

Feasibility study for the implementation of a food and beverage company aimed at the service of initial training educational establishments.

Estudio de factibilidad para la implementación de una empresa de alimentos y bebidas dirigido al servicio de establecimientos educativos de formación inicial.

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Abstract

Children are fundamental to any society because of the love they receive at home. Agencies such as UNICEF work to ensure the well-being of children. In Ecuador, where this study is being conducted, children's rights are a priority. A key element for their development is adequate nutrition. Despite the efforts of the State and parents, Ecuador suffers from high levels of child malnutrition, possibly associated with poor nutrition in school-age children. This is due to parents' lack of time to prepare balanced meals, lack of knowledge about a healthy diet, or economic limitations. This study will evaluate the feasibility of creating a catering company to feed the Centro de Educación Inicial Santa Teresa de Jesús in Durán, Guayas. The objective is to improve the nutrition of the children through meals that allow for optimal growth. Scientific advances have shown that certain foods are related to health problems. This generates greater awareness, especially in children who need adequate nutrition for their development. The State and parents must guarantee children's food security.

key words: Balanced diet, Nutrition, Catering, Initial education, Entrepreneurship.

Resumen

La niñez es fundamental para cualquier sociedad debido al amor que reciben en el hogar. Organismos como UNICEF trabajan para garantizar el bienestar infantil. En Ecuador, donde se realiza este estudio, los derechos de los niños son prioridad. Un elemento clave para su desarrollo es una nutrición adecuada. A pesar de los esfuerzos del Estado y padres, Ecuador sufre altos niveles de desnutrición infantil, asociados posiblemente a una mala alimentación en niños en edad escolar. Esto se debe a falta de tiempo de los padres para preparar comidas balanceadas, desconocimiento sobre una dieta saludable o limitaciones económicas. Este estudio evaluará la factibilidad de crear una empresa de catering para alimentar al Centro de Educación Inicial Santa Teresa de Jesús en Durán, Guayas. El objetivo es mejorar la nutrición de los niños a través de comidas que permitan un óptimo crecimiento. Los avances científicos han demostrado que ciertos alimentos se relacionan con problemas de salud. Esto genera mayor conciencia, especialmente en niños que necesitan nutrición adecuada para su desarrollo. El Estado y padres deben garantizar la seguridad alimentaria infantil.

Palabras clave: Alimentación balanceada, Nutrición, Catering, Educación inicial, Emprendimiento.

1. Introduction

The purpose of this work is to analyze the feasibility of implementing a food and beverage company aimed at serving educational establishments for initial training.

It is common that even though parents are aware of their children's needs regarding consuming healthy foods, they cannot always provide them, and there may be various reasons for this, including absence of time due to both parents having to work, lack of knowledge about how to prepare balanced meals for children made in safe environments, or perhaps a lack of economic resources to carry out this activity.

The lack of adequate food in early childhood has an impact on the child's lack of attention, anxiety, frustration, as well as not being able to communicate effectively, which undoubtedly affects their physical and

mental development, which of course is related to their academic performance. School is the child's second home, the place where for the first time they separate from their parents and begin to build themselves as individuals, but it is also the environment where food disorders usually begin in children due to the fact that parents do not send their children an adequate lunch, and in other cases, with slightly older children, they give them money so they can buy products in the bars of the different educational establishments.

This outlook is worrying considering that just in the Durán canton of the Guayas province, according to figures from the Ministry of Education, there are 113 educational establishments that offer initial education, that is, children between the ages of 3 to 4 years old, estimating that more than 52 thousand boys and girls attend initial and basic education centers daily.

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Despite being a large market, it is unattended by catering companies that focus more on hiring corporate or healthcare clients. It is because of this that the need arose to study the feasibility of implementing a catering company in Durán that can serve the unsatisfied demand starting with the Santa Teresa de Jesús initial education center.

The study in its first section describes in detail the problem, that is, the importance of balanced nutrition in children, as well as the difficulties that arise in the body when this does not happen, revolving around knowing if parents would be willing to hire services and at the end mentions the plan that was used so that the proposal is successful from a marketing and financial point of view.

Statistics made known by UNICEF [1] indicate that worldwide malnutrition figures in children under five years old reach 149 million. Of this figure, in Latin America and the Caribbean, 4.8 million children have growth retardation, and 0.7 million children suffer from emaciation, these main problems due to receiving inadequate nutrition during the first thousand days of life and consequently the rest of their lives.

The figures are the result of circumstances such as food shortages, poor feeding practices, crises, etc. which are factors that benefit malnutrition, as is also losing control over the nutrition of minors at different stages of growth, that is, from conception onwards [2].

Table 1. Malnutrition in Latin America.

Countries with available information	Percentage of the child population (Children under five years old)	Number of children
Guatemala	46,50%	927.000
Ecuador	25,30%	406.000
Honduras	22,60%	220.000
Panamá	19,10%	68.000
Nicaragua	17,30%	108.000
Bolivia	16%	190.000
Perú	14,60%	439.000
El Salvador	13,60%	79.000
Colombia	13,20%	518.000
México	12,40%	1.430.000
Argentina	8,20%	294.000
República Dominicana	7,10%	75.000

The malnutrition problem due to poor diet that exists in Latin American countries, around five million children.

1.1 Equity for Children

According to the Convention on the Rights of the Child, the States Parties are committed to ensuring that all sectors of society, and particularly parents and children, know the basic principles of health and nutrition,

including hygiene, environmental sanitation, and preventive measures.

Conducting this study is part of fulfilling children's rights by presenting itself as an alternative service related to their proper nutrition, which, in the face of parents' lack of information and the fact that much of society does not promote it, is a means of guidance and support for the execution of rights.

Children's rights must not be suppressed under any circumstances, "there is no because that deserves higher priority than the protection and development of the child, on whom depend on the survival, stability and progress of all nations and, indeed, of human civilization" [3].

1.2 Acquisition of Eating Habits

In the preschool stage, eating habits are strengthened, and for the completion of this phase, educational factors are of fundamental importance both within the family and at school or educational center. The influence on learning eating habits as in other socialization activities is also related to classmates, therefore, it is essential that the family, especially the mother, understand how to instill eating habits in her child.

The eating habits created in each child's home must receive sufficient support and instruction in educational centers to put them into practice or modify them if they were incorrect, ensuring that they are carried out properly through regulated teaching, nutritional educational program, school cafeteria or other food provider, so that the child becomes aware that their health depends on the food they eat and can achieve a better nutritional status in adulthood [4].

The traditional food pyramid presents a better distribution of the food category, in the same way as the previous graphs, the foods of greater consumption occupy more space from the base to the top, indicating with utmost importance physical activity and water consumption, and remembering that the consumption of processed, sugary or high fat foods should be occasional or almost null since it does not indicate recommended ration [5].

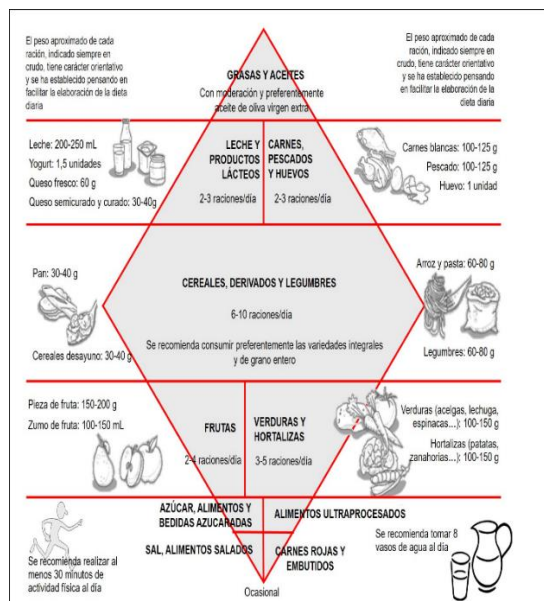


Fig. 1. Nutrition rhombus.

[ROMBO 2019.jpg \(1706x1219\) \(ucm.es\)](#)

Given the previous information, the saying "health and disease enter through the mouth" must be taken into account; in order for children to be able to acquire good eating habits that result in an adequate level of health, menus will be prepared detailing the proportion that should be consumed of each food using the Healthy Eating Pyramid; Although there are different graphs of food guides, the one provided by the Spanish Society of Community Nutrition (SENC) is the most adapted for child nutrition.



Fig. 2. Food pyramid.

1.3 Nutrition Action Program.

In Ecuador there are sufficient food resources and availability to combat malnutrition; the challenge of government programs is to work on the causes of why

sufficient and nutritious food does not have its biological utilization, that is, comprehensive care and attention for early childhood, especially in territories and populations where child malnutrition prevails [6].

1.4 Nutritional Needs of Childhood.

There are several general suggestions about energy and nutrient needs at the preschool stage; interpreted in rations and consumption frequencies they help us prepare a healthy diet in addition to considering that each recommendation must adapt to the characteristics of each individual; as much as possible personal tastes should be respected since there are several ways to eat, but only one way to nourish oneself.

According to López [7], foods can be considered natural containers because they contain the different nutrients that the body needs for proper functioning and adequate health, there are foods with the same nutritional contribution that can be consumed according to individual tastes; foods contain nutrients that are or are not manufactured by the body (some amino acids, vitamins, etc.).

They perform three functions:

- Energetic: cover the body's energy expenditure.
- Structural: growth and structuring of organs and tissues.
- Regulatory: control metabolism and body functions.

Table 2. Foods high in protein (plant origin)

HIGH PROTEIN FOODS (PLANT ORIGIN)
Legumes: chickpeas, beans, lentils
Nuts: walnuts, almonds, hazelnuts
Cereals: wheat, rice, corn
potato, carrot, green beans, peas, bell pepper, tomato

2. 2. Materials and Methods.

The following methodologies were used in this research work:

2.1 SWOT analysis.

The SWOT analysis consists of evaluating the strong and weak factors that, together, diagnose the internal situation of an organization, as well as its external evaluation, that is, opportunities and threats. It is also a tool that can be considered simple and that allows obtaining a general perspective of the strategic situation of a given organization [8] establish that the SWOT analysis estimates the effect that a strategy has to achieve a balance or adjustment between the internal capacity of the organization and its external situation, that is, opportunities and threats.

2.2 PESTEL analysis.

The PESTEL analysis tool is a strategic analysis technique to define the context of a company through the analysis of a series of internal factors.

The PESTEL analysis, like the SWOT, is part of strategic marketing, which is responsible for analyzing both the internal and external factors of the company and whose results must be included in business planning [9].

2.3 Porter's analysis.

It mainly deals with issues of competitiveness and innovation. In addition to creating the theory of the 5 forces that define the profitability potential of a company, he was the author of the following concepts: value chain, clusters and strategic groups.

His theory has evolved and has focused on the social environment of companies and corporations. As a result, it has given importance to terms such as corporate social responsibility and shared value.

3. Results.

3.1 Substitution analysis.

In this part of the research, the internal and external factors that could affect the business will be observed, using the SWOT, PESTEL and Porter analysis for this.

3.1.1. SWOT analysis.

The SWOT analysis is an instrument that allows knowing the internal and external factors surrounding the company, as well as its strengths and weaknesses, in this way it is possible to design strategies that take advantage of opportunities or defend themselves in case of having weaknesses in the face of possible threats [10].

Strengths: Product quality, specialized personnel, adequate training for this type of project, customer-focused organizational culture.

Opportunities: High purchase intention, trend towards healthier products, importance of nutrition for children.

Weaknesses: Lack of experience in the business, lack of own premises, seasonal product since children go on vacation, market is always renewed (births).

SO Strategies.

- Offer a menu with quality ingredients to capture market share.
- Staff trained in gastronomy will be able to offer healthy and balanced products for children.
- Specialized staff can create nutritious menus for children.
- Offer discounts for other children, and thus take advantage of a market that renews itself.

WO Strategy

- Design processes to offset the lack of knowledge about the business and thus gain market share.
- Find partners willing to invest in the project.
- Grow as quickly as possible to also be able to offer a menu in the highlands cycle and thus continue working during the vacations in the coastal region.

ST Strategy

- Product quality to obtain health certifications.

- Establish contractual sanctions to avoid non-compliance by suppliers.
- Focus on creating value for the customer and thus not compete on prices, especially in an economic forecast that could limit the purchasing power of families.

WT Strategy

- Position itself in the market as the first catering company specialized in food for children at the initial education stage.
- Work with multiple suppliers to have alternatives in case of non-compliance with orders.

3.1.2. PESTEL analysis.

The PESTEL analysis allows knowing the environment in which a project will be developed, in this way it is foreseen, and improvement actions can be taken [11].

Political environment.

Ecuador has achieved a high degree of political stability in recent years, which is explained by the agreement reached by the different political actors to understand that what is important is for Ecuador to reactivate economically, this above any political stance, that is, strategies have been promoted to encourage work, encourage private investment, strengthen legal stability, develop entrepreneurship. This political scenario is favorable for developing and promoting small ventures by the economically active population [12].

Ecuador's entrepreneurial activity is one of the highest in Latin America, which is the result of several factors that have contributed in recent years such as greater financial support, government policies, training, transfer of research and development among other aspects [13].

Economic Environment.

In the last three years Ecuador has been experiencing a decrease in its economic growth, going from 2.4% in 2017, to 1.4% in 2018.

This slowdown period is due to a decrease in the price of a barrel of oil compared to the previous decade, an appreciation of the dollar which makes the price of imported products more expensive, including machinery and equipment, which may have even impacted the minimal growth in 2019 as well (the figures for this year will be published by the Central Bank starting in March 2020 since the figures are processed with a 3 month lag).

Regarding inflation, it is completely under control, closing 2019 with a decrease of -0.07% [14]. This negative inflation is not always an indicator that the economy is doing well since the lack of price increases may be associated with lower demand which in turn is affected by lower household liquidity.

Regarding unemployment at the end of 2019, it closed at 3.8%, which represents a slight increase compared to 3.7% in 2018, which undoubtedly represents a somewhat difficult outlook, especially because adequate or formal employment, meaning at least working 40 hours a week and earning a basic salary, stood at 38.80% in 2019, which when compared to 2018 when it reached 40.6% means that approximately 115 thousand people were left without work [15].

Additionally, in terms of inequality, Ecuador, like most Latin American countries, has a high degree of social inequality, which is measured through the Gini coefficient, resulting in an average for the Latin American case that is 65% higher than in developed countries. That is why education plays a preponderant role for Latin American societies, noting for the Ecuadorian case a higher enrollment rate because of an improvement in the quality of life of citizens that together has allowed Ecuador to go from low income to middle income.

Regarding how much low-income families spend on food and non-alcoholic beverages, they allocate an average of 24% of their income to meet this basic need [16]. For the case of initial education, according to INEC data, demand has increased 1.6 times over the last 9 years, with the total number of enrolled children being approximately 700 thousand.

Due to different public policies, it is possible to point out that in Ecuador there is greater access of the poorest population to public education, however, there is also a greater migration of children from the private system to the public system, which could be associated with an adverse economic situation as well as the lack of a value proposition by private institutions. As described, the economic outlook is somewhat unfavorable for the development of ventures, however, the central government's effort to generate confidence for local and foreign investors, as well as provide loans to small microentrepreneurs to boost the economy, is evident.

Social Environment.

In social terms, Ecuador has made great advances in recent years, among which the following stand out: greater health coverage, free education up to the third level, and greater access to housing, this has led to a reduction in poverty levels and extreme poverty which helps the population to have resources that they previously lacked.

About food, the Ecuadorian State has promoted the development of food security, that is, the right of every Ecuadorian citizen to access safe and nutritious food to meet their nutritional needs and be able to lead a healthy life.

Technological Environment.

The world is moving forward, and there is no greater certainty that it is increasingly interconnected, so people are in constant demand for timely and truthful information, which also includes organizations. This would not have been possible without people's current access to the internet and technological devices.

In Ecuador, internet penetration is estimated at 55.9%, figures that increase in urban areas where penetration reaches 64.40%, making Ecuador one of the countries with the highest proportion of users in the region, which is supported by a considerable number of users who access the internet through smartphones 41.4% and laptops 24.2% [17]. These figures reflect the state's efforts to provide citizens with tools to access higher levels of information.

For their part, there are 11 million cell phones, which means there is practically 1 cell phone per person over fourteen years old in Ecuador. This technological outlook means that the project should consider ways to inform parents about various updates, menus, etc.

Natural Environment.

The environment refers to all those elements that surround human beings and therefore organizations. In the case of the environmental environment, it is possible to point out that the world is going through a stage where, thanks to global warming, mismatches in cultivation periods are beginning to be noticed, which is undoubtedly a factor to consider since vegetables and fruits are an important part of children's diet.

Already in the field of production, the observance of impurities in raw materials, both in their reception and in their storage, is something that must be considered since their mismanagement regarding these different elements would affect that the foods do not present the necessary safety characteristics, especially when it comes to children.

Additionally, when it comes to food preparation, it is necessary to design mechanisms that allow the assurance of different aspects such as the spillage of inorganic materials through pipes, which is controlled periodically by local governments.

Legal Environment.

Article 27 of the Childhood and Adolescence Code enacted by the National Assembly [18] states that children have the right to adequate nutrition, as well as to a favorable environment that allows them to have the development of their abilities, therefore, it is transcendental to bear in mind that, when dealing with children, everything that could affect them must always be foreseen by the organization in order not to have legal problems.

On the other hand, the most important administrative expense within organizations is usually the payment of their payroll. In that sense, a factor that affects the performance of companies has to do with obligations of the company and the rights of its workers. According to the labor code, employees have the right to carry out their activities based on the signed contract, have facilities, tools and instruments that allow the correct performance of the employee, always ensuring that they are not forced to perform activities that endanger their health and physical integrity, as well as treating employees with due consideration and respect.

Finally, a factor to consider has to do with the fact that companies must periodically comply with a set of regulations aimed at granting the corresponding permits for their operation, with the municipalities, as well as the fire department and the ministry of public health being responsible for this control activity.

3.1.3. Porter analysis.

Bargaining power of customers.

Since the project is aimed at children attending initial education, it is highly likely that parents will be integrated and have a representative through a board of directors, which is quite normal. So it is possible that parents come together to demand greater benefits or a decrease in the selling price [19].

Bargaining power with suppliers.

Because it is not a large-scale project or mass consumption where suppliers can impose their requirements to sell at a higher price, it is unlikely that they can demand greater compensation or partner around this, so it will always be an alternative to contract raw materials and supplies in general with another supplier.

Threat of new competitors.

The market for supplying food to educational establishments is generally unattended by large catering companies, because it is a small segment in relation to other more traditional ones to which they are directed, such as companies, hospitals, or public entities where there are a greater number of people and where the offered price can be higher.

Therefore, there is not too much interest on the part of these food and beverage service companies in hiring initial education establishments, while in the case of individuals or microenterprises an entry barrier tends to be that invoice payments are made up to 15 days after provision of the service, this being a limitation in case sufficient capital is not available.

Threat of substitute products.

The substitute product that could exist would occur if parents sent their own prepared food, which is unlikely given the lack of time presented to them because

nowadays, given the difficult economic situation, they are often forced to have both the father and mother work, this is part of the explanation of why parents send cookies, chips, drinks and other processed foods, something that is starting to change due to awareness of the importance of nutrition in children.

3.2 Legal feasibility.

Company/product legal study.

In this section, the regulatory framework is mentioned where the different laws and regulations that affect the proper development of the company from a legal point of view are located, since they indicate the duties and rights of people who start an economic activity.

There are two main laws that affect the business line of any company in Ecuador, these are the Political Constitution of Ecuador and the Consumer Defense Law.

Company constitution.

Article 23 of the Political Constitution of Ecuador in section 16 states in relation to the civil rights of individuals that they have the right to do business subject to the provisions of the law. About setting up a company, this is stipulated in the Companies Act enacted in 1999, and in recent years thanks to technology it is very easy to do, since it is only necessary to access the website of the Superintendence of Companies.

The steps to set up a company in Ecuador are detailed below.

Tax elements.

It is a tax that levies the value of local transfers or imports of movable property, for all its marketing stages, which must be paid by all natural persons and companies, serving as a tax credit in the cases contemplated by law. On the other hand, companies and individuals who have been designated as withholding agents will withhold VAT in cases that merit it according to the law. The current rates in Ecuador are 0% and 12% depending on the type of good or service being marketed.

The tax is paid monthly and semi-annually when the transaction levies 0% VAT, and the day depends on the last digit of the Tax ID Number (RUC).



Fig. 3. Requirements to set up a company.

3.3 Organizational feasibility.

Company name.

Lunchids Cía. Ltda. The company name is a conjunction of the words Lunch and Kids in English, which mean lunch for children.

Mission.

We are a small company dedicated to providing solutions in the field of gastronomy at the initial education center level, and were contributing to the well-being of our children is the goal of each day.

Vision.

To be the number one catering company dedicated to providing gastronomy services in initial education.

Organizational values.

The values that represent the company are considered a guide that allows aligning all employees in the organization [20].

To generate trust, it is necessary for the company in general to observe its conduct and ways of proceeding, considering the following aspects:

- Be sincere and honest.
- Assume your mistakes.
- Worry about maintaining a high level of quality in its products and services.
- Complying with delivery time.
- When a company assumes trust as a fundamental value, it generates a feeling of loyalty in its customers, since it has earned their credibility.

4. Conclusions

Most of the children who attend the Santa Teresa de Jesús Initial Education Center do not bring the most appropriate foods for their age, their diet being composed mainly of processed products rich in sugar, salt and dyes.

It is possible to create balanced menus and in appropriate portions for children between three and four years old, marking this possibility to the extent that the different food groups such as proteins, carbohydrates, sugars and fats are balanced in optimal quantities.

The project is not feasible from a financial point of view, because the business does not generate profitability, since sales are very low and do not generate sufficient income to cover costs, fixed and variable expenses. On the other hand, a negative cash flow implies that bank loans must be requested to leverage the company's production activities, therefore, the financing interest will make the proposal less profitable.

However, the project could be of great value to society, since it is favorable that children from an early age can access balanced foods that favor their development, which is supported by nutritionists, teachers, and parents who are aware that their children need adequate food intake and that for various reasons it is currently not done that way. From that point of view and considering that there are products and services that are not for profit, that is, their definition of organizational benefit is not focused on money, but on other aspects such as health and well-being of people, this project could be implemented by foundations and NGOs.

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5. Annexes

5.1 Survey.

Dear parent, please take a moment to complete the following survey, the information you provide will be used for a new proposal in initial education centers.

Age: _____

Gender:

Male Female

1. Are you familiar with catering services?

YES NO

2. Are you familiar with child nutrition?

YES NO

3. Select the level of importance you consider your child's diet to be.

- Not at all important
- Slightly important
- Indifferent
- Important
- Very important

4. Do you believe that good nutrition leads to good academic performance?

YES NO

5. Do you believe you send adequate foods for your child's preschool activities?

YES NO

6. What factors do you believe prevent sending adequate foods for your child to school?

- Time
- Money
- Lack of information
- Other

7. Do you know of any catering services for preschoolers in Durán?

YES NO

8. Would you like to have a catering service for your child's nutrition in preschool?

YES NO

9. Would you be willing to acquire this service for a monthly fee of \$40?

YES NO

If your answer is no, please indicate an amount:

10. Would you consider enrolling your child in an educational center that offers this service?

YES NO