Characterizing Internal and External Factors Affecting the Success of Health Food Industry in Peru

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Abstract

Over the last years, several Latin American consumers have been changing their eating habits, opting for healthier options, and allowing the emergence of healthy fast-food restaurants. This research aims to determine the key variables and actors' developments of healthy fast-food restaurants in the culinary industry within the Lima Metropolitan area, with the participation of a group of local experts familiar with the industry and based on a structural analysis that evaluates the levels of motor skills and dependency, the interrelationship between the actors and variables for the study system was determined. The evidence presents commercial management, communication, lifestyle, age distribution, and sale price as influential variables. The social actors responsible for its management are the suppliers, the customers, and the local healthy community. The value of this study lies in the practical knowledge it offers to the management of healthy restaurants, as well as the possibility of designing and strategic planning of future scenarios for the sector.

Keywords
Healthy Food, Restaurants, Latin America.

1. Introduction
Fast food originated in 19th century Europe, when the Cossack mercenaries of the Russian army -in France- requested fast service in restaurants by repeating the word bistro (in Russian bystro, which means fast). Since then, French fast-food restaurants have been known as such. However, this concept only arrived in America at the beginning of the 20th century when, in 1912, the first automat was inaugurated in New York; a self-service restaurant offering food behind a glass window and a slot to pay with coins. Then, with the arrival in the United States (U.S.) of the popular drive-through in the 1940s, a period of popularity of this type of service began (Witzel 2002). Years later, in 1955, the first restaurant of the first fast food chain was inaugurated: McDonald's (McDonald's 2019). Today, this industry seeks to satisfy two main needs: time savings and economic prices.

The increasing consumption of fast food among adolescents and young adults is a cause for concern due to the high intake of fats and carbohydrates that can cause overweight or obesity and subsequently chronic diseases. As stated by Kader and Nasirullah (2019), the increase in junk food consumption is a global phenomenon that has a prevalence of about 70%. One of the main reasons for this type of food being in such high demand is the affordability of prices, followed by the speed of attention of the premises that offer it. In Peru, according to the 2019 family health report of the National Institute of Statistics and Informatics (INEI), 3 out of every 5 people over 15 years of age are overweight and 22.3% are obese. This problem is more severe in Metropolitan Lima, where 64.7% of the population is overweight. For this reason, Lázaro and Dominguez (2019) created for the Ministry of Health a food guide for the population

where they encourage healthy food and the importance of this industry to develop, as well as to promote studies that evaluate the future implications of this industry.

Misso and Mariani (2016) postulate that a society's eating patterns are determined by the social, political and economic transformations they have gone through. In line with this, as Fulkerson (2018) posits, the food industry has evolved drastically in recent years, with an increase in fast food consumption being observed. With the passage of time, this type of food deteriorates the quality of life of people; due to this, the Peruvian Congress approved Law N°30021, Law for the Promotion of Healthy Eating, which came into force in 2019. The purpose of this law is that the population avoids foods with a high content of saturated fats, sugars and sodium. Under this new context and the impact on the behavior of citizens, new needs are perceived in consumers, so companies are focusing on offering healthy and nutritious products that contribute to wellness, strengthening a healthy lifestyle. In Latin America, 7 out of 10 people pay attention to the ingredients of their food, opting for natural ingredients and unprocessed foods. In the case of Peruvians, they seek to avoid foods with artificial flavors (66%), preservatives (65%) and artificial colors (67%) and around the world as mentioned by Fernandez (2014) the most valued characteristics by consumers are: health, practicality and indulgence, because although health continues to lead, consumers do not resign the taste of their food and seek rich and pleasurable products as part of a balanced diet. A fast good restaurant is a model of innovation, where a door opens to create a trend when it comes to selling healthy products, as noted (Tejada 2013).

The restaurant industry is growing at an accelerated rate. In the month of November 2019, as released by INEI (INEI 2019), this sector increased by 5.86% when compared versus the same month of the previous year. In addition, there is a rise in demand for healthy food restaurants, as shown by the thesis of Anicama et al. (2018), where they argue through a descriptive statistics study that consumers currently relate healthy eating with improved health and wellness. They also present an economic feasibility study on the development of a restaurant of this type in the city of Metropolitan Lima, which yields positive results that could be of interest to investors.

Over the years, a relevant factor has become visible in the market and it is the perception of low nutrition generated by these fast foods. The consumer distinguishes them as foods with high energy density due to their high fat content (saturated and trans) and carbohydrates. According to a study conducted by the universities of Auckland and Nottingham, consuming fast food 3 times a week can generate diseases such as asthma, eczema and irritated and watery eyes (International Study of Asthma and Allergies in Childhood 2013). In recent years, it has been observed that people are increasingly concerned about what they consume and about being informed about nutritional values: calories, fats and carbohydrates (Villalobos 2012). In response to these new consumer concerns, food trends have emerged that are opposed to fast food and that call for healthy food.

Slow food is a movement founded by Carlo Petrini in 1986, which reached international presence in 1989 and aims to oppose fast food. It is defined as combining the pleasure of food with sustainability, harmony with the environment and responsibility. They consider that industrialized and fast food causes the loss of flavors and aromas, and of millenary culinary traditions (Petrini 2001). At the same time, 20 years ago a new concept was born: smart food. This initiative seeks to provide food that is nutritious and healthy, environmentally sustainable and convenient for the farmer, and to contribute to some of the world's problems: poor diets (malnutrition and obesity), environmental issues (climate change, water scarcity and environmental degradation) and rural poverty (International Crops Research Institute for the Semi-Arid Tropics 2020).

In 2004, famous chef Ferran asked himself the following question: is it possible to offer healthy fast food at an affordable price and high quality? Thus, the concept of fast good was born, which seeks to offer consumers, who are overwhelmed by the daily rush but attentive to their well-being, a simple and innovative gastronomic offer consisting of traditional dishes based on healthy ingredients. Fast good includes different types of establishments, including juice stands or formats linked to pizzas, hamburgers and desserts (Espinoza 2011).

1.1 Objective
The main objective of this study is to determine and characterize the key variables and actors for the development of the health food restaurant industry in Lima (Peru).

2. Literature Review

As office jobs and long commuting distances increase as cities expand, people have less time to exercise and prepare healthy, fresh meals. This situation has led to consuming processed foods with high amounts of fat, added sugars, and salt; however, in recent years, healthy eating has emerged as a trend in Latin America.

According to a study by Ingredion and the consulting firm Opinaia, 82% of consumers in Peru are interested in healthy eating, 78% in Colombia, 73% in Brazil and 58% in Argentina. In addition, they give an average of 65% importance to eating well tohy (Ingredion and Opinaia 2020). Likewise, Nielsen research shows that Latin American consumers are increasingly concerned about health issues and seek local, fresh and organic foods, where 75% are willing to modify their diet to take care of themselves and 62% are willing to pay a higher price for products that support them in their goals to achieve their wellness (Nielsen 2017).

Currently, there are different proposals of healthy fast good chains that offer fresh, healthy and on the go. Go Green is a Guatemalan brand leader in Latin America with specialties such as salads, paninis and wraps that are complemented with natural drinks, snacks and parfaits. It has more than 90 units operating throughout the continent with presence in 9 countries in Central and South America. Another similar chain is Freshii, a Canadian franchise that offers burritos, wraps, soups, salads and frozen yogurt, in more than 100 locations worldwide, 3 of them in Lima. Finally, Oakberry is a Brazilian franchise that offers bowls and smoothies. They have more than 340 locations in several countries, 3 of them in Lima.

It is very interesting to understand how some authors such as Gregory et al. (2006) provide the perspective that it is unrealistic to expect industry to shoulder the burden for the food choices consumers make. Still, it is also naïve of them to expect consumers (who see and are influenced by well-designed multimedia advertising campaigns) to take full responsibility for their purchasing choices, so much of the responsibility should fall on government regulations. This view is also shared by Shill et al. (2012) as they give a government's perspective on government regulation to promote healthy food, as well as Arbaiza et al. (2014) who found a conflict between the fast-food industry and the government as the latter pushes healthy eating.

Therefore, to build a promising future, it is essential for fast food chains to offer low-fat and low-sugar products and to form alliances with traditional restaurants to face any possible government action against them. In fact, the chains are already beginning to listen to a public that is more concerned about good nutrition and wellness by offering, for example, menus that include salads, juices or water, among other low-calorie products.

On the other hand, regarding the concept of healthy food and the options that this type of restaurants should offer, Beltrán and Romero (2019) recognize that this type of food not only revolves around the intake of fruits and vegetables, but also healthy fats, whole grains, etc. While for authors such as Díaz Beltrán et al. (2019) it is enough for a restaurant to offer dishes with vegetables and fruits to be considered as healthy.

In recent years the fast good market in Metropolitan Lima is increasing, both in demand and supply, because as APEGA indicates as of 2018 there is an increase of 7% to 8% in the restaurant industry (APEGA 2018). Currently, there are restaurants in the Peruvian capital such as: Pickadeli, Quinoa Café, Armónica, La Nevera Fit, Protein Food, D'Sala and foreign franchises (Freshii, Oakberry); in addition, a large number of small entrepreneurs; among the best-known brands are Leslie Yengle, La Foodie and DatoFit.it should be noted that this brands do not have a store and sell only by delivery. Also, some supermarkets sell healthy snacks, which together offer a wide menu with salads, grilled meats with healthy side dishes, Peruvian food options with variations in legumes and flours, fast good (hamburgers, pizzas, rolls, etc.), desserts and beverages, mostly for districts such as San Isidro, Miraflores, Magdalena, Surco, Lince, Jesús María, San Borja, etc.

A PESTE (political, economic, social, technological and ecological) analysis is presented in order to contextualize the healthy food market in Lima (Peru).

In relation to the political aspect, in Peru there are: Law No. 30021 for the promotion of healthy eating and the food guides approved by the congress in 2019. These contribute and guide people to opt for a better diet; which helps to combat diseases such as overweight, diabetes, hypertension, among others. On the other hand, under the current leftist

government, a gray picture is painted full of uncertainty about the possible changes in the constitution, which could change the type of economic system of the last decades, more than half of the citizens rejects these proposals.

With respect to the economic aspect, the economy around the world has been affected in the last year and Peru has not been immune to it; however, there are various means of support for small businessmen. It should be noted that most of the companies in this area must import ingredients, and since these are in foreign currency, they can cause fluctuations in the final prices.

The age, gender and lifestyle of individuals should be taken into account, since each segmentation presents different needs. Since the arrival of the pandemic, there has been a growing concern to start taking better care of oneself and eating better, since people with comorbidities are more likely to die from COVID-19. Health problems as well as people's interest in improving their lifestyle or staying healthy are variables that motivate the consumption of healthy food.

Not only does the aforementioned promote these actions, but also the use of technology that, through social networks, applications, web pages and forums, makes it possible to create promotions, recommend different establishments and establish a closer relationship with consumers. Emphasizing technology, internal processes and their level of automation were taken into account.

Finally, more and more people around the world are becoming aware of the need to take care of the Earth, and in line with this, this sector of the food industry should seek to reduce its use of plastics through environmental campaigns.
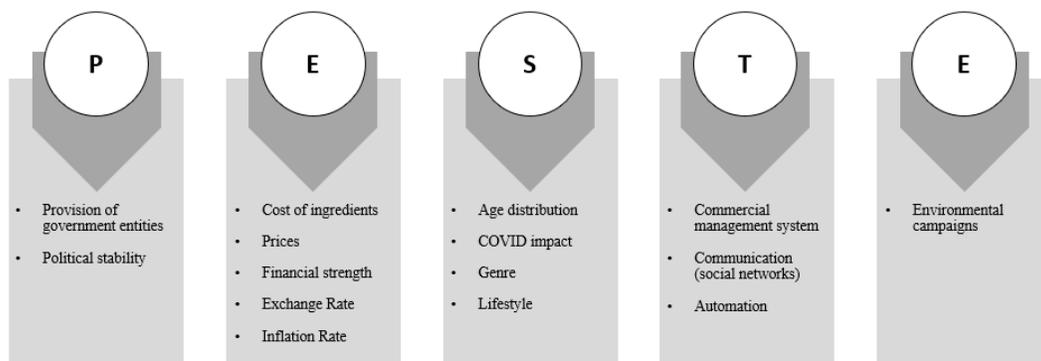

Figure 1. PESTE diagram

3. Methods

Structural analysis is a technique of collective reflection that makes it possible to describe a system of study through a matrix that makes it possible to relate all the elements that compose it (Godet 2007). The objective of this method is to identify the variables that have the greatest influence on the others and therefore those that are key to the development of the system. In order to identify the degree of influence we had the collaboration of a group of experts with experience in the sector and who have mastered a research topic, in addition to external advisors who contributed to the study.
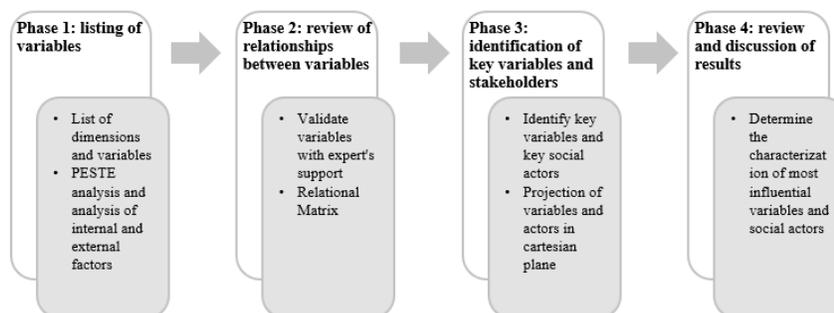
Figure 2. Structural analysis phase diagram

4. Data Collection

Phase 1: listing of variables

In this stage, the dimensions and variables that characterize the healthy industry market (fast good) in Metropolitan Lima were listed. This was done through the elaboration of a PESTE analysis crossed with an analysis of external and internal factors that was presented in the introductory chapter. The literature review was carried out with the help of various databases such as Scopus, Web of Science, Google Scholar, Scielo, Proquest; as well as certain repositories of theses from the most prestigious universities in Latin America. The variables were grouped into five dimensions: political, economic, social, technological and ecological. The variables in question were validated with the support of experts and the social actors were identified.

Phase 2: review of relationships between variables

In this stage, the variables were validated and related based on the level of dependence and influence between them. This was recorded using a double-entry matrix, which a group of 5 industry experts filled out, their profiles are presented in the following table.

Table 1. Experts participating in the characterization of variables for structural analysis.

Code	Profile
E1	Co-*founder* of Protein Food, with more than 5 years of experience in the sector in Metropolitan Lima and leading the company's expansion plan to Mexico.
E2	Partner and general manager of Oakberry Peru, with a 17-year track record.
E3	*Founder* and general manager of D'Sala, with more than 7 years of experience in the market.
E4	*Founder* of Saki Poke Bowls, with more than 5 years of experience in the industry.
E5	*Founder* of Hawi Poke Bowls, with more than 3 years of experience in the field.

As there is a relationship between the variables located in the columns and those located in the rows, each specialist assigned a score in the matrix. The following scale was used to rate the level of influence between the variables.

Table 2. Degree of impact or motility for the confrontation matrix

Degree of impact or motility	Rating
Strong	4
Potential	3
Moderate	2
Weak	1
Null	0

Phase 3: identification of key variables and stakeholders

In the present stage, the most relevant variables in the fast good industry in Metropolitan Lima were identified using a Microsoft Excel spreadsheet, which made it possible to rank the variables according to their direct and indirect impact.

First of all, with the help of the aforementioned matrix, it was possible to determine the relationship of motricity and dependence of the direct variables and proceeded to locate them in a Cartesian plane. To find the coordinates, the values of the rows and columns were added, where the first ones indicate the motricity of each variable on the others and the second ones represent their dependence. Then the projection of the points on the diagonal was made and it was determined which were the key variables for direct impacts of the system.

Finally, the matrix of direct impacts was raised to the fourth power in order to obtain the matrix of indirect impacts, followed by the same steps as the previous matrix, in order to validate the hierarchization of the variables previously carried out.

Finally, five experts from the sector -who previously supported the validation of the variables- were involved in determining the degree of power of the actors. A relational matrix was created to establish the degree of influence among the system's participants. In addition, it was determined whether the degree of dependence among them was high, low or moderate. The actors were then placed in the matrix of influence and dependence.

Phase 4: review and discussion of results
In this stage, the nature of the system under study was detailed and the most relevant variables and the most influential social actors were characterized, which made it possible to analyze the impact of the variables and understand the role played by each of the actors in the system.

5. Results and Discussion
5.1 Graphical Results
The results of the first phase are presented below, where the fifteen variables were listed based on the five dimensions established for the fast good industry in Metropolitan Lima, which were validated in phase 2 with the support of experts.

Table 3. List of variables

Dimension	Variables	Type	Description	Baseline status
Policy	Provision of government entities	External	Documents published (laws, dietary guidelines, etc.) by government agencies that promote the consumption of healthy foods	Dietary Guidelines 2019, Law No. 30021 on the Promotion of Healthy Eating for Children and Adolescents
	Political stability	External	Citizen approval of the current government.	Approval = 12% (2023)
Economic	Cost of ingredients	Internal	Price of the most representative inputs	E.g.: Monk fruit (1kg = 28 dollars)
	Prices	Internal	Selling price of finished products of the main health food restaurants in Metropolitan Lima	E.g.: Pickadeli desserts between 7 to 18 soles.
	Financial strength	External	Macroeconomic fundamentals and measures to face the future with optimism	The IMF projected in October of this year that global GDP would increase 1.1% in 2023 and 2.7% in 2024.
	Exchange rate	External	Ratio relationship that exists between two currencies	1 dollar = 3.9 nuevos soles
	Inflation rate	External	Shows the percentage change in prices for a given territory during a given period	Inflation rate = 4.5% (2023)
Sociocultural	Age distribution	External	This indicator is used to identify the number of people within the fast good's target audience, people between 15 and 54 years of age	Percentage of population between 18 and 54 years of age = 58.43%

	COVID Impact	External	Impact on the habits of the population due to COVID-19 disease	Not presented
	Genre	External	Proportion of consumption between women and men.	Women = 80%, Men = 20%
	Lifestyle	External	Group of people who consider themselves athletes or seek to eat healthy.	Not presented
Technological	Commercial management system	Internal	Actions designed to publicize the company's commercial proposal	Web pages, sales by applications
	Communication (social networks)	Internal	Use of social networks to communicate offers, special days, etc.	Use of Instagram for the most part and Facebook in some cases
	Automation	Internal	Use of software, supplier and customer databases, automated, semi-automated or manual production processes.	Use of basic software, semi-automated processes, ERP such as SAP.
Ecological	Environmental campaigns	Internal	Proposals to reduce the use of plastics in the packaging of sauces, tapers, cutlery, bags, etc	Not presented

After performing phase 3, the following Cartesian plane was obtained in which the 15 variables are projected for the system under study, considering the indirect relationships between them.
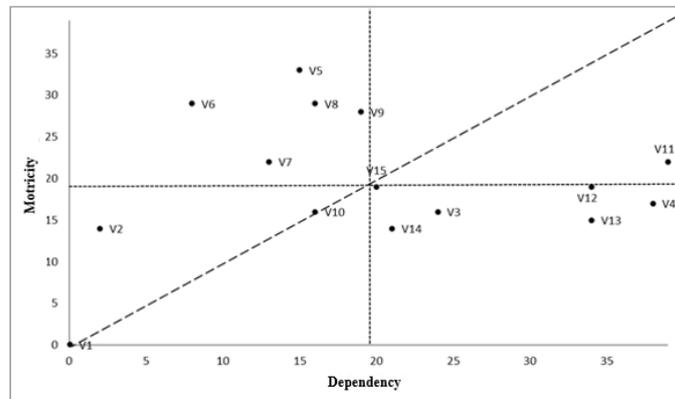

Figure 3. Cartesian plane of indirect variables

As proposed by Godet, a stable system is observed since there is a predominance of motor variables, it is easy to identify the dynamics and each quadrant with its variables. The key variables -inputs- and results -outputs- are well defined (Godet,1993).

A summary table is presented below, containing the groups of variables: platoon, input, excluded, link and result variables; the definition of each of these, the corresponding position in the Cartesian plane and the results found.

Table 4. Classification of variables

Type of variable	Definition	Position in the Cartesian plane	Result

Platoon variables	They are moderately dependent and motor variables. The role they play in the system cannot be determined because they are not sufficiently dependent or motor.	They are located close to the axis of quadrants II and III	V3: Cost of inputs V7: Inflation rate V10: Gender V14: Automation V15: Environmental campaigns
Input variables	They are highly influential and somewhat dependent variables. Much of the system depends on these variables, as they can act as brakes or motors. They act on the system according to how much they can control them.	Upper left quadrant	V5: Financial soundness V6: The exchange rate V8: COVID impact V9: Age distribution
Excluded variables	They are not influential and dependent. They do not slow down the evolution of the system, but neither do they act as drivers for it.	Lower left quadrant	V1: The disposition of governmental entities V2: Political stability
Link variables	They are highly influential and dependent; a change in them affects the other variables of the system, like a domino effect.	Upper right quadrant	V11: Lifestyle
Variables result	They are sensitive to the variation or unwinding of the link variables, i.e. they behave as output variables of the system.	Lower right quadrant	V12: Commercial management V13: Communication V14: Selling price

Subsequently, 8 social actors were identified and validated for the healthy food market (fast good) in Metropolitan Lima, which are presented below.

Table 5. List of social actors

Actor	Description
Legislative Power	Represented by the Congress of the Republic, which can legislate laws and exercise political control over the actions of the executive branch.
Suppliers	A natural or legal person that supplies goods or services, in this case, supplies ingredients to the restaurants of *fast good*.
Customers	Consumers of the *fast good*.
Healthy community	People who maintain healthy habits and are able to consume healthy food in restaurants of *fast good*.
Public figures with healthy lifestyles	They are those people with the capacity to influence consumers to have a healthier lifestyle and to consume in healthy food restaurants.
Media and communications	Social networks, radio or television that promote healthy lifestyle habits.
Healthy restaurants	These are companies that offer healthy food services either in a store or through *delivery*.
Ministry of Health	An agency of the executive branch in charge of leading the national health system, ensuring the benefit and well-being of the population through intersectoral actions.

Figure 4 below shows the location of the social actors in the Cartesian plane defined for the system under study: the fast good market in Metropolitan Lima.
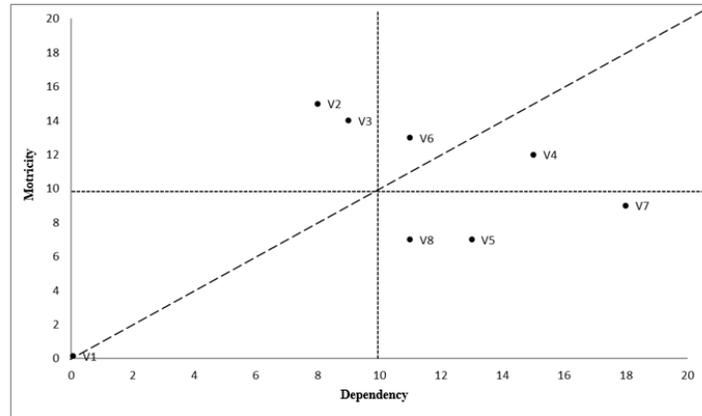
Figure 4. Cartesian map of social stakeholders

The following figure shows the level of hierarchy of the social actors, where 4 types can be found. The high-power actors are the most influential over the others and with little dependence, they are in the upper left quadrant. The medium power actors are those with a high degree of influence and dependence, they are in the upper right quadrant. The low power actors are those with a high degree of dependence, but low influence over the other actors, they are in the lower right quadrant. Finally, those with very low power are those with a low degree of influence and dependence and are located in the lower left quadrant.
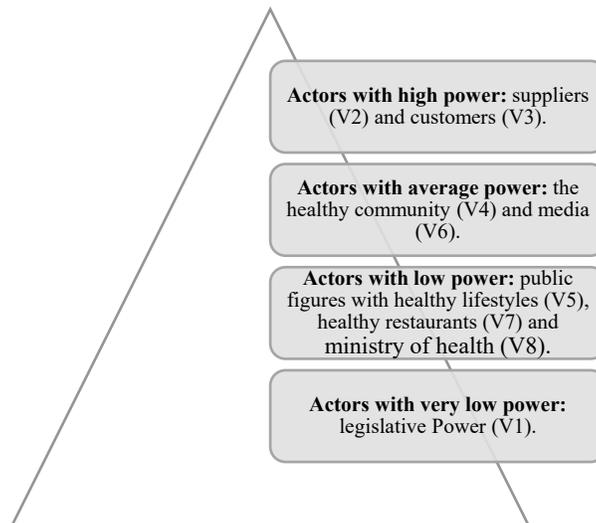

Figure 5. Level of hierarchy of the social actors in the healthy food market

5.2 Validation

Based on the results found, it was possible to identify the five most relevant and influential variables for the system under study, which were classified as external, in the case that the restaurants have no direct influence on these, or internal, where they do. They are presented below in order: commercial management (V12 - internal), communication (V13 - internal), lifestyle (V11 - external), age distribution (V9 - external) and sales price (V14 - internal). Likewise, the three social actors that play a very relevant role are: suppliers (V2), customers (V3) and the healthy community (V4). It is important to emphasize that three of the five key variables are internal, while only two are external.

Regarding the first variable, business management, convergences were found against other research. First, as suggested by Kang et al. (2015) it is recommended for healthy food restaurants to establish creative marketing strategies to motivate customers' interest in menu items and emphasize benefits. Similarly, Liu et al. (2019) determined a novel marketing strategy: the use of handwritten typeface on menus, which improves consumers' responses to healthy restaurant brands. This is because it creates a competitive advantage by conveying a sense of human touch, including positive attitudes towards the menu, a greater perception of brand healthiness and increased engagement on social media. According to the study conducted in Spain by Lessa et al. (2017) the communication of the healthy restaurant is even more important than that of a conventional one, since consumers usually have the idea that healthy food does not taste as good as fast food, so it is vital to promote the restaurant with a message of healthy but tasty food and help yourself with good content on social networks (mostly Instagram) where you can place many appetizing photos.

In relation to healthy lifestyle, a study by Kang et al. (2015) concluded that the value of health was the key element that inspired customers' interest in healthy eating and aroused expectations of hedonic and positive outcomes, which in turn enhanced intentions to purchase healthy food in restaurants exclusive to healthy eating.

Finally, for the variables price and age distribution, Newson et al. (2015) conducted a study of international consumers to identify barriers and needs in the healthy restaurant industry, where taste, price, and satiety were considered key barriers to current healthy choices, and country, age, as well as gender had a strong influence on preferences.

Regarding the most relevant stakeholder, customers, they are responsible for the demand for healthy restaurants. According to research by Lebel et al. (2010) they spend about half of their food allocation on eating out, and a little more than 15 percent of their meals come from restaurants. Customers are in a quest for healthier and more balanced lifestyles, unfortunately for many years health and pleasure have been perceived as irreconcilable motivations for eating: if it tastes good, it can't be good and vice versa. It is for this reason that they represent the most influential actor, as they are increasingly looking not only for a restaurant with healthy options but also with good quality and taste, this consumer has become more demanding as time goes by.

The healthy community is a very important variable, as has been studied for other industries, such as fashion. One success story is the company Lululemon, which focused on the healthy community and specifically on people who practiced yoga and through a system of collaborations with yoga teachers and studios formed a community that today has more than 1 million people. According to former CEO Laurent Potdevin (2018), the success of the brand is not about the clothes but about the people and the investment they make through the brand and the intrinsic reward it brings them of personal development, a healthier life that allows them to live better - life.

Finally, suppliers play a very important role since they provide the basic ingredients for the restaurant menu, most of which are imported, so if there is a poor relationship with them or there are delays in lead time, there could be problems in the acquisition of essential ingredients. Murphy et al. (2009) in their research collected data from executive chefs through surveys and personal interviews, and documented producer-chef relationships, why and how ingredients are presented in menu lists, and how chefs communicate ingredient usage to their customers. The results also describe potential issues related to supplier usage and their perceptions of customer expectations for their meals.

6. Conclusion
The research results yielded the most relevant variables for the health food industry in the context studied: commercial management, communication, lifestyle, age distribution and sales price; and the actors that play the most influential role: suppliers, customers, and the healthy community. An important finding is that three of the five key variables are internal, while only two are external, which may suggest that in this industry the differentiating factor of each restaurant and the value proposition provided to customers is more important than the external factors already known.

Although this research is focused on the area of Metropolitan Lima, it could serve as a reference for other Latin American countries due to the similarity in consumer behavior in this region. Similarly, researchers are invited to address this topic of study for their countries and with the scope they require, since the health food industry is emerging and could undergo strong changes over the years.

It can also be stated that the system under study is stable, since the input and output variables are well defined and the dynamics are easy to identify. Furthermore, as proposed by Godet (2007), there is a predominance of driving variables. Finally, it should be noted that this industry does not show seasonality, since consumption is relatively stable throughout the year.

Finally, as a recommendation, this research can be used to propose future scenarios for this industry through the Prob Expert software, which uses the probabilistic cross-impact method to help determine events by simulating risks.

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