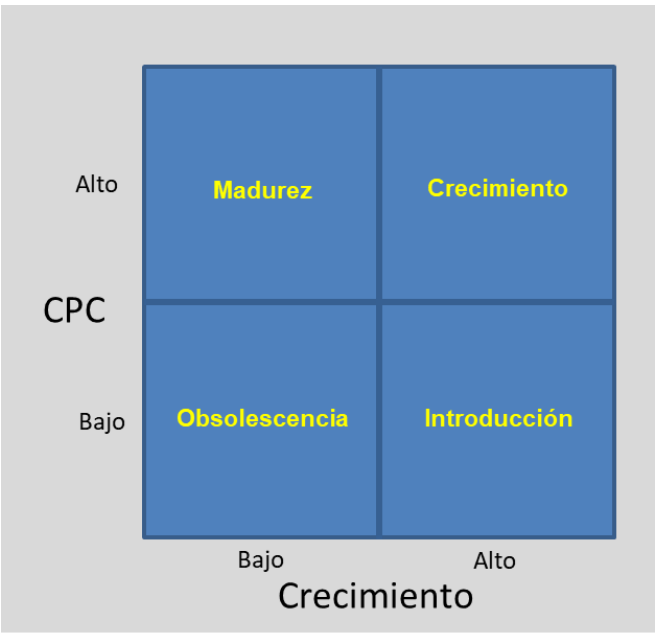
The proposed methodological process begins with the identification of the attractiveness of the market and the quantification of the niche, continues with the assessment of the demand and ends with the preparation of the sales plan.

Market Attractiveness

A market is attractive based on the existence of several of the five forces of competitiveness proposed by Michael Porter, that is, a market or industry is more attractive to the extent that there are barriers to entry into the market, that there are no strong and aggressive competitors, that the product does not have many substitutes and that buyers and customers do not have much power over prices or aspects of the negotiation. These five forces positively or negatively impact the average profitability of the industry in which firms compete. "The prevailing competitive force or forces determine the profitability of an industry and become key pieces of the analysis and formulation of strategies" (Porter, 2016, p. 37).

This means that in order to determine the attractiveness of a market, these forces must be studied and the average profitability of the industry must be identified, thus, the higher the profitability, the greater the motivation of new competitors to enter it; however, in a complementary way, attractiveness can also be identified taking into account per capita consumption (C_{pc}) and the growth of industry (d), since the existence of several of the forces will promote the growth of companies and will be reflected in the increase in consumption. In this way, the business can be placed in one of the stages of the product life cycle as follows:

- Introduction stage: low per capita consumption (less than one unit per year) and medium or high growth (with respect to the growth of the economy), for a new product.
- Growth stage: high per capita consumption (greater than one unit per year) and high growth, for a product that is already on the market.
- Maturity stage: high per capita consumption and low growth for an already positioned product.
- Obsolescence stage: low per capita consumption and low or negative growth for an already known product.



Source: (Castro, 2018, p. 51)

In the first two stages, the profitability of the industry is high and this attracts new competitors; In the last two stages, profitability is reduced by increased competition. A new company would seek to enter the introduction or growth stage of a product or industry, as it will allow it to earn significant profit margins without having to fight for market share. As for the axes, per capita consumption is obtained by dividing Apparent Consumption (formula 2) by the national population (N), while the growth rate of industry (d) is obtained from the average of growth over at least three periods. The profit margin of the industry will be taken as an objective in determining the sale price of the project's products.

Identifying and quantifying consumers

The logic of marketing is based on finding who the consumers¹ or target market would be, mentioned indistinctly in the references analyzed as a group of people with the highest probabilities of purchase, but the question would then be: who and how many are they really? Solving the previous question means a process of purification of the population through segmentation, a concept well known to all administrators, but impractical due to its qualitative nature. Kotler and Armstrong classify segmentation criteria as geographical, demographic, psychographic, and behavioral. These criteria can be used in a matrix to filter out the consumers who actually meet the conditions of the target market, i.e. they define who and how many are the ones who really need the product and could buy it (niche market). (2008)

Table 1 shows the suggested matrix for filtering the information based on the criteria and variables.

Table 1. Segmentation matrix			
CRITERIA	VARIABLE	MAGNITUDE	SOURCE
GEOGRAPHIC, DEMOGRAPHIC, PSYCHOGRAPHIC, OR BEHAVIORAL	Depending on the criteria. For example: urban area or locality for the geographical, or, income level or family life cycle for the demographic.	It is the amount of the population that meets or corresponds to the variable analyzed and can be absolute or relative. For example: 7,181,469 inhabitants of Bogotá.	It is the original source of the information. For example: DANE, Census 2018.

Source: Own elaboration (2025)

Once all the criteria have been chosen and their variables have been assessed, the target market or niche can be easily calculated by multiplying the magnitude. As an example, Table 2 is presented for a bee honey production project for the city of Bogotá, concentrating on the localities of Teusaquillo, Barrios Unidos, Chapinero, Usaquen, Fontibón and Puente Aranda, which are the localities with the urban prosperity index above the city average (Serrano et al., 2020).

¹ Most of the texts mention the words customer and consumer as synonyms, however, this document addresses them in a differentiated way, since the customer would be the person with whom you have business relationships (in this case the intermediaries of the channel) and the consumers would be those who are interested in the products and to whom the marketing effort is directed (in this case they are people, households or companies).

Table 2. Practical example of segmentation

CRITERIA	VARIABLE	QUANTITY	SOURCE
GEOGRAPHICAL	Total population (2024)	1.764.609	Bogotá Mayor's Office (2024)
DEMOGRAPHIC	Income (covers more than minimum expenses) ² Stratum (3 the upper) Employed (occupancy rate)	59,9% 79% 61%	Bogotá Mayor's Office (2019)
PSYCHOGRAPHIC	Lifestyle (oriented towards the consumption of healthy foods) Reviews (look for foods with local, natural ingredients and organic alternatives)	90% 84%	Carmona (2020) Nielsen (2015)
BEHAVIORAL	Shopping site (supermarkets, hard discount, and chain stores) Method of purchase (by quality and taste)	54,8% 37,2	Food (2022)

Source: Own elaboration (2025)

Multiplying all the values yields 78,501 people. It should be noted that when there is no access to a numerical value, but the variable is important to define the target population, it is placed 100% in the quantity. The target or niche market is then a synthesis of the qualitative and quantitative variables as follows: 78,501 people from the towns of Teusaquillo, Barrios Unidos, Chapinero, Usaquen, Fontibón and Puente Aranda in Bogotá, with incomes that allow them to comfortably cover their minimum expenses, reside in homes classified in strata 3 or higher and are employed, oriented towards healthy products, who look for natural and local foods and buy them for quality and taste, but who also buy them in specialized businesses such as supermarkets, *hard discount* and chain stores. It is important to note that the variables are not always obtained as a percentage; sometimes they are found in absolute terms and therefore it is necessary to make calculations to determine the relative value, for example the DANE data are obtained in number of people, so it must be divided into the total population of the territory to determine the percentage; It may also be the case that the population needs to be corrected because the year does not correspond to the year of analysis or does not meet the criterion, for example: suppose the clients were households and there are inhabitants, then it must be divided into the number of people per household and updated to the corresponding year with equation 3.

Quantification of demand

Demand is perhaps the biggest challenge in investment projects, as figures are rarely available or not relevant. Most of the demand reports are national aggregates that do not respond to the reality of the local market, so it is always advisable to carry out a survey of potential consumers, that is, market research with the previously selected segment. This way of calculating demand is advisable to the extent that it is based on the information provided by the niche, while projections based on statistical or econometric models arise from aggregate figures and sometimes do not reflect the preferences of the target market. The quantification of demand starts with market research that includes fieldwork to obtain data on key or determining variables and ends with the application of the proposed equations. Historical data obtained from secondary sources can serve as support to determine apparent consumption and growth rates and trends of the sector in which the business will operate.

Key variables or determinants of demand

In competitive markets there is a large number of producers and this means that prices and quality tend to present minimal differences and stabilize in the long term, likewise, the quantities offered and demanded will be close to equilibrium and will present low growth rates, generally linked to the growth of consumers or the behavior of the national economy. Under these conditions, in addition to price, the factors that modify the behavior of demand and are set out in formula 7 are: "average income, population, prices of goods related to the good in question, tastes and special elements" (Samuelson, 2002, p. 43). Consumer tastes and expectations are stimulated by advertising or promotion, so that companies can present superior growth in their sales.

$$D = f (P, I, G, N, E, psc, otros) [5]$$

Source: Adapted from Parkin and Loria (2010)

Where, D is the demand; P is the price; I is the income; G is the taste or preference, E the expectations; N is the population; and Psc is the price of substitute and complementary products.

The way in which the variables are related to determine demand is as follows:

- Price: the relationship between the price and the quantity demanded is inverse, that is, the lower the price, the greater the quantity demanded.

² For the illustrative example, only the data from Chapinero are taken, which is a locality located in the average of the six in terms of the prosperity index.

It is generally not advisable to ask for prices in a survey, except to determine the availability to pay when a product is differentiated or new³, but since it was said that the market is competitive, it is convenient to look at the prices of the brands that are identified as preferred when applying the form.

Once it is determined that the price is a decision of the investor, either as an acceptor of market prices or as a fixer because it has enough differentiation to place a higher one, it is understood that it is not necessary to determine the quantity demanded and is more of a restriction that reduces the market niche for those who can afford it. which coincides with the segmentation variables. In case the survey asks if you would pay a higher price than the market, this percentage can complement the variable of taste or preferences.

- Price of substitute and complementary products: it is not possible to establish a precise relationship with substitute and complementary products without much more thorough market research, but for practical purposes it will be enough to ask which products are considered substitutes and which complementary products to design marketing strategies with which to take advantage of the opportunities and counteract the threats they represent. that is, determine which products or brands are competitors and which are allies.

- Income: the consumption of a product can occur at all income levels of society, but the variation of this can affect the quantity demanded, since when income is low and the price increases, many consumers opt for substitutes for more affordable ones. According to economic theory, if income is taken into account, demand increases when products are normal and decreases when they are lower, therefore, determining the income elasticity is essential to determine the segment to which to sell the product. Revenue is a very important variable to determine the growth rate of the market (see equation 4), necessary to project demand, however, in the proposed method, it is more useful to quantify the market niche in segmentation, that is, when it is taken as a segmentation variable it is not necessary to take it up again in the quantification of demand.

- Taste or preference: this is a very important variable because it determines the true intention to acquire the product of interest, which means that it must be expressly formulated in the survey; It will be enough to ask if you would like to purchase the product to obtain a percentage of availability or purchase intention. To avoid bias in the answer, it is recommended to reinforce it with questions about aspects that are part of the value proposition or differentiators such as design, ingredients, shelf life or other dimensions of quality.

- Population: the target market is the most important variable of demand and is not only about determining its number (market niche), it also requires knowing two fundamental aspects: per capita consumption and frequency of consumption.

- a. Per capita consumption: is the average consumption of the individuals who answer the survey. To determine this, you must ask how many units of product they buy per unit of time (days, weeks, months, year) and from this data calculate the arithmetic mean. It is a method of quantification that is highly recommended, especially by SENA. It is also advisable to compare it with national per capita consumption to verify that the segment is more attractive (See attractiveness matrix).

- b. Frequency of consumption: it is a logical calculation of the number of times consumption is repeated in a year, so for example, if you were asked how many breads an individual consumes per week, it is logical to know that this consumption is repeated 52 times a year. If the question were monthly, the frequency would be 12 times.

When considering the above elements, the demand formula would be expressed according to population and preferences.

Calculation of current demand

According to the above reflections, to calculate the current demand (Do) only the variables population and taste would be taken into account, using the following formula:

$$D_0 = Cpc * f * N * G [6]$$

Source: Own elaboration

Where, Cpc is the per capita or average consumption, f is the frequency of consumption per year, N is the market niche, and G is the taste or preference. From this formula it is already easy to calculate demand. Taking the aforementioned niche as an example; a per capita consumption of 80 grams per year (Castro et al., 2022) and the results of market research carried out by Prochile, where, for example, it was found that the typical consumer buys in glass containers (73%) and that 74% prefer natural packaging. According to EMR Enterprice, the main channels of honey bees in Colombia are hypermarkets/supermarkets, convenience stores and online channels; for Prochile (2023) 13% buy online and the remaining 87% in physical channel (proposed for the project).(2023)(2024)

$$D_0 = 80 * 1 * 78.501 * (73\% * 74\% * 87\%) = 2.951.474$$

The demand for honey would be 2,951,474 grams per year. However, if the market study by Prochile (2023) is taken into account, the most common presentations are 240 and 375 cc and that according to Vásquez et al., the density of honey in Colombia is 1.4 Kg/L, a presentation of 370 cc (commercial packaging presentation) would weigh 518 grams. so the initial defendant would be equal to 5,697 jars of honey of 370 cc.(2012) The use of formula 6 then resolves the shortcoming presented in the literature about a method to assess demand in specific or local markets.

³ In the case of a differentiated product, the willingness to pay is asked and the calculation of it will be through the search for a target profit margin.

Calculation of future demand

Demand is growing exponentially due to its close relationship with the population, so future demand uses formula 3. In this case, the growth rate can be calculated with formula 4 if the income elasticity is obtained⁴ or, failing that, the growth rate of the sector or industry or the growth rate of the Gross Domestic Product-GDP can be used. It is advisable to choose the smallest of all when formulating the project, as this helps to reduce false expectations in projections and budgets, which is a very common mistake among entrepreneurs. Continuing with the example, if the growth of the minimum wage was 12.07% in 2024 and demand grew by 5.1% between 2024 and 2032, the income elasticity of demand (Mintrabajo, 2024)(EMR Enterprice, 2024)⁵ is equal to 0.425. The calculation of income elasticity serves to classify the product, which in this case would be a basic good and therefore the growth in demand is lower than the increase in income, in such a way that a differentiation strategy must be established if one wants to charge higher prices than the competition. If you already have the value of the elasticity, you can use formula 4 considering a population growth rate of 0.4% in 2023, although in this case the result of the parenthesis is equal to the growth in demand (5.1%) because the elasticity was calculated in the same year.(Banco Mundial, 2024)

$$d = 0,4\% + [0,425 * 12\%] = 5,5\%$$

The growth rate of the sector is a data that must be calculated and that says a lot about the stage of the life cycle in which the product is, so, for example, if it is higher than GDP growth it will be a sector in the introduction stage (new product) or in the growth stage, but if it is close to this indicator it will be in the stage of maturity or obsolescence (it is more obsolete to the extent that it is more obsolete to the extent that it is not the same as it is in the development of the product). that growth is lower or negative). If demand grows at a rate of 5.5%, it would be a market in the growth stage and it is expected that new companies will cover the unsatisfied demand and begin to consolidate themselves as brands, a very convenient stage for entrepreneurial projects.

In the case of future demand, formula 3 is used as follows.

$$D_1 = 5.697 * (1 + 0,055)^1 = 6.010$$

It is observed that for the first year (2025) there would be a projected demand for 6,010 jars of 370 cc of natural honey. For the following years it will be enough to change exponent 1 for the corresponding year, for example, the demand for year 4 is 7,058 units.

The income of the project

The income from an investment project that develops a business idea will come from the sales of the products and for this it is necessary to have the calculation of the units to be sold and then multiply them by the price. The units sold will depend on market share, while the price depends on the type of market and the entrepreneur's profit expectation.

Market Share

Sales in the niche is the part of the total demand of the target market that can be covered and therefore will be the market share or share. However, market share can also include competitors if there is no high degree of innovation or product differentiation. In this case, the share is the quotient between the company's sales and the industry's sales, however, when it comes to a segmented market, it is very difficult to know the sales of the competition, so the share can be determined as an average share taking into account the number of competitors and using the following formula:

$$\text{Cuota} = \frac{1}{\#competidores+1} * 100 [7]$$

Source: Authors' elaboration (2025).

For example, EMR Enterprice highlights as the main players in the market in Colombia (2024) Abundant Honey Group, North Dahllas Honey Company and GloryBee Natural Sweeteners Inc. would each have an average share of 33% and the inclusion of a new entrepreneur would reduce the share to 25% for each. Although this analysis is simplistic and does not consider the size of competitors and market concentration, where there may be one that covers 90% and the others have to share 10%, this calculation allows us to budget for likely sales by defining coverage objectives and strategies that help achieve this, in particular, when there is no data about the competition.

Units to sell

From the market share, the sales of the project are calculated by multiplying it by the projected demand.

$$Vn = D_n * \text{Cuota} [8]$$

Source: Own elaboration (2025)

⁴ In practice, income elasticity can be calculated on the basis of minimum wage and apparent consumption data for certain years

⁵ If you divide the percentage of growth of the defendant by the percentage of increase in income.

In the example above, it would be 1,502 jars of honey for year 1.

$$V_1 = 6.010 * 25\% = 1.502$$

Once this sales potential data is available, it can be compared with the production capacity or size of the project, which takes into account the company's production capacity or productivity. For example, the company must acquire assets that generate a production greater than the calculation of projected sales during the 5 or 10 years of planning or propose reinvestments over time. Additionally, it is recommended that the quota be reached in the planning period and not start directly with it, that is, start with a sales plan with a part of the quota and increase it with greater market penetration through promotion and advertising and the positioning achieved by the brand. This is because, for the first few years, the company will be in its introduction stage and will be able to gain participation to the extent that its marketing strategies are effective and allow it to attract and retain customers that increase its sales. For example, year 1 could start with a 5% share and increase by this same value year after year until it achieves 25% of the projected sales in year 5. For the illustrative example, an initial fee of 25% is left and maintained every year, which implies a great marketing effort that first year.

Price and revenue

If the type of market is competitive, the company would be price-accepting and therefore the managerial concern will have to do with the reduction of costs as a strategy of penetration, positioning and sustainability; but if the market allows entering with a differentiated product, the entrepreneur could look for a price that allows him to obtain a profit margin with which to cover both the operational needs of the organization and the expectations of investors, this price will be called the target price and its formula would be:

$$P = \frac{CT}{Q * (1 - MO)} \quad [9]$$

Source: Adapted from Burbano (2001)

Where, CT is the total cost of the company (cost of sales + administrative expenses + sales expenses), Q is the quantity to sell, considering the market share and MO is the expected operating margin⁶.

The MO should be consistent with the industry, for example, if the already positioned competition is earning an operating margin of 10% it would be unlikely to achieve a higher profit. In the example above, if the total costs of the company are \$25 million per year and the entrepreneur wants to obtain an operating margin of 10%, the price of the jar of honey would be as follows:

$$P = \frac{25.000.000}{1.502 * (1 - 0,1)} = 18.495$$

To cover all its costs and operating expenses and obtain an operating margin of 10%, with a market share of 25%, ⁷the price would be \$18,500 per 370 cc jar of natural honey.

This price should be compared with the competition to define a reasonable strategy, especially in competitive markets or with products with little differentiation. According to Prochile (2023), the consumer price in the supermarket and specialized stores channel has an average of USD\$11 dollars per kilo (USD\$5.67 for a 370 cc presentation), which means that the nationalized price would be \$23,247 for the presentation of the project, thus leaving a margin of maneuver to support the channel's marketing margin.

Finally, the income will be the product of the price and the quantity to be sold. The following table shows the summary of the selling plan for years 1 and 4.

Table 3. Project sales plan. Year 1 & 4

CONCEPT	1	4
DEMAND	6.010	7.058
SHARE	25%	25%
SALES	1.502	1.765
PRICE	18.500	18.500
SALES REVENUE	27.787.000	32.652.500

Source: own elaboration (2025)

It is observed that the level of sales is very low for a company, but a little reasonable for a small beekeeping farm. In this case, the intention is didactic, being important to take into account the type of product and industry in which it operates, since the

⁶ The operating margin is equal to the operating profit on sales.

⁷ If the recommendation of a much lower initial payment is taken into account, the target price will increase because the amounts that the company's costs and expenses must bear are lower.

intention is to stand out from competitors with a competitive strategy that allows the entrepreneur to prosper and stay in the market, that is, to meet the financial objectives of profitability, growth and sustainability.

Discussion

The results obtained confirm that market research can transcend its descriptive function to become a mechanism for quantitative estimation of the target market when it integrates segmentation and consumer behavior variables in a structured way. This proposal coincides with Malhotra (2008) and Morgan et al. (2019), who highlight that market research is a fundamental support for strategic decision-making, although it expands on these approaches by offering an operational procedure to convert this information into demand estimates applicable to investment projects. From the perspective of segmentation, the model complements the proposals of Kotler and Armstrong (2008) and Céspedes (2008), who extensively develop the geographical, demographic, psychographic, and behavioral criteria, but without establishing quantitative mechanisms to determine the effective size of the market niche. In this sense, the procedure presented constitutes a mathematical operationalization of these criteria, allowing qualitative variables to be transformed into objective estimates of the potential market. Regarding demand estimation, the proposed method does not intend to replace the traditional econometric models recommended by Miranda (2008), Sapag and Sapag (2008) or Webster (2005), but to offer a methodological alternative when the availability of historical information is insufficient or when the object of study corresponds to highly segmented markets. In these scenarios, the use of primary information from market research represents a valid source to approximate potential demand and reduce the uncertainty inherent in project formulation processes. The application of honey to the Colombian market made it possible to demonstrate the operational viability of the procedure and to show that the integration between segmentation, market research and sales projection generates estimates consistent with the economic logic of the sector. Although the study was developed in a specific market, the methodological structure has enough flexibility to adapt to other business contexts, constituting a support tool for researchers, entrepreneurs and project formulators.

Conclusions

By resolving the questions about who and how many are the potential consumers of a project, it is possible to conclude that every product has a market defined by characteristics determined by the investor, since they define who is to be served with the value proposition and achieve their satisfaction, so that the market niche can be expressed in terms of criteria and segmentation variables. The procedure to determine the segment consists of identifying the variables that are important or relevant to the consumer and that the investor can attend, obtaining their percentage value from secondary sources and then multiplying them by the absolute value of the target population, thus obtaining a number of potential customers who have the highest probability of buying the product offered and who make up the so-called market niche. Once the segment has been quantified, market research with primary sources can be used to obtain data on the variables that determine current demand. From current demand, it is possible to calculate future demand using recommended formulas and industry data obtained from secondary sources. Market research should also lead to identifying and quantifying current competitors, which when considered determine the average share or share as a market penetration objective. When the different formulas are resolved, the potential income of the project is available and therefore, when the assumptions developed in the document are fulfilled, there is a tool for the preparation of market studies in investment projects or business plans, a model that can be replicated in academic teaching and constitute a support for monitoring its execution. Its use would be recommended given its flexibility, since it must be considered that the market is dynamic and the projections of economic models are very rigid, however, the variables must be periodically monitored and the budgets of different projects must be compared with the real results obtained from the implementation. As future lines of research, it is advisable to validate the model in different economic sectors and compare it with methodologies based on econometric models, machine learning and predictive market analysis. Likewise, it would be pertinent to evaluate the accuracy of the estimates obtained through longitudinal applications that allow contrasting the projections with the real behavior of sales, thus strengthening the empirical evidence on the usefulness and scope of the proposed methodological procedure.

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