Menu engineering: A benchmark methodology for improving the profitability of a restaurant company

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Abstract

The business of a restaurant is a complex enterprise that requires the best instruments for the effective administration and management of its processes, so in this research article, the application of menu engineering is proposed in the restaurant Valentine by Carnes y Sabores, as a reference methodology for the improvement of the restaurant's profitability. For this purpose, a brief cost analysis of the dishes offered on the menu is made to determine the qualitative criteria of profitability and to obtain the coefficients of the ideal mix and real mix to determine the criteria of popularity. Moreover, apply the BCG matrix to value the dishes. The research is based on a non-experimental, applicative design using menu engineering methodology. The results obtained translate into three strategies: the restaurant has two-star dishes that must be permanently evaluated to maintain their quality, a horse dish that must be revalued and made profitable, and a dog dish whose strategy is to eliminate it, to be replaced by another product with profitability potential. The research constitutes a reference for the application of menu engineering to obtain greater profitability and improve the quality of the restaurant's services, maintaining the cultural and gastronomic essence with which it was created.

Keywords: *menu engineering, restaurant, profitability, popularity, dishes.*

INTRODUCTION

The Central Bank of Ecuador in macroeconomic forecasts for 2020, published in January 2021, places the hotel industry and mainly food services in 12th place in the ranking of economic activities, generating a contribution of 2,388.63 million dollars in 2020, which means that the lodging and restaurant industry contributed 2.2% of the GDP.

For its part, the Ministry of Tourism (MINTUR) reports that, in 2019, 24,382 lodging establishments were registered of which 16,569, 78% were restaurants and soda fountains, 87.4% of these establishments were registered with second, third and fourth categories. As a result, the sector's growth between 2011 and 2019 was 2.9%.

This phenomenon indicates that people see food services, such as restaurants, as an alternative for sustainable economic development; however, with the same speed with which we observe the emergence of restaurants, at the same dizzying pace, this is because restaurant administrations do not carry out adequate planning of their processes and do not consider important actions such as menu engineering (Biler et al., 2020).

Menu engineering is a methodology that represents an important alternative to be applied in restaurants to improve profitability and consider their best resources, capabilities

and potentialities (Vanegas, 2019). The best restaurants in the world use this methodology based on the BCG matrix (Boston Consulting Group) application adapted to the analysis of restaurant menu items (Borrego, 2014).

The advantages of this methodology are the opportunity to position the company against the competition in terms of the different dishes considered and to establish the importance of these products for the company, which should be done through an analysis of resource allocation, costs and analysis of the popularity of the product (Martini, 2007). (Martini, 2007).

In Ecuador, despite a large number of existing restaurants, very few of them systemically perform menu engineering; generally, empirical analyses are made that lead to errors of appreciation, which means that restaurant enterprises do not have sufficient sustainability since they do not find ways to renew their processes, improve their products and consolidate their successes.

Hence, this research aims to apply the menu engineering methodology to consolidate it as a reference for improving the profitability of catering services, enhancing culinary resources and improving the quality of services at the Valentine by Carnes y Sabores restaurant in the city of Ibarra. Considering that during the time the restaurant has been operating, changes have been made to the menu, specifically from the particular point of view of the administration, without considering the constituent elements of the menus and the information provided by customers when choosing a specific dish and why they are willing to pay to taste it.

Building the sustainability of a business and creating an image around the characteristics it seeks to give it is a complex and long-term task, which requires persistence that only a restaurant owner can understand, considering the long process and investment involved in launching a restaurant. For this reason, the integration in the processes of analysis and

evaluation of costs and popularity of the avocados allows the consolidation efficiently of the achievements that can be reached regarding the approach and the gastronomic development of the restaurant; this fact justifies the learning and application of menu engineering.

To carry out this research, we resorted to a bibliographic analysis considering the elements related to the knowledge of restaurant companies and menu engineering, which consists of the analysis of costs, of the dishes considered relevant within the menu, the analysis of their popularity and a comparison and correlation between the two results through a BCG matrix, which allows "to reduce to the minimum possible the number of dogs on the menu, limit the puzzles and have the maximum number of stars. The rest will be workhorses that will be in charge of increasing the profitability of the chart (Rodriguez, 2020).

Theoretical Framework

The catering company

The restaurant business is different from all other types of business. This enterprise combines art and tradition, the mechanisms of activity and experience of the salespeople, the philosophy of service and the concept of forming a potential clientele. Consequently, development is vertiginous, and serious competition exists to attract diners (Dubuc, 2017). This factor makes restaurant owners reflect not only on the main strategy and style of the restaurant but also on the details that make the establishment unique and inimitable. Only with the formation of a well-developed concept and consistent, integrated implementation of all components of the restaurant business success in the development of the restaurant is guaranteed.

Restaurants play a very important role in human life. In addition to satisfying physiological, and nutritional needs, "going out" to a restaurant has an important social

function. A person needs not only to eat but also to communicate. Restaurants are one of the few places where all the senses work and generate an overall sense of satisfaction. Taste, sight, smell, and tactile sensations are combined in the assessment of the food, service and ambiance of the restaurant (Ceseña, 2019)

The efficient operation of a restaurant depends on several factors. Like any complex system, the restaurant starts from the idea of its creators and ends with the control of the operation of the institution. The practical philosophy of its owner and/or director plays the main role in this. It is revealed by the approach to doing business, which determines the ethical and moral values realized in the operation of the enterprise. The main idea of the founders of the restaurant will determine its credo and is designed to satisfy the visitors as much as possible (Stierndet al., 2014).

The Royal Academy of the Spanish Language (RAE, 2006) defines a restaurant as a public establishment where food and beverages are served, for a fee, to be consumed on the premises. It establishes that the restaurant business is an entrepreneurial activity at the expense of its funds or borrowed at its own risk and responsibility, in the field of the food business. Like any other business, a restaurant requires a business plan, management, market research and development of its strategy.

With potential visitors in mind, a restaurant profile must be developed. The profile of a restaurant is determined by its concept, which characterizes its image associated with a certain market segment: casual, children's, ethnic, etc. The concept must meet the specificities of a particular area, which determines the institution's design, the menu and more. Of course, for the proper functioning of a catering establishment, the quality of the food, the menu, the level of service, the price, the atmosphere and the management are important, but the most important is the location (Godoy et al., 2014)

Most restaurants fall into one of two categories: full service and specialty. Other categories include fast-food restaurants that specialize in lunch, special occasion restaurants, casual, national, etc. Restaurant specialization can be very diverse: quick service, family, casual, and others. Restaurants can also specialize in preparing national dishes, breakfasts, and lunches, among others (De la Ossa, 2018)

As a rule, a fast food restaurant specializes in preparing a main dish. At the same time, it belongs to one or another fast food chain, the most famous ones. Family restaurants are a modern version of the cozy style with homely features. Most enterprises of this type are privately owned. The interior design, as well as the menu, are simple (Gimeldo, 2009).

Structural subsections of hotels are called catering complexes and include several departments (sections): a kitchen, a buffet, reception rooms, a restaurant, room service, mini-bars, lounges, bars, and cleaning and dishwashing sections. In accordance with company policy, the kitchen is headed by a chef. It is supported by not only meeting but also exceeding customer expectations to achieve certain financial results (Garcia et al., 2016).

In large hotels that are part of well-known hotel chains, as a rule, there are two restaurants: fashionable, branded and small, like a cafeteria (most often for breakfast). They serve both hotel guests and the general public. Compared to others, most hotel restaurants are more original. The qualifications of cooks and service staff in such restaurants are higher; it is more difficult for them to operate at a profit than for independent restaurants. As a rule, they are open from morning until late in the evening, but often for lunch and dinner, hotel guests prefer to visit independent restaurants (Garcia et al., 2016).

Menu Conceptualization.

Nowadays, the restaurant business is developing in different directions. Many restaurants with their characteristics and new types of establishments appear so a positively developed menu is one of the main components to make a difference and develop an efficient restaurant operation. Often, it is the menu that is the first and exclusive advertisement that will attract 100% attention of the visitors (Otalara, 2020)

The menu of restaurants is one of their main features and a unique business card. Simultaneously, customers' attitude depends on how well the menu is compiled. Therefore, the cover and the menu's interior design play an important role.

The RAE (2006) defines a menu as a set of dishes that constitute a meal, the menu of the day where meals, desserts and beverages are listed, or as a fixed-price meal offered by hotels and restaurants with limited choice.

The menu can be presented in various forms: a catalog, brochures, or Internet publications; it can be distributed in the form of advertising in specialized publications and print advertising. The menu is the main marketing tool for increasing revenues and operating profits of the institution. The menu is a document that informs consumers about the range of products and their quantitative characteristics. It guarantees that consumers will receive a variety of dishes offered during the established period of operation of the restaurant hall. The menu should include the most demanded dishes by consumers, and necessarily vegetable, fish, meat and snack dishes prepared by various methods of thermal and culinary processing (boiled, fried, poached, poached, baked) (Espinosa, 2016)

The characteristics of a correctly composed menu are as follows:

• The menu is an effective tool for relationship building, marketing and price control;

• The menu is an indicator of the customer's wishes and the company's possibilities;

• Menu means control of income level and means to solve financial problems.

The menu is the most important factor in the work of a company dedicated to food service (García et al., 2016).

Menu types

Depending on the type of catering establishment and the form of service, the menu is divided into the following types:

• menu with free choice of dishes;

• menu of the day (breakfast, dinner);

• daily dietary menu;

• dietary and children's menu;

• banquet menu;

• themed events menu

Special menu types include menu inserts: chef's dishes, tasting menu, national cuisine menu in addition to the main menu, gourmet menu, Lenten menu, summer menu, business lunches, etc. Each menu type contains four columns: the name of the dish, its composition, the price and the output (Garcia et al., 2016).

In the modern restaurant business, it is difficult to predict which establishment, once opened, will immediately begin to succeed and which, being in an excellent location, will close in six months. Although, of course, the business will depend only one-fifth on the menu, it will also be important for the staff of the cafeteria (the waiters are the face of the establishment, the

chefs and the products the taste of the cuisine), the management and its principles, the concept of the establishment and compliance with health and other standards. The menu is important, but without an educated and trained staff, all will fade away without the overall ambiance of a cafeteria (Raab et al., 2007).

Almost all restaurants use a menu with a free choice of dishes. The menu includes chef's dishes, specialties, cold dishes and appetizers, first and second courses, sweet dishes, hot and cold drinks and desserts. The menu with a free choice of dishes indicates the departure of the dish, its name and price. For the first menu courses, as a general rule, the price is given for ration and half ration. The output is indicated as a fraction for dishes served with garnish and sauce (main product, sauce, garnish).

The menu content distinguishes the following elements: titles, names of the dishes and descriptions. The titles include categories such as chef's dishes, specialties, cold entrees, salads, hot entrees, soups, hot dishes, grilled dishes, desserts, side dishes, and sauces, as well as sub-items (cold, fish, meat, and vegetables). The name of the dish can be simple, including a description of this dish, or complex. Finally, descriptions inform consumers about the composition of the dish and its ingredients (Garcia et al., 2016).

A variant of the free-choice menu is the customized menu, which is often used in restaurants. The customized menu includes specialties, cold dishes and snacks, soups, sweet and hot main courses, hot and cold beverages, and desserts.

 When compiling a complete menu for lunch (breakfast or dinner), along with the rules of rational nutrition, the cost of the recipe, the variety and the correct selection of products included in the dishes are taken into account. The day's menu usually includes a cold appetizer or salad, soup, a hot meat or fish dish, a hot side dish and a drink; desserts are included in some establishments. It is recommended to prepare the menu in advance in two or three versions, differing in the composition of the dishes and the price. The cost of such a lunch should be acceptable for a restaurant's sustainability.

Executive lunches are gaining popularity among people; they are generally much cheaper than the main menu, allow the customer to choose quickly and are also served quickly, which is a significant advantage for people who only have an hour for a lunch break. Lunch should be served within 10 to 15 minutes, hot. (Espinosa, 2016).

The dietary menu is compiled taking into account 5-6 basic diets. For each diet, a specific set of products is compiled, while a nutritionist elaborates the menu.

The children's menu is carried out in types of premises whose regular customers are children or adolescents. Therefore, it will be elaborated based on nutritional standards and the physiological characteristics of this age group with portions for different age groups: 3 to 7 years, 7 to 14 years and 14 to 17 years (Ramos et al., 2012).

The banquet menu is developed in each specific case when an order is received, taking into account the client's wishes, the type of banquet and the time of its celebration. The first thing to know when developing a banquet menu is the total number of people. The banquet manager must calculate the number of portions of each dish and beverage, offer it to the client and write it on the menu. A good restaurant manager already has clear patterns in mind for each holiday.

Menu forms

The menu is the "business card" of the restaurant, it is nice when it is beautifully designed, and of course, it should be easy to read. Menu types differ in the selection of dishes offered and the pricing structure.

A la carte menu. This type of menu offers a choice for each type of dish, and each dish is priced separately. All a la carte dishes are prepared according to the order of arrival of the guests at the restaurant and are served in 15 to 20 minutes, particularly when the server must warn the guests. Dishes from the menu, chosen by visitors, are prepared to order.

Menu of the day. This menu offers a small selection of dishes and is priced at the total amount per person for the entire menu. A typical example of such a menu is an executive lunch. It should be moderately priced, including three or four choices of dishes. The customer pays a fixed price for the entire lunch or breakfast.

The Buffet is a wide selection of dishes with free access; this service method increases the room's throughput and speeds up the service process (Garcia et al., 2016).

Menu planning

For menu planning, creating a working team involving the chef, kitchen assistants and administrators is suggested. The task of this working group will be to develop ideas for some time, and the group work allows the development of new and interesting ideas for presentations. Then, with this plan in hand, the chef will be able to calmly create, invent dishes, test different cooking technologies and be ready for each period in advance. When compiling a menu and the flavors to be achieved, the dishes' external design must be considered. It should also be taken into account that the harmony of taste should be achieved thanks to the correct selection and integration of the components in the dish; it is important to pay attention to the correct combination of garnishes and sauces with the main products (Martini, 2007).

The dishes included in the menu should be on sale during the entire working day of the company. This increases customer loyalty, and no one will like it if they choose a dish for a long time, that it is unavailable and more if half of the menu is unavailable (Vanegas, 2019).

A good menu sells dishes by itself; its structure should consider the psychological characteristics and needs of customers in such a way that it increases the average turnover without the effort of the staff. For example, the most profitable dishes should be placed in the upper right corner because this is where people will look most often. It is best to place a bright picture, a historical note about a particular dish in the lower-left corner to catch the consumer's attention. The menu should be printed on good paper in a clear and legible font. Choosing the correct font size, type, and spaces between letters and words is necessary. This is because each person perceives visual information differently (Espinosa, 2016).

The main steps to create a menu are as follows. At the first stage of menu compilation, various dishes and beverages containing traditional, new and signature dishes are developed. At the same time, it is necessary to constantly monitor the changing preferences of consumers, study the demand for dishes and make changes to the menu.

At the second stage, it is necessary to determine which dishes should be highlighted on the menu. To draw attention to the dish, you should place its name with a photo and advertising text in the most advantageous place on the menu. Good advertising of a dish increases your sales.

In the third stage, the popularity and profitability of the dishes included in the menu are analyzed.

Menu design is considered complex and time-consuming, as it is both a science and an art, requiring a lot of hands-on experience and consideration of various factors. When developing a menu, the following reasons should be considered:

-         should present an approximate range of dishes, beverages and products;

- availability of raw materials and products in stock, ease of purchasing;

- seasonality of products;

- the availability of cooking standards (recipe collections, technical and technological maps for new and signature dishes), the availability of expertise of its chefs;

- characteristics of the clients served (age, nationality, profession, religion);

- service hours (breakfast, lunch, dinner);

- forms of service (business lunch, buffet, buffet, family dinner, etc.);

- the complexity of cooking, culinary and confectionery products;

- specialization of the cuisine in relation to competitors;

- the expected level of profit;

- costs of purchasing products, rent of premises, salaries of staff. (Beck, 2017).

Menu Engineering

Menu engineering studies the profitability and popularity of menu items and how these two factors influence the placement of these items on the menu. The goal is simple: increasing customer profitability (Raab et al., 2007).

The concept of menu engineering is not based on random, spontaneous decision-making; it has its roots in work done in 1970 by the Boston Consulting Group to help companies segment their products in a way that facilitates analysis and decision-making. The idea was brought to the restaurant industry about a decade later by "Coach" Professor Donald Smith of Michigan State University. While menu engineering is most often mentioned in traditional restaurant menus, the concepts are equally applicable to other forms and types (Borrego, 2014).

A well-executed initial menu engineering effort takes about a week and can increase a restaurant's profits by 10% to 15% on an ongoing basis. Menu engineering does not depend on the type or size of the establishment, and the determining factors are the restaurant owner/manager's knowledge of the menu and willingness to devote the time and effort to understand the process and execute the changes.

Of 100 randomly selected restaurants, an estimated 40 perform some form of menu engineering. These companies are not a specific type of restaurant: they are large and small, high-end and low-end. In addition of those 40, only 10 are doing a good job with their engineering efforts (Rap, 2021).

The menu engineering process

Rap (2021)explains that menu engineering is performed in four steps and describes it as follows:

Menu Cost: "Valuing a menu" refers to breaking down each item into its ingredients and determining how much it costs to create each item. Establishments must analyze the cost of their menu absolutely to the penny because the engineering process is highly dependent on each menu item's profitability level.

Categorizing menu items according to profit and popularity levels The process of categorizing each menu item allows to determine how to apply menu engineering efforts. This process can be divided into three parts:

1) Divide the menu into "categories" and "sections".

Place each menu item in one of the quadrants of a growth-share matrix, known as the Boston Consulting Group Matrix or BCG Matrix. (Borrego, 2014)

For this purpose, each menu item is reviewed and, using data from a sales period, and each

menu item is placed in one of the following quadrants:

Stars: high profitability and popularity

Plow horses: low profitability and high popularity

Jigsaw puzzles: high profitability and low popularity

Dogs: low profitability and low popularity

2)   Determine the destination of the menu items in each of the four quadrants

To do this, you should use the profitability/popularity information to help determine how you want to handle each menu item. It is important to analyze the menu items sorted by profitability and popularity first at the category level and then at the section level. Viewing the data at the category level can help you decide where to place the various sections of your menu.

3)   Design your menu

Part of the design process is highlighting the items you want to sell the most (stars), but it goes beyond that and cannot be accomplished with a simple checklist. When designing a menu, it is worth considering the customer base: what types of customers order what items, what brings them to the establishment (a particular dish, cheap drinks, ambiance), and whether customers read the menu thoroughly, among other factors. Menu design does not happen in a vacuum, and having such information alerts you to how and when to apply certain menu design techniques.

4)   Evaluation of the new menu design

It provides information on the successes and errors that may have been made in the preparation of the menu.

Methodology

This scientific article is the result of an investigation with a non-experimental, applicative, descriptive research design in which the elements of profitability and popularity of the most representative dishes proposed in the menu of a Valentine by Carnes y Sabores restaurant in the city of Ibarra are analyzed. It is based on the operative methodology of menu engineering, which is applied based on the results of the factors mentioned above and the analysis of a BCG matrix, linked to the dishes.

The cost analysis, which is easy to perform, reviews the costs and sales prices, the number of dishes sold, and the total gross profit to obtain a qualitative assessment of profitability from these results. Finally, the popularity analysis involves obtaining an ideal mix to compare the results with the data calculated from a real mix, which results in popularity. Subsequently, the qualitative values of profitability are related to the qualitative values of popularity and interpreted through the BCG matrix, to propose the necessary strategies to apply them in the menu and improve the restaurant's profitability.

Results Discussion

Characterization of the Restaurant

Chef Msc created Valentine by Carnes & Sabores. Roberto Molina. N. professional in gastronomic art, to enhance the gastronomic traditions of the Ibarreña Culture.

The names that were used to identify each one of the preparations

were thought for the history, customs and culture of the people of Ibarra. Each name has a meaning and an icon in the life of the people of Ibarra.

The research carried out by Chef Quiteño, in the culture of Ibarra, has resulted in the creation of signature recipes, in which he uses

raw materials of excellent quality and mostly organic, meticulously chosen,

trying to preserve the organoleptic sensations of each food.

You have to know how to treat the senses and at Valentine by Carnes & Sabores we know how to do it well, combining different types of spices, innovated in house, applying cooking techniques such as dehydration, using a wood oven, the product is dried and ground, obtaining a delicate, aromatic and full of flavor spice.

Profitability analysis

Table 1 Profitability Analysis

Saucer	Cost	Sales price	Individual gross profit	% of cost	Gross profit	Quantity sold	Total gross profit	Profitability
Candelaria	3.52	10.06	6.54	35%	65%	200	1307.4	Under
Ribeye	3.71	10.60	6.89	35%	65%	250	1722.5	High
The Return	3.71	10.60	6.89	35%	65%	300	2067.0	High
La Esperanza	4.46	12.74	8.28	35%	65%	50	414.1	Under
			28.6			800	5511.1	

The profitability analysis was conducted based on four iconic dishes from the menu of the Valentine by Carnes & Sabores restaurant, Candelaria, Ribe ye, El Retorno and La Esperanza, based on the traditions of the city of Ibarra. The average cost of the dishes was $3.85, fluctuating between 3.52 and 4.46 dollars. The average selling price of the dishes was 11 dollars, the average individual gross profit was 7.15 dollars, and the individual gross profit of the four dishes was 28.6 dollars. The monthly sales of 200 units for the first dish generated a total gross profit of 1307.4 dollars with low profitability; 250 units for the second dish with a gross profitability of 1722.5 dollars with high profitability; 300 units for the third dish with a gross profit of 2067.0 dollars and high profitability and 50 units for the fourth dish with a gross profit of 414.1 dollars with low profitability.

As can be seen in the table, there are two interesting situations, the first one is that the

The rustic wood, the modern decoration and the good customer service, makes Valentine by Carnes & Sabores a quiet and cozy place to enjoy some free time, escaping from stress and daily routine.

To thank and pay homage to the White City of [bar, for having allowed me to know its gastronomy in which I put my own style to what I like. COOKING.

dish whose raw material is of lower cost not necessarily had the best profitability and on the other hand, the dish of higher cost had very low demand, so it reached low profitability, in this sense it agrees with what is proposed by Rodriguez (2020). (2020) states that many restaurant managers make a serious mistake by thinking that the lower the cost of raw materials, the more profitable the dish.

Popularity analysis

For the popularity analysis, it is necessary to obtain an ideal mix coefficient to compare it with the results of a real mix; for this purpose, it proceeded as follows

$$Mix\ ideal = \frac{100\%}{\#\ platillos\ categoría}\ 25\%$$

$$Índice\ de\ popularidad = \frac{mix\ ideal\ x\ 70}{100}\ 17,5$$

$Mix\ ideal\ X\ 0,70$

$$\text{Índice de popularidad} = \frac{mix\ ideal\ x\ 70}{100}\ 17,5$$

The following formula was used to obtain the Real Mix:

$$Mix\ Real = \frac{Cantidad\ vendida\ de\ Cada\ Plato}{Total\ de\ platos\ vendidos}\ X\ 100$$

Table 2 Popularity Analysis

Saucer	Real mix	Popularity
Candelaria	25,00%	High
Rib eye	31,25%	High
The Return	37,50%	High
La Esperanza	6,25%	Under

The results of the popularity analysis represented in Table 2 were as follows: for dish 1, the actual mix is 25%, which gives it a high popularity index; dish 2 reached an actual mix of 31.25% with a high popularity index; dish 3 reached an actual mix of 37.50, obtaining a high popularity index; and finally dish 4 scored a percentage of 6.25%, reaching a low popularity index.
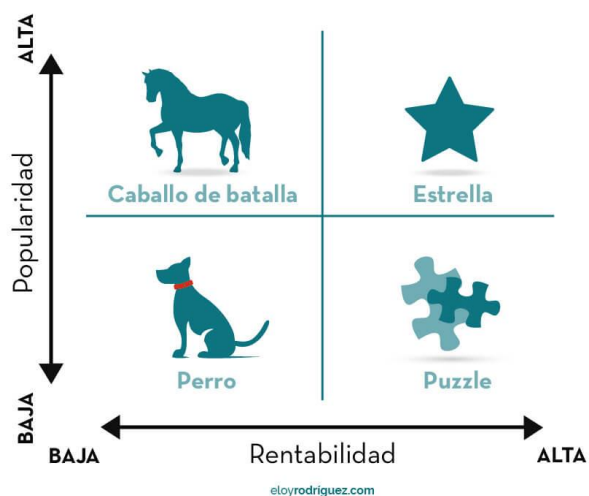
Menu Engineering Results

Based on the results of profitability and popularity, the menu engineering matrix is structured considering the following BCG matrix, with the criteria proposed in Table 3.

Table 3 Method Interpretation

Profitability	Popularity	Category
high	high	Star
under	high	Workhorse
high	under	Puzzle
under	under	Dog

Source: (Rodriguez, 2020)

Figure 1 BSG Matrix, for Menu Engineering Analysis

Source: (Rodriguez, 2020)

The final result of the Menu Engineering performed for the photos of Valentine Carnes y Sabores restaurant is the following:

Table 4 Menu Engineering Matrix

Profitability	Popularity	Category	Saucers
Under	High	Horse	Candelaria
High	High	Star	Rib eye / The Return
High	Under	Puzzle	XXX
Under	Under	Dog	La Esperanza

Table 4, which details the results of menu engineering, reports the Candelaria as a horse dish since it generates low profitability but has a high popularity. Two Rib eye dishes and the Retorno reached the stars category since both achieved high profitability and popularity. None of the ducks analyzed in the menu were categorized as puzzles. La Esperanza scored in the dog category, with low profitability and low popularity.

Strategic Proposal

Strategy for the dish Hope (Dog)

According to the analysis carried out, this dish is rarely requested by the customers, and the elaboration costs do not generate profitability, so a follow-up of labor costs has been made, resulting excessive, so it will be removed from the menu and replaced in prominence with another dish that shows potential for profitability and popularity.

Strategy for the Candelaria dish (Horse)

This dish is very popular because of its name and suggestive characteristics; however, the elaboration costs are high, so it is not profitable, so it was decided to assume as a strategy to keep it on the menu but reduce the level of promotion, this will make two things possible, that if customers require it, they will be able to find it on the menu. Therefore, the purpose is to find a mechanism to make it more profitable, so it was considered to reduce its price to significantly increase demand.

Strategies for Rib Eye Dishes / The Return

These two dishes deserve the maximum attention since they are the preferred ones of the clients and generate the best profitability. Furthermore, a survey has established that 73% of the clients come to the Valentine Carnes y Sabores restaurant exclusively to taste these two-star dishes, especially the dish I call the return, which is pork ribs in fig sauce accompanied by a salad garnish.

The recommended strategy is to evaluate them to maintain high quality constantly.

To turn them into the restaurant's reference points, placing them in privileged places on the menu and carrying out a wide marketing deployment to promote them more widely and as a product attraction in the marketing strategy to be designed.

Conclusions

The proper management of a company linked to the food service involves the implementation of a series of actions aimed at strengthening the potential and resources available to it, for it has to plan its processes and seek appropriate strategies to take the business forward because if it is not done, more than in other forms of business, the venture will fail without remedy.

Menu engineering is a methodological alternative that allows the analysis of the dishes that a restaurant offers, making it possible to determine the financial profitability and popularity of the gastronomic offer to correct, improve and sustain the menu.

This methodology is based on the BSG management tool, which is widely used to propose business development strategies, and which, when applied to menu analysis, has proved to be an important ally for entrepreneurs seeking to get the most out of their restaurants.

In this study, menu engineering was applied in the restaurant Valentine be meats and flavors, which uses the culture of the population of Ibarra in Ecuador to highlight dishes that, linked to the experience of the citizens, have generated a very successful business.

The results obtained, according to the BCG matrix, refer to two-star dishes, a horse dish and a dog dish, proposing strategies based on strengthening and maintaining the star dishes, lowering the price of the horse dish to increase profitability and eliminating the dog dish to leave the space on the menu to be occupied by another dish that has the potential to replace it.

Theoretical implications

Menu engineering is by no means a new methodology. However, due to its characteristics, it has had a great influence on the gastronomic environment worldwide; the understanding of its administrative concept, the ease of its economic analysis and the evaluation

of the popularity of the dishes make it a fundamental tool to be known by the business people linked to the administration of restaurants.

Practical implications

The application of menu engineering in Valentine's meats and flavors restaurant has shown a high degree of efficiency by explaining, through a cost analysis and the evaluation of the popularity of the dishes, the potentialities and obstacles that the restaurant has in the most sensitive of its elements, the gastronomic part.

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