Transforming the lives of Portuguese people by changing their eating habits.

A new grab-and-go system of vacuum-packed healthy and highly nutritious food to preserve all nutrients and flavours

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Dissertation written under the supervision of professor Rute Xavier

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Abstract

Society is changing at an unprecedented rate. According to some, the very first human to reach the age of 150 must have been born already. The present economic, social, and environmental uncertainty is favourable and catalyses new business breakthroughs.

The current dissertation investigates if an innovative grab-and-go system of vacuum-packed food may succeed in the marketplace of Lisbon. This product's dimensions are the conception of healthy dishes with multi-ethnic flavours through the *sous-vide* cooking technique.

The development of this product served as the starting point for this thesis. Herewith, literature and interviews with stakeholders from the HoReCa and wellness sectors were used to understand its evolutions, concluding that both sectors are going through a disruptive development phase regarding digital transformation. Then, a survey was conducted to determine the potential of this product by asking the importance of the product's features. Finally, a multiple regression model was used to determine which features respondents prefer, using NPS as the dependent variable and the elements as explanatory factors.

Despite the lack of a statistically significant model, it was determined that the characteristics most desired by potential consumers are: a home delivery system and multicultural menus. Regarding financial sustainability, a monthly sales volume of 3,830 units was estimated as a break-even point, and the project will be financially sustainable after the second year.

Title: Transforming the lives of Portuguese people by changing their eating habits. A new grab-and-go system of vacuum-packed healthy and highly nutritious food to preserve all nutrients and flavours.

Author: António Seixas Lopes Soeiro

Keywords: New Business Opportunity, Food Business, Vacuum-sealed food, HoReCa, Grab-and-go, Brand Awareness, Customer Behavior, Market Analysis, TAM-SAM-SOM.

Resumo

A sociedade está a evoluir a uma velocidade nunca vista. Diz-se que o primeiro ser-humano a chegar aos 150 anos já nasceu. A atual incerteza económica, social e ambiental é favorável a novos avanços no desenvolvimento de negócios.

Esta dissertação desenvolve um sistema de *grab-and-go* de refeições embaladas em vácuo, para implementar em Lisboa. Este produto baseia-se na conceção de pratos saudáveis, multiculturais, através da técnica *sous-vide*, que cozinha os produtos a baixa temperatura, em sacos de vácuo, aumentando a durabilidade do produto.

O desenvolvimento deste produto serviu de base para esta tese. A literatura e entrevistas com *stakeholders* dos setores HoReCa e bem-estar foram utilizadas, para entender as suas evoluções, denotando-se uma fase de desenvolvimento disruptivo em relação à transformação digital. Em seguida, foi realizado um *survey* para determinar o potencial deste produto, questionando a importância das suas características. Por fim, utilizou-se um modelo de regressão linear, para determinar quais características preferidas, utilizando o NPS como variável dependente e os elementos do produto como variáveis independentes.

Apesar da falta de um modelo estatisticamente significativo, foi determinado que as características mais desejadas pelos potenciais consumidores são: sistema de *home-delivery* e menus multiculturais. Em relação à sustentabilidade financeira, estima-se que um volume mensal de vendas de 3,830 unidades corresponderia ao ponto *break-even*, e o projeto será financeiramente sustentável após o segundo ano.

Título: Transformar a vida dos portugueses, alterando os seus hábitos alimentares. Um novo sistema de *grab-and-go* de refeições saudáveis, embaladas em vácuo, para preservar todos os nutrientes e sabores.

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Table of contents:

List of Figures

List of Abbreviations

Target Group Index……..……………..……………………………………………………..………..TGI

Total Addressable Market…………………………………………………..……..…… ………..TAM

Value Added Tax……..………………..……………………………………………….……..…..VAT

Vegan menus……..………………..…………………………………………………..……..………..VM

1. Introduction

1.1 Background trends

Currently, we are living the fastest days that our society has ever lived. It is estimated that by 2050, more than 65% of the world population will live in urban areas (United Nations Department of Economic and Social Affairs Population Division, 2018). Today, more than ever, cities are organically growing to smart cities, which are defined as technology integrators "to improve the quality of life, increase the economic value generated in that community and promote environmental sustainability" (Deloitte, n.d.).

Alongside this change is the change in people's lifestyle. The constant urbanisation and real estate speculation, in recent years, has forced a large part of the citizens to start moving to the outskirts of cities, justifying the increase in citizens residing in urban areas different from where they work, which by 2050 would be more than 80% of the European Union (EU) citizens. As a result of this mobility, average commute time increases, and one out of five workers in Europe spend more than 90 minutes commuting each day (Molina & Velilla, 2020; Nijskens et al., 2018).

Not only the time spent commuting has changed, but also the time people spent cooking and planning healthy meals, which has been lowered excessively (Monsivais et al., 2014). In this fast-changing society, cooking and meal preparation are perceived as time-consuming activities, jeopardising healthy eating habits, and creating a civilisation composed/ made up of more people who are obese than underweight (WHO, n.d.). Thus, combining the analysis of time spent on commuting and cooking healthy meals, people today, more than ever, see their time for leisure and well-being reduced to a minimum, especially for the conception of healthy meals and physical exercise.

In this fast-paced society, few things do not rapidly evolve. Therefore, more than ever, a distinctive trait, position, or concept is no longer enough to retain a sustainable position in the business dynamic world. Moreover, due to the fast dissemination of knowledge through mass media, business duplication and imitation are now available, possible, and even attractive (KPMG, 2020).

Notwithstanding, it is feasible to retain a durable advantage among the primary rivals and even among prospective imitators, even if it is not viable to preserve an everlasting edge. According to Porter, to achieve it, trade-offs among different resources are a prerequisite, as they impose the need to reflect and look at the company itself. Moreover, it encourages the company to choose different paths in response to dilemmas about what types of products, services, and areas to focus on, creating consistency and a strong reputation (Porter, 1996).

A new generation has been evolving, and the COVID-19 pandemic has promptly accelerated this entire process of transformation. This generation (Generation Z) has been transformed and shaped by COVID-19, creating stakeholders engaged and motivated by different social values, such as sustainability, corporate social responsibility (CSR) and transparency. As well, they will be much more connected to technology and data through the Internet of Things (IoT), creating a more connected world that emerges from the sudden evolution (EY, 2020).

Among the most promising transformation in different sectors, the future of the wellness sector arouses some inquisitiveness as consumers are spending more money than ever on wellness. At the same time, this market has reached a value of 1.5 trillion $, growing 5 to 10% a year (Mckinsey & Company, 2021). Furthermore, the interconnection and sharing of data allow a large part of the citizens to precisely know what and how to eat and the healthiest practices. Thus, the world is reaching a new era, democratising the knowledge era, enabling access to data for a generalised increase in health and wellness. In this way, the creation of businesses focused on well-being, health, and concern with food has been emerging as new business opportunities.

1.2 Problem Statement and Research Questions

The dissertation's purpose is focused on understanding whether the use of vacuum-sealing technologies with the *sous-vide* technique, plus the creation of diversified and multicultural food meals sold in stores without a human interface, in the city Centre, becomes a business opportunity in the markets of Lisbon. For this, it is essential to understand the perspective of customers, and then, it is important to understand which features these potential buyers value most. Lastly, comprehend if this business is financially sustainable. Specifically, the following research questions will be answered:

Research Question 1: What are the main characteristics and challenges of the HoReCa (Hotels, restaurants and Coffee-shops) channel in Portugal?

Research Question 2: What features have the most importance and value for potential buyers?

Research Question 3: Would be vacuum-sealed self-service meals financially sustainable in the Portuguese market?

Source: The Author

Figure 1 - Description of the business opportunity, through the presentation of the diverse dimensions, namely, the concept, its main characteristics, and the distribution channel

Through this photograph, it is conceivable to recognise the diverse dimensions of the business opportunity. On the one hand, creating unconventional dishes from various cultures allows the Portuguese to travel gastronomically to those same cultures without leaving their home. Moreover, these meals would be sold pre-cooked in vacuum packaging to preserve the freshness of the flavours. Furthermore, these items would be prepared to utilise the *sous-vide* technique, which focuses on cooking vacuum-packed food at a low temperature for an extended period. This procedure aims to keep the food's integrity intact, preventing moisture and, most importantly, flavour loss.

On the other hand, regarding the distribution channel, the creation of small spaces in the centres of big cities, such as Lisbon, close to corporate headquarters and residential areas is preconceived. These stores would be 100% cashierless, which would use a technological concept where there is no need for cashiers or any registration of products during or after purchase. With this, customers would enter the store, remove the vacuum-packed meals and leave the store when they have completed their purchase. In addition, there would be a partnership with a home delivery company to deliver the product at home.

1.3 Academic and Managerial Relevance

Primarily, the final findings of this master dissertation will serve as evidence to understand whether there is a business opportunity in combining vacuum-sealing technologies with the creation of diversified and multicultural food meals sold in stores without a human interface in the city Centre. Furthermore, this dissertation will expand entrepreneurship literature knowledge in the wellness sector since it is underdeveloped. Thus, future entrepreneurs would develop projects in this field by using this thesis as a reference.

1.4 Scope of Analysis

The scope of this study is to find a way to improve the eating habits of the general population by analysing and evaluating the business opportunity of combining vacuum-sealing technologies with the creation of diversified and multicultural food meals, considering the need to create profitable business opportunities. At the same time, vacuum-sealing is a simple technique with a high potential to create scalable value in different markets and sectors. Simultaneous, as the wellness industry is deepening in the digital world, demand increases and diversifies. As so, the need to create business opportunities for a new population is urgent and convenient.

2. Literature Review

For the development of this literature review, was assessed the existing literature regarding different topics, such as wellness, healthcare, food-technology, market analysis, customer behaviour and brand awareness, drawing on all these subjects for the project conceptualisation, to be able to answer the questions from the problem statement. All these documents were searched/browsed from/through reliable sources, such as top journals, articles, consultant reports, books and web pages, from companies and well-known people in diverse fields for their extensive expertise and experience.

2.1 HoReCa Channel

The HoReCa channel is a food business sector comprised of establishments that prepare and serve food and beverages. Although it covers all venues and is commonly referred to as the "out-of-home consumption", HoReCa is abbreviated for Hotels, Restaurants, and Cafés.

Due to the COVID-19, the HoReCa sector's suspension of operation for months, and changes in demand and consumption patterns, the viability of old business models have been called into question, making it urgent for this sector to reflect and change paradigms (Duro et al., 2021).

For the following years, it is expected the resulting trends:

- **Sustainability** will be present-day in the decisions of this sector. Currently, one of the Generation Z cornerstones is focused on understanding the individual levels of sustainability, which is why it is essential to change the paradigm of companies to have more sustainable products, thus becoming more sustainable companies. Moreover, preoccupations on wasting and emission of greenhouse gases levels will also be at the heart of the matter (Food and Agriculture Organization of the United Nations, 2021; Morawicki & Díaz González, 2018);

- **Customisation** Era is here. Customers are becoming more demanding, with specific and detailed necessities, such as allergies and diets. Food firms will be required to understand and serve these trends (Deloitte. (2019b)., n.d.);

- **Convenience.** Prepared and ready to eat meals are becoming a trend, especially due to the fast-paced society we are living in. Also, with the increase in online delivery platforms, consumers are opting for convenience (Moordor Intelligence, 2017). More specifically, in Portugal, according to the Target Group Index (TGI) study, by Marktest, 2 million Portuguese ordered food/meals over the phone or applications in 2019. Concomitantly, 22% of Portuguese households consume pre-cooked meals (Marktest, 2013). Simultaneously, and primarily due to technical advancement, the availability of pre-cooked foods has grown significantly, including all sorts of cuisine. (Dudeja & Singh, 2017; Harrison & Smith, 2016);

- **Healthy Lifestyle.** The number of people incorporating healthy habits and linking them to their lifestyle is increasing (Mckinsey & Company, 2021). Consumers are choosing products associated with positive health effects (KPMG, 2018).

In addition to these trends, the HoReCa sector will need to constantly reinvent itself, given the growing instability and inconstancy in which we live. Incorporation of technology, approximation of gastronomic cultures, bringing cultures closer together, bringing up the subject of the global village. It will also be necessary to incorporate connectivity so as not to miss opportunities to reach all target populations, allowing the entire sector to evolve at the same pace and in the same direction that the whole society is moving.

2.2 The increasing prominence of the wellness market

The human need to feel good about one's body, mind, and soul is rising tremendously and becoming more prevalent in our society. As a result, it is critical to respond to this demand by establishing new businesses that provide services that make people physically and psychologically better (Stasha, 2021). As a result, the well-being sector is evolving to a scale never reached before, providing services subdivided into different divisions and areas, such as Healthy Eating, Preventive Medicine and Fitness Industry. As a whole, their primary goal is to assist people in incorporating healthy habits and lifestyles into their daily routines (Kickbusch & Payne, 2003; Mckinsey & Company, 2021).

Despite this continuous growth of customers and opportunities, countless people are out of this well-being movement, becoming overweight, malnourished, and unwilling to change their habits. Currently, in the EU, more than half of adults are obese, and in Portugal, the rate of overweight population is over 54%, and obesity is around 17% (WHO, n.d.). The EU is reaching a no-return point since obesity struggles with the national healthcare systems and countries' financial capacity. It is estimated to cost 70 billion euros a year, owing to healthcare expenditures and lost productivity (Abelson & Kennedy, 2004; Erixon, 2016). To make matters worse, COVID-19 lockdowns may promote obesity and related metabolic disorders. (Clemmensen et al., 2020). Thus, governments have a decisive and imperative opportunity to change the paradigm of their population, improving scientific understanding of obesity and enlightening advanced therapeutic technologies to treat obesity. These innovations would minimise governments' expenses with obesity, as the people would become well-informed and healthier (Dee et al., 2014; Tremmel et al., 2017).

Currently, this sector is undergoing a vast and disruptive transformation worldwide. Not only did the COVID-19 pandemic accelerate this disruption through compulsory digitalisation, but the change in societies is inevitably causing this sector to evolve itself. Today more than ever, people are engaged in adopting healthy lifestyles, eating nutritious food, and practising sports. This is mainly due to people being increasingly aware of potential health issues of not being committed to a healthy lifestyle. The knowledge behind these practices has also been more accessible to more people (Pilzer & Pilzer, 2007; Singh & Jain, n.d.).

2.3 The Wellness Market's Trends

To keep being an economically relevant sector (essential to governments) and with a sustainable market dimension, it has to focus on some core trends for future success, mainly the necessity of relying on a sustainable value chain and the essential digitalisation of the entire value chain. According to the Global Wellness Institute and McKinsey (Global Wellness Institue, 2019; Mckinsey & Company, 2021), well-being is present in six dimensions:

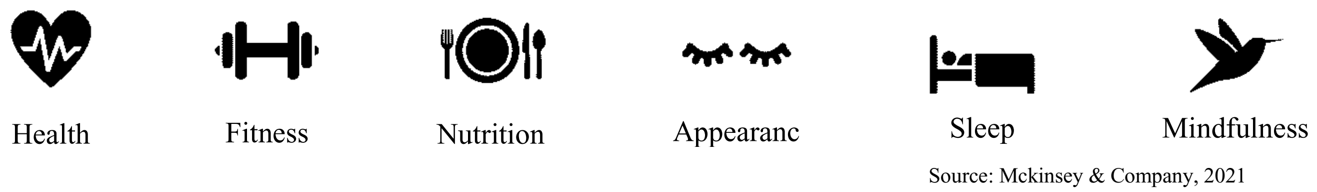


Figure 2 - Six Dimensions of the Wellness Market Trends for 2030, by Mckinsey

- Health, the intrinsic category, focuses on taking control of people's health and is composed of personal health devices, drugs and supplements. The evolution of IoT and gadgets that let them track their health and symptoms creates a new era of leading with health;

- Fitness, although its levels have been reduced during the COVID-19 (Tison et al., 2020) and it is a difficult mindset to impose on everyday life, it has many benefits for the human body, as prevention of cardiovascular disease, creating harmony between the body, mind, and soul. (Warburton et al., 2006);

- Nutrition is a connecting element between the different dimensions of well-being, given the importance of food in health and fitness, making it possible to balance all dimensions;

- Appearance is primarily achieved via combining good nutrition with regular physical exercise. In addition, there is also a variety of service-oriented offers in cosmetics, such as skincare;

- Sleep is one of the most recent sectors, mainly occupied with app-enabled sleep monitors, due to the vital role of sleeping well in health and well-being (Dumuid et al., 2018; Worley, 2018);

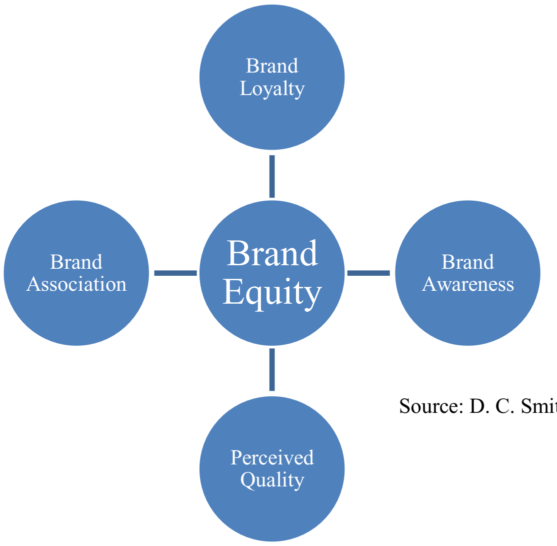
- Mindfulness appears to enhance general acceptability in the form of meditation-focused applications like Headspace and Calm. During the COVID-19 pandemic, there was a tremendous deterioration in mental health, creating an opportunity given the importance of mindfulness reshuffle in the coming times (Abbott, 2021; Conversano et al., 2020; Germer, 2004).

Opportunities in the wellness sector may be found in various dimensions described above, including wellness tourism, which focuses on enhancing its users' well-being, health, and happiness (Global Wellness Institute, 2018; M. Smith & Kelly, 2006). Furthermore, with the increased health consciousness, the future of the health and wellness business will be shaped by how customers approach their physical, emotional, and spiritual well-being, making it possible for companies to capitalise on a wide range of opportunities, creating value for themselves and the customers (Global Wellness Institue, 2019; Mckinsey & Company, 2021; Pilzer & Pilzer, 2007).

2.4 Brand Awareness

According to the American Marketing Association (Jackson, 2003), a brand is defined as a "name, term, symbol or design (or a combination of them) which is intended to signify the goods or services of one seller or group of sellers and to differentiate them from those of the competitors.".

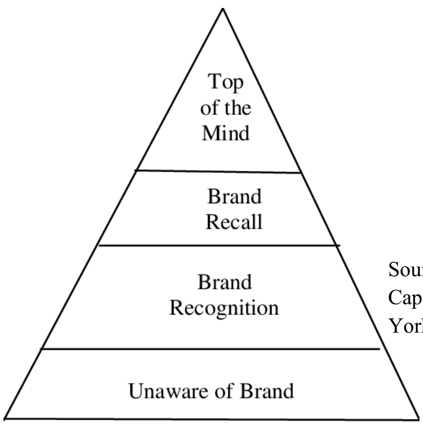
Currently, besides a brand being a bridge between companies and customers, it is also how the company influences the decision process of a potential buyer, impacting positively to the detriment of another competitor (Holt, 2016). Thus, in addition, to analysing brand awareness individualised, it is also essential to incorporate its concept into a multidimensional one, called Brand Equity. This last concept was firstly introduced by Farquhar's, in 1989, as "the added value with which a given brand endows a product" (Farquhar, 1989 as cited in (Troiville & Cliquet, 2016)). Afterwards, this concept was complemented by Aaker in 1991 (1991,p.15 as cited in (Baalbaki & Guzman, 2016)). Aaker states that brand equity should be defined as "a set of brand assets and liabilities linked to a brand, its name and symbol that add to or subtract from the value provided by a product or service to a firm and/or to that firm's customers". Aaker introduced this concept in a model composed of 4 components: brand loyalty, brand awareness, perceived quality, brand associations. The four components as a whole makes it conceivable to improve brand equity, by creating a favourable outcome to the brand's "pricing, distribution, advertising, and promotion activity" (Keller, 1993).



Source: D. C. Smith & Aaker, 1992

Figure 3- Aaker's Brand Equity Model

In short, since brand awareness is the first element to be considered in the process of accomplishing brand equity, and it is an essential element in consumer decision making, it will be the element described in this literature review (Macdonald & Sharp, 2000; Troiville & Cliquet, 2016). Aaker defines brand awareness as the extent to which the brand is known to the public (D. C. Smith & Aaker, 1992) mainly composed of brand recognition and brand recall performance (Troiville & Cliquet, 2016). Consumers' ability to identify the brand as having previously seen is referred to as brand recognition. Brand recall refers to the instant when people correctly recall the brand from memory. On top of these two features, Aaker distinguishes four degrees of brand awareness: not being aware of the brand, recognising that the brand exists, recalling the brand, and believing that the product is the only one in its product category. These levels are represented in the following figure, as the awareness pyramid:



Source: Aaker (1991), Managing Brand Equity: Capitalizing on the value of a brand name. New York.

Figure 4 - The Awareness Pyramid.

Now more than ever before, the importance and the value given to brand awareness and the entire model mentioned above are enormous. Analysing the levels of retail competitiveness and the feasibility of switching a product for another with similar characteristics is increasing (Chaarlas, 2012 as cited in Baalbaki & Guzman, 2016;). Given so, it is vital to apply this model to improve customer retention, to create value for the consumer through increased engagement and satisfaction. On the other hand, this model also makes value for the company itself. It facilitates retaining customers, improves brand loyalty, allows for an increase in importance later, and increases competitive advantage (Keller, 1993; Stahl et al., 2012).

Even though the importance of brand awareness is crucial, it is also decisive to analyse the evolution of society in different fields. The shift is happening now, and consumers' interactions with businesses are evolving due to the emergence of digitalisation (KPMG, 2020; Merriman, 2021). Thus, we live in the hyperconnectivity era, making it compulsory for companies to use technology to attract people. One example is the development of direct-to-consumer business (Swaminathan et al., 2020). Companies sell their products online and offer a different brand experience by making life easier for their network of customers.

2.5 Customer Behaviour

Nicosia, in 1966 proposed one of the first two models focused on understanding customer behaviour (Starr & Rubinson, 1978). This approach relies primarily on the company's interaction with its potential customers. Nevertheless, one fundamental shortcoming of the model's framework is that it should be written in more detail from the customer's standpoint rather than the company's (Starr & Rubinson, 1978).

Years later, in 1967 and 1969, Howard and Sheth shaped the theory of customer behaviour based on the expectation to explain the reasonableness of the consumer's product selection in situations of partial information and limited cognitive capabilities (Haines et al., 1970). Also, combined with this understanding, it examines the outward manifestations of behaviour, emotions, and mental processes that cannot be observed directly (Farley & Ring, 1970b; Friedman, 1988).

According to Howard and Sheth, choosing a brand or a product is not haphazard but rather methodical, and most of the time, somewhat repetitive. According to this theory, three variables can influence the buyer's decision-making process, which itself is placed at the heart of the Howard-Sheth theory:

- A set of motives that are often particular to a product class and reflect the underlying needs of the buyer;
- Several possible developments that can satisfy the customer's motivations. Three key concepts are involved in the defining of alternatives as brands. To begin, the many brands that become options to the consumer do not have to belong to the same product class. Second, the brands that are alternatives to the buyer's chosen selection are typically few. Finally, buyers' preferences for alternative brands may vary;
- Decision mediators are indeed the set of guidelines and procedures used by the consumer to match his motives. They rank and structure the various brands depending on their ability to meet their wishes.

Suppose somehow the brand appears to be satisfying for the customer. In that case, it is expected that the customer would be inclined and pursued to buy more frequently and in larger quantities and additional items and services from the company. However, it is critical to be aware of the elements that impact consumer's product selection, such as client financial position, personality attributes, social and organisational contexts, to adjust customer needs and satisfaction constantly. (Anderson et al., 1994; Farley & Ring, 1970a; Haines et al., 1970; Haley, 1968; Howard & Sheth, 1968; Pinto Castro, 2006; Reichheld & Sasser, 1990; Seiders et al., 2005; Sheth, n.d.).

3. Methodology

The Literature Review had its primary function to approach the most in-depth knowledge about several subjects. All these subjects were mainly related to the HoReCa Channel, Well-being industry, as topics related to customer behaviour and its relationship with the products surrounding it. Nevertheless, it is necessary to clarify how this study is sustained, more specifically which will be the methodology applied, to be able to answer the three research questions

3.1 Research Approach

Qualitative and quantitative approaches were employed to gather information for developing this business project.

FIRST RESEARCH QUESTION

First, documents and literature research will be conducted to collect all relevant market indicators and competition information. Then, this data would aid in assessing features and factors that may influence and characterise both the business and the sector. To this analysis, it would be used reports carried out by *Associação da Hotelaria, Restauração e Similares de Portugal* (AHRESP), such as the analysis of the report: "Produtividade das empresas no canal HoReCa" (AHRESP, 2015), as well as the Sector Table from Banco de Portugal, more concretely, the Economic Activity: 56 - Food and beverage service activities (Banco de Portugal, 2020). In addition, interviews involving key players and specialists were undertaken in order to gain a better understanding of the HoReCa sector and the challenges it faces. The majority of the interviews lasted one hour and were performed over the phone. Four significant interviews generated a lot of factual information for this project: Carlos Lisboa, a hotel group partner; João Máximo, the owner of a healthy food restaurant; João Luis Carvalho, an investor in health and wellness enterprises; and Cristóvão de Oliveira e Sousa, an entrepreneur who created a concept for delivering vacuum-sealed meals in Porto.

A patterns analysis using thematic coding trees will be done on the data collected from the interviews to examine it. A thematic analysis will be done as it is a qualitative research question that requires an answer with the delineation of the primary characteristics and challenges that characterize the HoReCa sector (Wicks, 2017). More information on the interviewees and their contributed data, namely the Coding Book, will be presented in Appendix 1 – Coding Tree Analysis.

SECOND RESEARCH QUESTION

Primary data from an online survey will be used to apprehend the most appropriate product features for the potential buyers. Thus, based on the questions asked throughout the questionnaire, namely the propensity to buy this product, it will be possible to determine which product characteristics are more appealing to the population that is more engaged with the product. This survey will be shared through email, WhatsApp, and social networks.

By this analysis, it would be possible to attract the most extensive and diversified population. Therefore, the structure will consist of diverse parts to fulfil different concerns. Firstly, the first part of the survey would be to understand the consumer perceptions about the involved sector. Also, it intends to get an overview of the status of fulfilling the customers' requirements. Thus, it will be possible to fulfil the customer's needs and understand how they perceive the sector with both understandings. Secondly, the following issue would be linked to the project idea, focusing on understanding the value given by the presumed customers. An inductive approach would be used in this specific part because the objective is to predict the features and functionalities that the consumers will desire based on their true intents for this particular product. For this final part, a multiple regression model would define one dependent variable: **The propensity level to buy the product (NPS).** For measuring this level, several independent variables were defined:

- Level of importance given for having a home delivery system;
- Level of importance given for having a point-of-sales 100% cashierless;
- Level of importance given for having point-of-sales around the city;
- Level of importance given for having a monthly subscription, with a special price for this package;
- Level of importance given for having vegan menus;
- Level of importance given for having children’s menus;
- Level of importance given for having seasonal menus;
- Level of importance given for having multicultural menus;
- Level of importance given for having desserts menus;
- Level of importance given for having personalised menus produced directly according to one dietary restriction.

By doing this regression model, it would be possible to understand which features have the most importance and value for potential buyers through analysing the slope coefficients for each explanatory variable.

THIRD RESEARCH QUESTION

To answer the third research question, it is necessary to understand the size of the target population and which would be the optimal price given by them. Then, a TAM-SAM-SOM analysis would be done to gain insight into the obtainable market. For this, data from the Sector Table from Banco de Portugal and the survey would be used. Based on this analysis, it will be possible to estimate the projected level of sales for the following years, assuming that a part of the SOM value corresponds to the estimated sales in the first years.

Regarding the optimal price, survey data will be used as a source. In addition, the different costs of opening and maintaining the business would also be taken into accounts, such as Capital Expenditure (CAPEX), salaries, licenses, suppliers, and others. This information may estimate financial sustainability by creating a balance sheet that includes both sales and cost estimations. Afterwards, a break-even point will be calculated.

The figure below provides an overview of the methodology used to address the three research questions, split by method, data source, and data type.

Research Question	**Method**	**Source**	**Type of Data**
Characteristics and challenges of the HoReCa in Portugal	Deductive	Interviews / Documents	Primary Data / Secondary Data
The most desired features of the product	Inductive	Survey	Primary Data
Financial Sustainability of the product	Inductive	Survey / Banco de Portugal Reports	Primary Data / Secondary Data

Figure 5 - Methodology applied to answer the three research questions, divided by the method applied, the source and the type of the data

Source: The author

4. Analysis

This chapter consists of two parts: data gathering description and assessment; and presenting primary outcomes from all the analyses presented above.

4.1 Market Analysis – HoReCa Channel

Through the analysis of the reports carried out by AHRESP, such as the analysis of the report: "Produtividade das empresas no canal HoReCa" (AHRESP, 2015), as well as analysing the

Sector Table from Banco de Portugal (BdP), more concretely, the Economic Activity: 56 - Food and beverage service activities, it was possible to analyse and characterize the HoReCa channel, as well as the market that involves this business (Banco de Portugal, 2020). Besides these sources of information, it would also be used an interview with stakeholders involved in this sector.

HoReCa channel is incorporated in the Statistical classification of economic activities (NACE) of the National Institute of Statistics, with the code 56- Food and beverage service activities. This includes preparing and selling food for consumption, usually on-site, and the supply of other consumption (e.g. beverages) accompanying meals. It also involves preparing meals to be delivered and/or served at the customer's specified location for a specific occasion. Finally, it encompasses all operations, including selling drinks and small meals for consumption on-site, whether without or with performance. In short, it contains all the places where food, meals and beverages are prepared and served that are usually consumed outside the home (Statistics Portugal, 2007).

In 2020, the collective sector represented 7,6 % of the companies in Portugal (36,304), 1,64% of the turnover (5,849 million €, which is a tremendous decrease compared with 2019, 8,848 million €, mainly due to COVID-19), with more than 85% being microenterprises, and less than 1% large enterprises, which is in line with the overall sector in Portugal. In terms of distribution by the geographical location of the head office, 44,4% of the enterprises were located in Lisbon, 15,3% in Oporto and 6,2% in Faro. Compared to the rest of the companies, there was a more significant predominance in the Algarve due to the strong influence of tourism. In profitability, this sector had an average Return on Assets (ROA) of 1,9% (a considerable decrease compared with 2019, which was 7,2%) and a negative Return on Equity (ROE) of -45,8%. Considering the overall sectors in Portugal, the ROE and ROA of this sector were significantly lower, compared to 3,8% and 5,9% for all the other sectors. By analysing how this sector funds itself, more concretely the financial debt composition, more than 70,7% of the financial debt came from bank loans. The panorama is almost the same in the other sectors, with Group Loans as a form of financing, gaining more expressiveness.

4.1.1 Interviews Analysis

As previously stated, in addition to these financial and statistical data regarding the HoReCa channel and the market involved in this business, three interviews involving key players and specialists were undertaken, plus one interview with an entrepreneur. The first key player was Carlos Lisboa, a hotel group partner. The second interview was conducted with João Máximo, a healthy food restaurant owner, "Tasca do João" in Faro. Following that, João Luis Carvalho was the third interviewee, an investor in health and wellness enterprises such as gyms, healthy restaurants, and organic groceries. Finally, it was possible to get insights from Cristóvão de Oliveira e Sousa, an entrepreneur who created a novel concept for delivering vacuum-sealed meals in Porto, "Taberna Está-se Bem". Figure 6 summarises the four key players, detailing their professional industry and their positions, and assigns them a unique identification code, which refers to the experts in the analysis of the sector.

Key Player Code	Interviewee	Working Position	Business Industry
KP1	Carlos Lisboa	Hotel group partner *Hotel chain with seven hotels and three restaurants scattered over the Algarve and Angola.*	HoReCa Channel
KP2	João Máximo	Health-food restaurant owner *"Tasca do João", a small restaurant serving healthy food in Faro.*	HoReCa Channel | Health Sector
KP3	João Luís Carvalho	Business Angel *An investor in health and wellness enterprises such as gyms, healthy restaurants, and organic groceries in the Lisbon.*	HoReCa Channel | Wellness Sector
KP4	Cristóvão de Oliveira e Sousa	Vacuum-food restaurant owner *"Taberna Está-se Bem", a small restaurant delivering vacuum-sealed meals in Porto.*	HoReCa Channel | Vacuum-sealed Food Sector

Source: The author

Figure 6 – Overview of the interviewed key partners, divided by the ID code, name, job position and the industry involved

After carefully analysing the responses provided by the experts during their interviews, the following patterns were identified regarding the HoReCa Channel and the Wellness sector. They are all summarized in Appendix 1 – Coding Tree Analysis.

4.1.1.1 Interviews Analysis – Coding Tree Analysis

In the first place, all respondents answered the question regarding the characterization of the main opportunities that the HoReCa sector will have to embark on. With this, key themes were identified, allowing a definition of thematic patterns related to the HoReCa sector's future. More concretely, two essential categories were outlined: potential success approaches and the potential interaction between the HoReCa sector and the digital world.

Concerning potential success approaches, the most addressed subject was **Sustainability**, as all key players aligned with the approach of shifting the paradigm toward environmentally responsible conduct. Furthermore, some players stated that incorporating **Sustainability** into business *"is an extraordinary way to attract costumers"* while others acknowledged that "*we all have this mission to apply an environmentally friendly strategy*", and it has become a *"matter of urgency."*

When implementing the **Customisation** approach, two key players regarded it as a successful strategy in the HoReCa sector. More specifically, the "power of consumer-specific information" was highlighted because it creates the opportunity to develop items tailored for customers. Having this ability was identified as a success strategy, as it will "exponentially raise the demand for our services/products.".

Regarding the implementation of **Digital solutions** in the HoReCa sector, some concepts were identified, namely the potential to increase "the efficiency of any production.". On the other hand, closely linked to the previously identified code (**Customisation**), having access to a technology that manages customer data allows us to truly "know our customer", developing customised products.

All key players emphasized **Social Media** engagement, characterizing it as a critical strategy for increasing demand. More specifically, it was considered as an imperative strategy ("emphasis on social media involvement cannot be underestimated."), to not become "an outdated company in the next five years".

In the final segment of the interview, a presentation regarding the product was given, and the interviewees were asked about their preferred features of the service/product. As a result, the following attributes were recognized as the most favoured by the major players:

- **Point-of-sales 100% cashierless**, mainly being characterized as an “extraordinary way to reduce costs”;

- **Personalised menus**, although identified as a feature that “might be costly and difficult to cater to all clients”, it was considered by the key players as a “way to attract more customers”, given the “huge number of individuals who have food intolerances”.

4.1.2 Demographic Analysis – Sample Population and Key findings.

Responses for this survey were collected during two weeks. There were 206 full replies.

Regarding gender distribution of the responses concerning this research, from 206 individuals, as shown in Figure 7, the male gender accounts for 46 percent of all respondents in this study. In contrast, the female gender accounts for 54 percent.

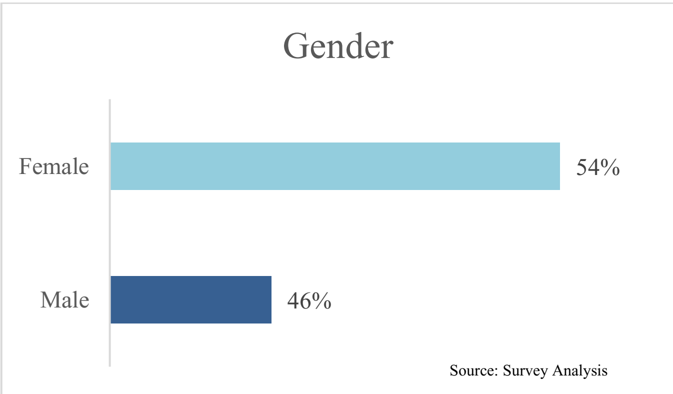


Figure 7 - Gender distribution across the survey pool

In terms of age, as shown in Figure 8, 47 percent are between 25 and 34, followed by 20-24 (30 percent), 35-50 (9 percent), 50-60 (6 percent), under 20 (3 percent), and above 60 (1 percent).

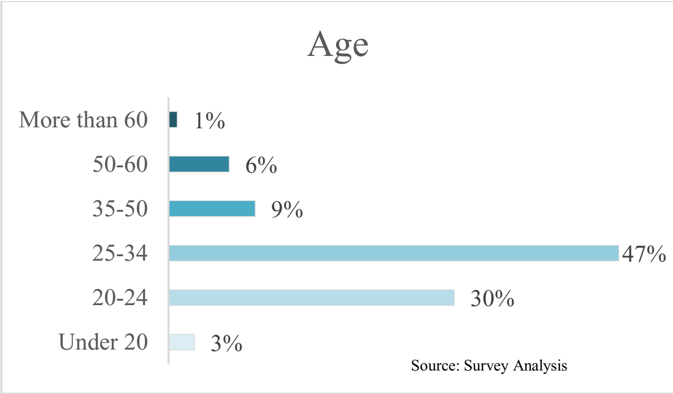


Figure 8 - Age distribution across the survey pool

By analysing the number of dependents, as shown in Figure 9, more than half of the respondents have no one under their responsibility (58%), followed by 25% with 1-2, and 3-4 counting for 17%.

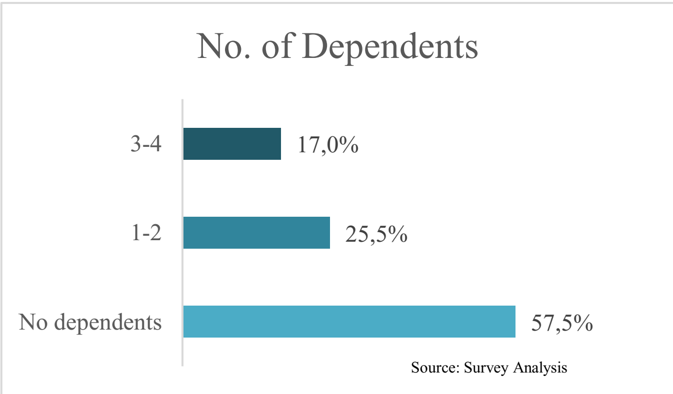


Figure 9 - Number of dependents distribution across the survey pool

In terms of education, as shown in Figure 10, the vast majority of the sample (58 percent) has a bachelor's degree, followed by a master's degree (34 percent), 12th (7 percent), and other (1 percent).

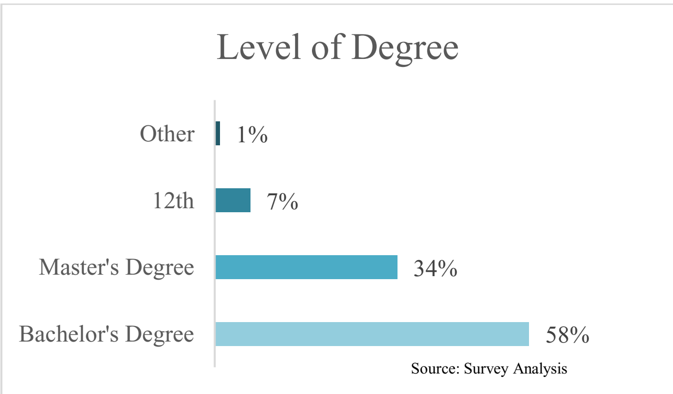


Figure 10 - Level of Degree distribution across the survey pool

Regarding the personal occupation, as shown in Figure 11, the majority of the sample (65 percent) is employed full time, with students coming in second (22 percent), followed by employed part-time and working students with almost the same percentage, respectively, 6% and 5%.

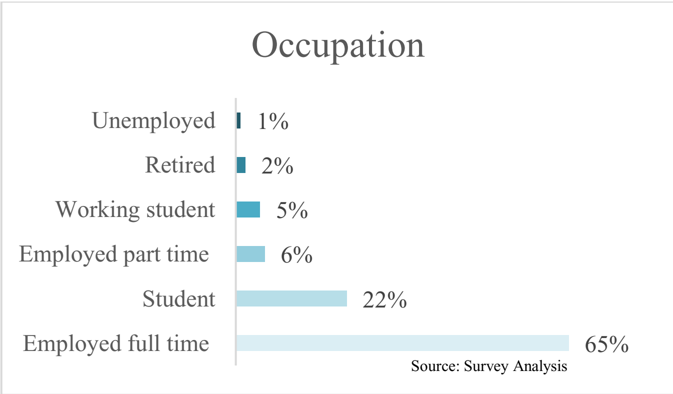


Figure 11 - Occupation distribution across the survey pool

In terms of the level of annual net income, the dominating annual net income range is 20,000€ to 35,000€, with 10,000€ to 20,000€ and < 10,000€ being with almost the same percentage, respectively 21% and 20%.

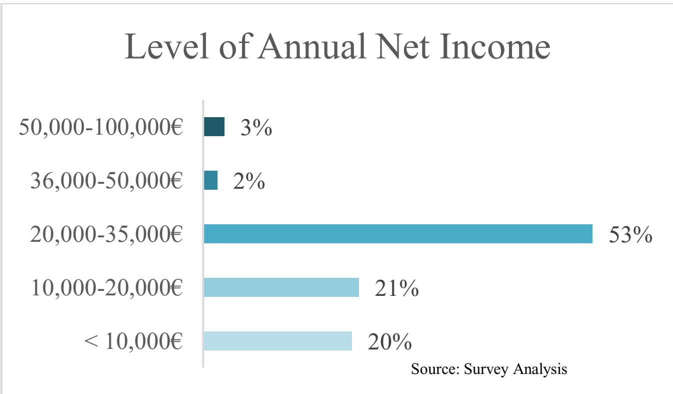


Figure 12 - Level of Annual Net Income distribution across the survey pool

4.1.3 Geographic Analysis – Sample Population and Key findings

Given that the original objective of this project was to open points of sale in the centre of Lisbon, the respondents' housing council was questioned. However, despite Lisbon's supremacy (67%), a total of 13 Portuguese districts were touched (33 percent). Also, in terms of respondents' country, 99 percent was from Portugal, and 1 percent from Sweden, represented in Figure 14.

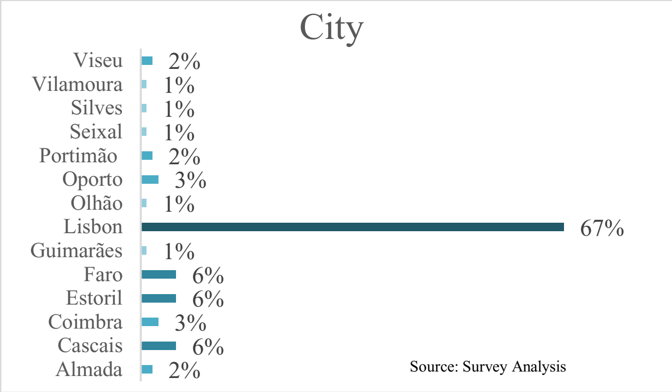


Figure 13 - Respondents' housing council distribution

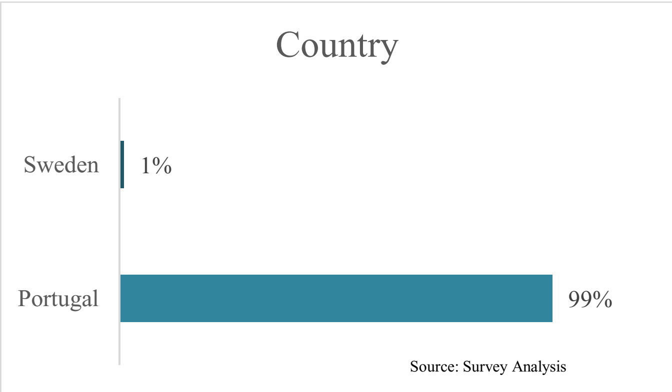


Figure 14 - Respondents' Country distribution

4.1.4 Psychographic Analysis – Sample Population and Key findings

Some psychographic characteristics were evaluated to understand potential consumers' behaviour and make some conclusions from these data: lifestyle; the number of times eating out and the money spent on each meal; the primary reasons for dining out; and places where generally eat.

Firstly, regarding the lifestyle respondents identified themselves more with, 58% of the respondents identified themselves with a healthy diet lifestyle, followed by traveller addiction and frequent physical exercise with almost the same percentage, 17% and 16%.

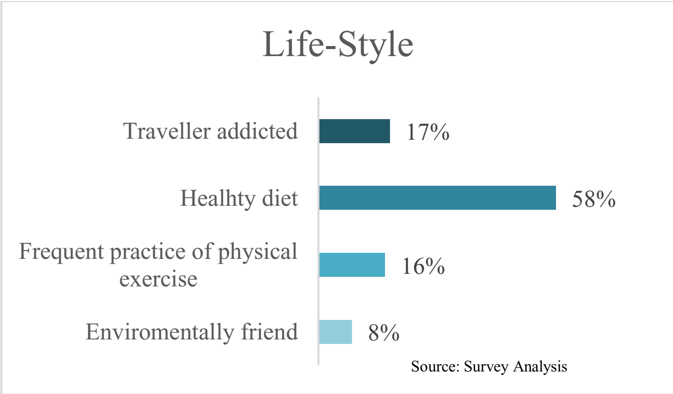


Figure 15 - Types of Lifestyle distribution across the survey pool

Regarding the usual places where respondents eat out, the distribution is relatively uniform, with 45% eating close to the workplace, 33% around the city, and the least chosen place being at home (21%).

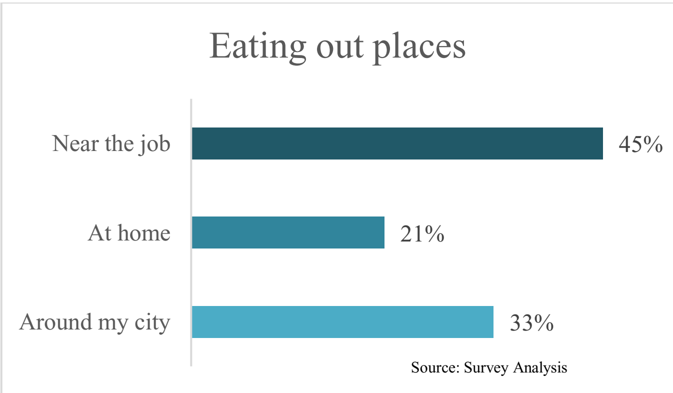


Figure 16 - Eating out places distribution across the survey pool

Of these people, as stated in Figure 17, only 3% are used to eating out 7 or 6 times during the week, 10% are used to eating out 5 or 4 times, compared to the 72% people who claim that are used to eat out 2 to 3 times, and 11 who eat one or doesn't eat out during the week. Concerning these meals' price, on average people spend 10,5€ per meal.

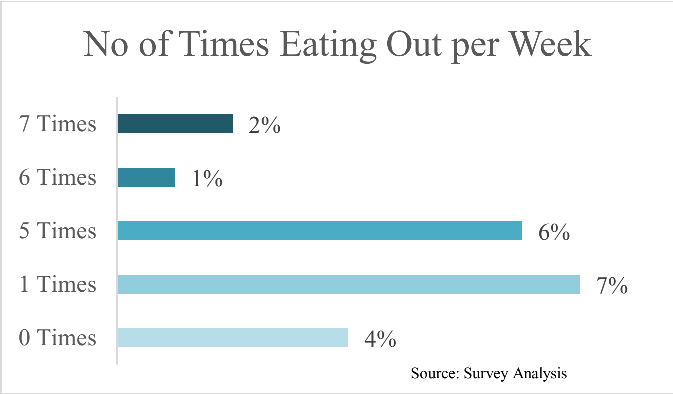


Figure 17 - No. of Times Eating Out during the week distribution across the survey pool

By analysing the different reasons why people eat out, as presented in the following figure, it may be inferred that, like eating-out places, the reasons for individuals to eat out are uniformly dispersed, as the percentage for each reason is nearly the same. Thus, for example, social Meetings and Work Reasons were the two most commonly reported reasons, with 36 percent and 25 percent, respectively, while convenience and gastronomic experience were the two least widely mentioned, with 18 and 21 percent, respectively.

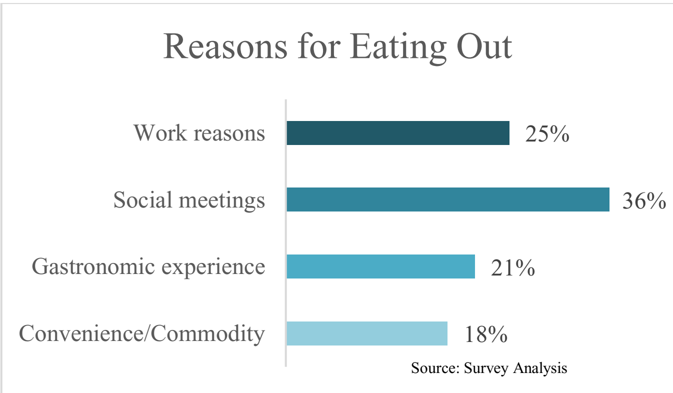


Figure 18 - Reasons for Eating Out during the week distribution across the survey pool

When it comes to dining out similar options, three alternatives stand out above the rest: eating in a restaurant, takeaway, and Uber Eats. Fast food and frozen meals were the least popular choices.

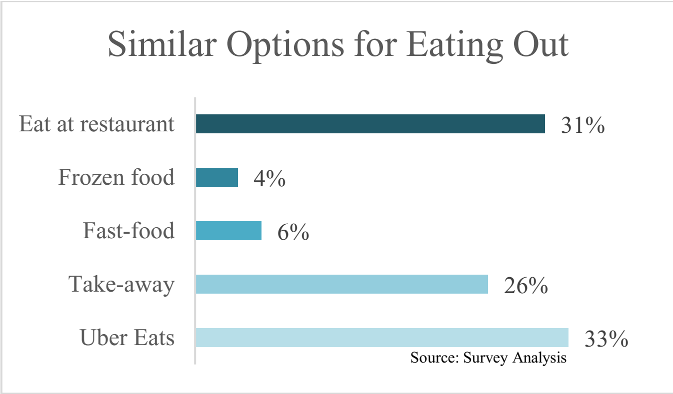


Figure 19- Similar Options for Eating Out during the week distribution across the survey pool

4.1.5 Product Features – Multiple Linear Regression Analysis

Throughout the questionnaire, several questions were asked to establish the significance level of different product features to define the product features most wanted by potential users. Thus, various questions were asked to determine how essential it would be for you to have a specific feature, product, or service on a scale of 1 to 7. One corresponds to not at all important, and seven corresponds to extremely important. Following that, a multiple linear regression was done on this data to predict the level of satisfaction, based on numerous independent variables defined, namely:

- Level of importance given for having a home delivery system;
- Level of importance given for having a point-of-sales 100% cashierless;
- Level of importance given for having point-of-sales around the city
- Level of importance given for having a monthly subscription, with a special price for this package;
- Level of importance given for having vegan menus;
- Level of importance given for having children's menus;
- Level of importance given for having seasonal menus;
- Level of importance given for having multicultural menus;
- Level of importance given for having desserts menus;

- Level of importance given for having personalised menus produced directly according to one dietary restriction.

and a dependent variable:

- Net Promoter Score (NPS).

Thus, based on these variables, the model is as follows:

$$\mathbf{NPS = \beta0 + \beta1 * Home\ delivery\ system + \beta2 * Shops\ without\ human\ interface + \beta3 * Point\ of\ sales\ around\ the\ city\ centers + \beta4 * Monthly\ subscription + \beta5 * Vegan\ menus + \beta6 * Children's\ menus + \beta7 * Seasonal\ menus + \beta8 * Multicultural\ menus + \beta9 * Dessert\ menus + \beta10 * Personalised\ menus}$$

The following figures aim at understanding the significance and robustness of the model in order to be able to draw statistically significant conclusions from this model.

MODEL SUMMARY

Model	*Multiple R*	*R Square*	*Adjusted R Square*	*Standard Error*
1	0,5493	0,3017	0,2652	1,5708

Figure 20 - Multiple Linear Regression Model Summary (Product features as predicting variables on NPS). Source: Survey Analysis

COEFFICIENTS

	Coefficients	*Standard Error*	*t Stat*	*P-value*
Intercept	4,7018	0,6414	7,3304	6,319E-12
Home delivery system (HYS)	0,5329	0,1107	4,8162	2,971E-06
Shops without human interface (SHI)	-0,0518	0,0942	-0,5502	0,5828
Point-of-sales around city centers (PS)	-0,1463	0,2155	-0,6788	0,4981
Monthly subscription (MS)	0,1301	0,1562	0,8329	0,4059
Vegan menus (VM)	-0,3060	0,0917	-3,3374	0,0010

Children's menus (CM)	-0,3213	0,1409	-2,2802	0,0237
Seasonal menus (SM)	-0,0288	0,0892	-0,3229	0,7471
Multicultural menus (MM)	0,3444	0,1123	3,0678	0,0025
Desserts menus (DM)	-0,1331	0,0937	-1,4210	0,1570
Personalized menus (PM)	-0,1586	0,0835	-1,8991	0,0591

Figure 21 - Regression analysis (Product features as predicting variables on NPS). Source: Survey Analysis

RELIABILITY STATISTICS

Cronbach's alpha coefficient	*No. of items*
0,6047	10

Figure 22 – Reliability Statistics Model (Cronbach's alpha coefficient). Source: Survey Analysis

As can be observed from the coefficient values and, more specifically, the adjusted R2, it has a value of 26,52%, indicating that 26,52% of the variation in the dependent variable is explained by the explanatory variables (Cameron & Windmeijer, 1997). Although it is not a considerable value, it is critical to recognize that this model is researching human behaviour. Furthermore, because this was the first model created for a product that had not yet been tested, there were limitless options for the features of this product, making it difficult to get the features of this product that best explained the inclination to acquire this product accurately. Finally, given the relatively small sample size (206 participants) and the fact that the initial model was produced based on the survey, there was no way to iteratively improve it compared to the data obtained from model 1.

The Cronbach alpha test was used to determine whether the questions used to assess willingness to recommend the product to a friend were consistent and adjusted with one another and presume that the findings were trustworthy. According to the rule of thumb, a Cronbach's alpha coefficient of 0,6047 shows doubtful consistency and correlation between the many elements questioned, being the relationship between the targeted variables questionable (Gliem & Gliem, 2003). Given that Cronbach's alpha is a measure of internal consistency, a potential approach to raising the value of Cronbach's alpha would be to run a correlation matrix and find the variables that have a low correlation between them. Then, these variables should be removed, and the recalculated Cronbach's alpha should be higher (Gliem & Gliem, 2003).

VARIABLES ANALYSIS

After applying multiple linear regression, the value of the coefficients is as follows:

$$\mathbf{NPS = 4,70 + 0,53 * HYS + (-0,05) * SHI + (-0,14) * PS + 0,13 * MS + (-0,31) * VM + (-0,32) * CM + (-0,03) * SM + 0,34 * MM + (-0,13) * DM + (-0,16) * PM}$$

The significant variables, i.e., with a p-value of 5% or lower, after achieving the final mode were:

- Home delivery system, with a positive impact;
- Vegan Menus, with a negative impact;
- Children's Menus, with a negative impact;
- Multicultural Menus, with a negative impact.

About the impact of the different variables on the level of consumer satisfaction, the following variables harmed the level of satisfaction:

- **Shops without human interface**. According to NEC Technical Journal and Marketing Review St. Gallen, cashierless stores will become the shops of the future because, despite their expensive cost, they allow for a substantial decrease in labour costs and allow customers to carry out a significantly quicker purchasing process (Schögel & Lienhard, 2020; Yamasaki et al., 2020). Given this information, and considering that pandemic has mainly contributed to the business digitalisation, giving less emphasis on social and physical interaction, there is no reasonable explanation for this figure. Given so, this coefficient might have been even more negative before the COVID-19 pandemic;
- **Point-of-sales around the city centres.** According to Moordor Intelligence, consumers are opting for convenience, as stated in the chapter HoReCa Channel (Moordor Intelligence, 2017). From the author's perspective, this occurrence bears the most profound investigation because one of the most significant features of this product is its practicality and convenience. As a result, having several points of sale across the city will allow users to purchase their meals from anywhere and at any time of day. It will

be necessary to enlarge the sample size and describe in further depth what these point-of-sales would be, demonstrating the actual benefits;

- **Vegan Menus**. According to an Ipsos Mori study done in 2018, 3% of the world's population is vegan, whereas 5% of the population is vegetarian (Bailey, 2018). As so, this coefficient might be negative due to the fact that a large size of the population (although random) does not identify with this diet style;

- **Children's Menus**. This can be explained by the fact that more than 57% of respondents do not have dependents (survey data), which makes food for children not a crucial point;

- **Seasonal Menus**. After some thought, the author concludes that the message regarding seasonal menus was not well communicated. Seasonal menus aim to let consumers only eat meals made from seasonal ingredients rather than processed and greenhouse foods. As a result, it is understandable that this number has no beneficial influence on the outcome;

- **Desserts Menus.** Given that this product is for vacuum packaging, it is understood and expected that the desserts would not be perceived as boosting potential clients' happiness. Also, as advised by the Key Player 3 (KP3), "vacuum-sealing desserts would compress the air out and would smash everything inside the vacuum-bag";

- **Personalised Menus.** As previously mentioned by the author, the message about personalised menus was not adequately explained because the goal of this function was to provide consumers with the ability to eat food that was tailored to their own needs, tastes, and health restrictions. Consequently, it is reasonable that this value has no favourable impact on the outcome.

4.2 Financial Analysis – Sales Estimates

4.2.1 TAM-SAM-SOM Analysis

In 2020, Portugal's whole food and beverage market was assessed at €5,850 billion. With a value of €178,9 million for the Portuguese confection of ready meals for the takeaway market, the TAM (total addressable market) represents around 3.06 % of the TAM for the food and beverage industry (Banco de Portugal, 2020). To properly analyse this project's serviceable available market (SAM), we will assume that the firm's sales will be concentrated in the Lisbon area, which represents 44.0% of national income linked to this project (Banco de Portugal, 2020). With these assumptions, we can estimate the SAM for this project to be around €78,72 million. Lastly, we'll use data from the survey to assess the company's serviceable obtainable market (SOM). As so, we will take as a measure the proportion of persons who answered the question, "On a scale from 0-10, how likely would you be to recommend this product or service to a friend or colleague if it were in the marketplace today?", with a value of 10, which represents 8%. As a small start-up, we need to estimate an even more conservative figure, employing 10% of this number, making the SOM equal to 0,8% of the SAM value (78,72 million * 0,8% = 3,15 million €). ,

As a result of several conclusions drawn from a lack of statistical data, we may estimate the company's SOM to be roughly 629,760€ (0,8 % * 78,72 million €). To evaluate financial sustainability, this data will be used in a trustworthy manner, inevitably to improve these predictions with additional factual data.

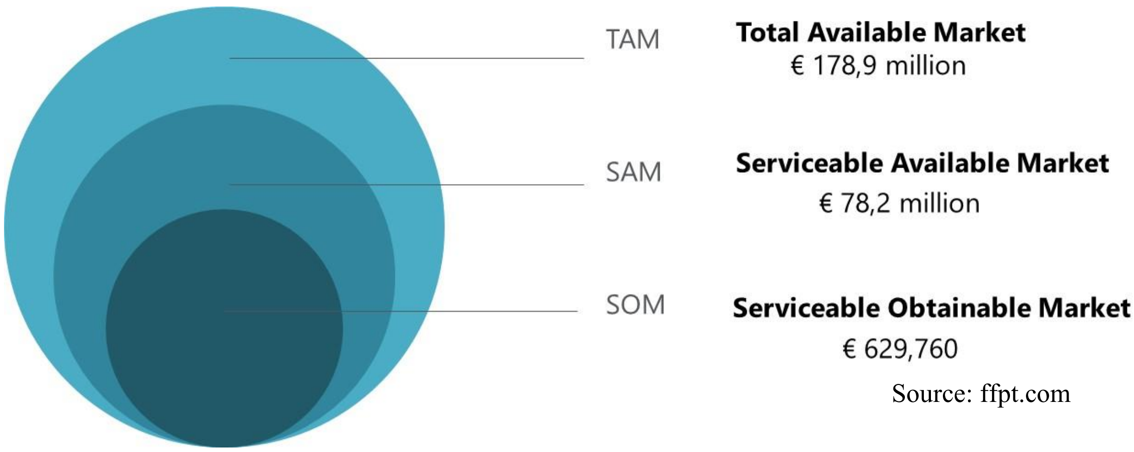


Figure 23 - Approximate TAM, SAM, SOM for the company in development

4.2.2 Financial Analysis – Costs Estimate

In order to determine the viability of this company, it is essential to estimate the level of income as the size of expenditures. From now on, all the data will be presented in Euros since it is the national currency in Portugal. Besides this, the tax rates applied will also be applied in Portugal. The first year of consideration was 2022~~.~~ The following tax rates were taken into account:

- Value Added Tax (VAT) is levied at a rate of 13% on restaurant sales and services (AHRESP, 2020);

- 1,5% of municipal tax (*Taxa de Derrama Municipal*) in Lisbon (Câmara Municipal de Lisboa, 2021);
- Income Tax Rate of 21% (*IRC, Imposto sobre o Rendimento de Pessoas Coletivas*) (PwC, 2015).

4.2.2.1 Costs Estimate – CAPEX

Since this project is still in its early stages, it is critical to estimate the amount of CAPEX. It is necessary to determine how much this firm will require at the start of the project to buy and maintain tangible assets such as property (point-of-sales), plants; technology (vacuum-sealed technology); and equipment. All the values described below were collected on publicly available information descriptively discussed, and their estimation was based on the insights from Key Player 3 and 4. The following figure shows the different capital expenditures, broken down by type and value.

Capital Expenditure Type	***Value (€)***
Rent of 1 point-of-sale, in the city centre of Lisbon (3 rents in advance and one security deposit), with a storeroom in which food production will be done.	2300€ * 4
6 Refrigerators to store the vacuum-sealed food	1100€*6
3 Sous Vide kitchen machine	153€*3
Industrial Kitchen	12,000€
2 Blast chiller	2215€*2
License *Empresa na Hora (ePortugal)*[1]	360€
2 Industrial vacuum packaging machine	950€ * 2
Branding and shop-online page (see Figure 29)	4,940 €
Total	**39,889 €**

Source: The author

Figure 24 - Capital Expenditure Costs

<u>RENT OF 1 POINT-OF-SALE</u>

[1] Source : [Empresa na Hora | Justiça.gov.pt (justiça.gov.pt)]

More concretely, regarding the point-of-sale chosen, the rationale was based on having a space with smoke extraction, with a minimum size between 50 and 100 square metres, as advised by Key Player 4. By analysing Imovirtual, an online platform where it is possible to buy, rent and sell houses, it was possible to gather some spaces with the indicated conditions, namely a space in Alameda, an area considered central with many transport accesses. (LOJA NA ALAMEDA - LISBOA | Imovirtual, n.d.). This space asked for a monthly rent of 2,300€, and at the beginning of the contract, three rents in advance and one security deposit.

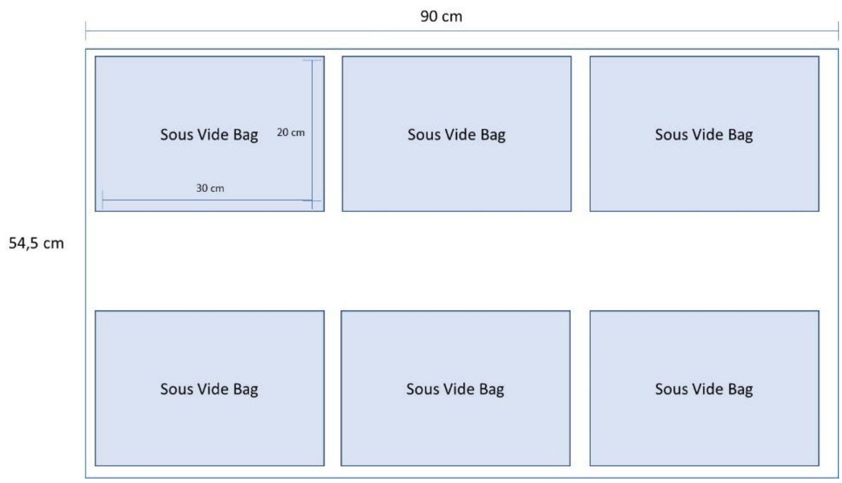
REFRIGERATORS

Regarding refrigerators, numerous options were identified in different online marketplaces, mainly Maxima Kitchen Equipment (*Deluxe Bar Frigorífico / Refrigerador Do Frasco BCU 1 - Maxima Kitchen Equipment*, n.d.), based on the advice given by Key Player 2 that a showcase refrigerator should hold at least 250 litres (see Figure 26). Furthermore, as the Anova sous vide bags are 20x30cm in size (see Figure 25), the shelves must be at least 40cm wide to accommodate at least two meals per shelf (without stacking). As presented in Figure 27 and Figure 28, since this refrigerator has W90cm x D54,5cm, with four adjustable stainless steel grids, it would be stored 36 meals in the same refrigerator. Given so, buying six refrigerators would allow having at the same time 216 meals.

Figure 25 - Example of a vacuum-sealed bag from Anova Source: Sous Vide Anova

Source: Maxima Kitchen Equipment

Figure 26 - Example of Refrigerator with four selves from Maxima Kitchen Equipment



Source: The author

Figure 27 - Example of a shelf with the respective dimensions, incorporating 6 vacuum-sealed bags

Source: The author/ Maxima Kitchen Equipment

Figure 28 - Example of the Refrigerator with six shelves, containing some vacuum-sealed meals

Industrial Kitchen And Sous Vide

Regarding the installation of the industrial kitchen, the estimation of the 12,000€ came from Key Player 2, who states that, on average, an industrial kitchen is available for that price. According to Vesta Precision, with one *sous-vide* machine, it is possible to cook 30 to 40 meals per machine, with an average time of 12 hours (*How Much Food Can You Cook with a Sous Vide?*, n.d.; Roca & Brugués, 2014). As so, in order to be able to reach the 216 meals that fits in the 6 refrigerators, it would need to have approximately 8 sous vide machines (216 meals / (40*2 turns) meals = 3 machines needed), with a cost of 153€ each (*Anova Precision Cooker WiFi - Anova Culinary*, n.d.). Dropping the temperature of the sous-vide bags as quickly as possible is crucial, is crucial to extend the meals’ shelf life as well as preserve their flavours (Roca & Brugués, 2014). According to NETFRIO, the blast chiller model takes around 90 minutes to take the food from 70ºC to 3ºC (*Abatedor Temperatura Mercatus 5 Tabuleiros GN 1/1 | Netfrio.Com*, n.d.). Also, it has five shelves to store the food for that 90 minutes. As so, two blast chillers, with a unit price of 2215 €, must be bought to reduce the meals' temperature after being cooked. Furthermore, in order to seal the vacuum-sealed bags, two industrial vacuum packaging machines must be purchased (advised by the Key Player 2 (*Máquina de Embalar a Vácuo - Câmara - 1000 W - 26 Cm | Expondo.Pt*, n.d.), with a unit price of 950 €.

BRANDING AND ONLINE-SHOPPING PAGE

Given that the firm is still in its early stages, a strong branding approach will be required to develop its consumer base. Furthermore, because an online store will be one of the primary sales channels, it will be needed to establish and manage this area regularly to keep the page updated. As a result, a budget was sought from Lxmax, a Portuguese design company, which presented the following budget:

Services provided	***Value (€)***
Identity design and creation: • Research and development of concept; • Drafting of sketches; • Lettering, graphics and colours; • Presentation of 2 proposals.	300 €
Creation and graphic design of the point-of-sale: • Development of the design concept; • Lettering, graphics and colours. • Material (Vinyl)	2,650 €
Website development: • Language: English and Portuguese • Design; • Creation of the layout «user friendly», 100% customized; • Creation of the shop online; • Backoffice tools, with the possibility of insertion, removal and editing of content; • Responsive Design, with a dynamic layout, adapted to new technologies (Desktop, Tablets and Smartphone).	1,920 € + 70 € annually

Services provided	*Value (€)*
• Google SEO Optimization, Website optimization for Google search engine: o Lxmax delivers the prepared website so that SEO techniques are applied. • Accommodation of the site (annual value of 70 €)	
Total	4,940 €

Figure 29 – Drill-down of the budget from Lxmax regarding the branding and the development of the online page Source: The author

4.2.2.2 Costs Estimate – COGS, Staff, External Supplies and Services Expenditure

In addition to these expenditures, it is essential to include the cost of goods sold (COGS), as money must be spent on procuring and preparing the various meals. Furthermore, the expenditure incurred on human resources and external supplies and services is critical to measure to create a balance sheet.

Expenditure Type	*Value (€, Monthly)*
Electricity (see Figure 31)	815,18€
Water	150€[2]
Communications	50€[3]
Insurances	125€[3]
Accounting	200€[3]
Wages (4 cookers and 1 replenisher)	1,304€[4] * 4 + 1,116€[5]
Marketing Costs	200€[3]

[2] According to the Key Player 4, considering 3000 meals served per month, he spent 150€ per month in water.
[3] All these values were stated by the Key Player 4.
[4] Assuming a monthly salary of 900€, adding the cost spent on Social Security (23.75%), on the Compensation Fund (9€ per month), on accident insurance (1% of the total salary) and finally on food allowance (167.86€).
[5] Assuming a monthly salary of 750€, adding the cost spent on Social Security (23.75%), on the Compensation Fund (7,5€ per month), on accident insurance (1% of the total salary) and finally on food allowance (167.86€).

Expenditure Type	***Value (€, Monthly)***
Total	7,872 €

Figure 30 - COGS, Staff, External Supplies and Services Expenditure List Source: The author

In terms of vacuum bags, the previously specified Anova vacuum bags will be employed. Because a pack of 50 bags costs €25,49, the unit price for each bag is 0,51€. When calculating the value of electricity, take into account eight sous vide machines (24 hours), 2 Industrial vacuum packaging machines (12 hours), 2 Blast chillers (12 hours), an industrial kitchen [6](12 hours), and freezers (24 hours), among other factors. Having stated that, and taking the Price of kWh at EDP into account, the minimum monthly energy cost would be 815,18€. As stated by Key Player 4, his maximum monthly electricity was 450€. However, for safety, the value that will be considered is the one calculated in Figure 31.

Machine	***Power***	***Hours***	***Price***
3 Sous Vide kitchen machine	750 W	24h	237,34 €
6 Refrigerators to store the vacuum-sealed food	560 W	24h	354,43 €
Industrial Kitchen	1000 W[2]	12h	52,74€
2 Blast chiller	618 W	12h	65,19 €
2 Industrial vacuum packaging machines	1000 W	12h	105,48 €
Total per month			815,18€

Source: The author

Figure 31 - Calculation of the monthly electricity bill, considering the various equipment.

The values below were fully computed using inputs given by Key Player 4. According to Key Player 4, considering 3000 meals per month, the average cost per meal is 3,90 euros. Regarding the price per meal (on average), it was calculated on the basis of the questionnaire sent to prospective buyers. Based on the question "How much would you pay for these meals, per person? ", filtering only those respondents who answered "Definitely Would" and "Probably Would", in the question “How likely would you be to purchase these meals if it were available

[6] According to the Key Player 1, it could be considered an industrial kitchen with 1000W as Power.

in the market today?". It was estimated that the average price each person would give for a meal was 9.5€.

Product Costs – on average	*Value (€)*
Vacuum-sealed bag	0,51€ per bag
Average money spent per dish	3,90€ per meal
Total Cost per meal	4,41€
Price per meal (on average)	9,5€
COGS on %Rev	4,41€/(9,5€/1,13) = 52,5%

Source: The author

Figure 32 - COGS, Staff, External Supplies and Services Expenditure List

4.2.3 Financial Analysis – Income Statement Estimate

Since there are no key factors to consider on the market shares of this new product, a more precise demand calculation must be done in the future. Even though the SOM value will be utilised as the expected sales benchmark, referring to the share of SAM that this product may collect. The anticipated value was 629,760 euros, which we would use 50% of this value for the first year (to apply the prudent principle), with an increase of 15% in the first year and 20% in the second year, over three years (GOCARDLESS, 2020).

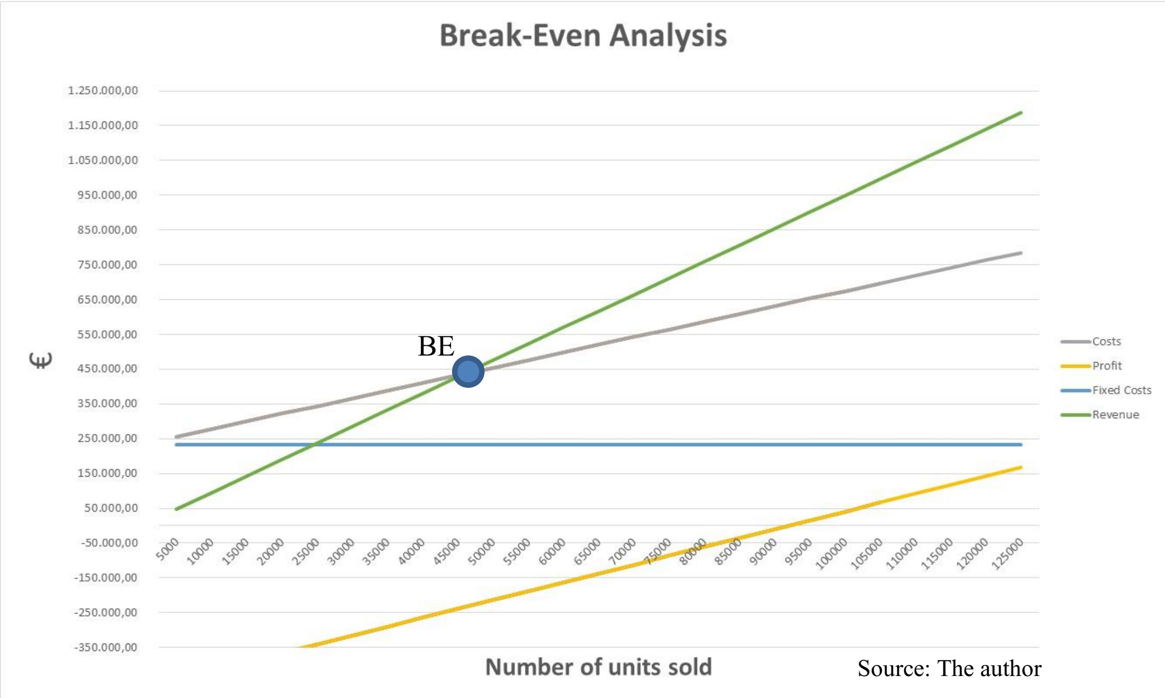
EUR (€)	*2022*	*2023*	*2024*
Product Revenues	315,000 €	362,250 €	434,700 €
Total Revenues	315,000 €	362,250 €	434,700 €
COGS	165,375 €	190,181 €	228,218 €
Gross Profit	149,625 €	172,069 €	206,483 €
Human Resources (HR)	88,648 €	97,513 €	107,264 €
External Supplies and Services	18.480 €	18.480 €	18.480 €
Space Rental	27.600 €	27.600 €	27.600 €
Capital Expenditure	39,889 €	-	-
Marketing Costs	18,900 €	21,735 €	26,082 €

EUR (€)	*2022*	*2023*	*2024*
EBITDA	(43,892) €	6,741 €	27,056 €
Depreciation and Amortization	-	-	-
EBIT	(43,892) €	6,741 €	27,056 €
Interest Payments	-	-	-
EBT	(43,892) €	6,741 €	27,056 €
Tax	-	1,517 €	5,142 €
Net Income	**(43,892) €**	**5,224 €**	**20,967 €**

Figure 33 - Income Statement from the year 2022 until 2024 Source: The author

The calculation of the preceding components leads to the final income statement, which demonstrates that the net income of this product project turns positive as early as the second year. It can be seen that the COGS account for roughly 45 percent of the revenues on average, which is greater than the average for restaurants (binwise, n.d.). The HR costs are four cooks and one replenisher, each with a salary of 900€ and 750€ in the first year, with a 10% rise in the following years. Aaron Allen Global Restaurants Consulting claimed that a restaurant business should spend 3% to 6% of sales on marketing (Aaron Allen, 2020). Given so, the marketing costs were calculated by multiplying 6% of the total revenues. The external supply and services values were determined using the values described in chapter 4.2.2.2. The monthly rent is based on a value of 2300 euros per month, 12 months per year, and the capital expenditure is based on the prior calculation, which is explained in the chapter ***Costs Estimate – CAPEX***. No interest payments or depreciation were considered, and the representative value of the taxes was calculated standing on the IRC of 21% with the extra 1,5% of the municipal tax.

4.2.4 Financial Analysis – Break-Even



Source: The author

Figure 34 - Break-Even Graphic Analysis

Considering the expenses and sales prices, the break-even analysis needs to be performed to illustrate which sales volume is necessary to accomplish break-even. For this, it was estimated that an annual sales volume of 45,956 units would be enough to pay all expenditures associated with the product. As a result, the development of this project becomes profitable after selling approximately 3,830 pieces each month. Assuming three meals per week, this equates to 320 store visitors every month on average. When a monthly income of 36,332 € is reached, the break-even point is reached.

Annually sales volume	**Monthly sales volume**	***Number of customers***	***Break-Even monthly income***
45,956 units	3,830 units	320 customers	36,332 €

Figure 35 – Break-Even Analysis Source: The author

5. Conclusion

Since all of the results for understanding whether creating this project becomes a business opportunity have been covered, this section of the dissertation gives a brief review of the project's significant findings.

5.1 Research Questions

Three research topics were generated at the start of the dissertation and will be answered in these sections.

FIRST RESEARCH QUESTION

What are the main characteristics and challenges of the HoReCa (Hotels, restaurants and Coffee-shops) channel in Portugal?

This RQ was answered considering input from key stakeholders as well as documentation pertaining to the comprehensive sector study. As a result, it was feasible to analyse these sources to assess the HoReCa industry regarding potential developments, prominent trends, and financial key indicators. According to the documents given by Banco de Portugal, the HoReCa Channel has experienced one of the most challenging periods in recent years, as it is possible to understand by comparing turnover data between 2019 (before covid) and 2020 (during covid). Understandably, the sector has lost more than 3 billion euros in turnover, primarily due to customer loss (caused by the pandemic). Furthermore, regarding ROE data, this value shifted from positive (31,65%) to negative (-45,8%.), implying that the majority of the firms in this sector suffered significant losses during this time.

After carefully analysing the responses provided by the experts during their interviews, it is feasible to conclude unequivocally that the challenges mentioned in the literature are concrete and real. Food production in the 21st century must be nutritionally balanced, environmentally sustainable, and culturally appropriate to each location and adapt to an increasingly heterogeneous population. Nowadays, the consumer need for this sector is not merely about sanitation, health, and tastes, but rather connected to the nutritional quality of the meals. The digitalisation and customisation of the HoReCa business are critical for companies that meet today's client, who expects real-time and personalised services involving data interconnection. The client of today is more knowledgeable and connected than a decade ago while is continuously looking for a unique and consistently self-improving experience. Also, sustainability was tremendously spoken by the interviewed, stating that running an environmentally friendly business and reducing the ecological footprint and preserving natural resources may set the firm apart from rivals and expand its customer base with who want to acquire products and services from an ecologically friendly business.

SECOND RESEARCH QUESTION

What features have the most importance and value for potential buyers?

In order to understand which features have the most importance and value for potential buyers, a multiple regression model was done, with the dependent variable given by the propensity level to buy the product (NPS), and the independent variables were mainly related to the features of the product. As a result, the predicted model has an adjusted R2 of 26,52%, which is explained by being the first model created for a product that had not yet been tested. In order to presume that the findings were trustworthy, the Cronbach alpha test was assessed, with a coefficient of 0,6047 showing doubtful consistency and correlation between the many elements questioned. Regarding the different variables, there were only four variables with a p-value of 5% or lower, i.e., significant variables: **having a home delivery system**; having **vegan**, for **children** and **multicultural** menus available. Only the home delivery method has a positive effect on the likelihood to buy the product, allowing it to claim that it is the feature that respondents value the most, more specifically, the one that is statistically significant and has a positive impact on NPV.

THIRD RESEARCH QUESTION

Would be vacuum-sealed self-service meals financially sustainable in the Portuguese market

To evaluate the financial sustainability of this project, a TAM-SAM-SOM analysis was performed, and it was assumed that 50% of the SOM’s (626,760 €) would correspond to the value of the 1st year's revenues. The most diversified costs were assessed in order to develop a balance sheet and predict when the firm would become financially viable, namely the CAPEX, COGS, Staff, Space Rental, External Supplies and Services Expenditure, being able to estimate a negative net income for the 1st, - 43,892 €, becoming a positive net income from and 2nd years onwards, with a value of 5,224 €. Based on the break-even analysis, it was predicted that an annual sales volume of 45,956 units would cover all product expenses, which equates to 3,830 pieces each month (assuming three meals each week, it is an average of 320 shop visitors per month). As so, the break-even point is accomplished when a monthly revenue of 36,332 € is obtained.

Given so, it is possible to state that this project is potentially viable and will be financially sustainable after the second year, making it feasible to determine that this project should be pursued further.

5.2 Limitations and Future Research

We are currently living in the fastest days in our society's history. The progress of technology, the breaking down of scientific boundaries, and the expanding globalisation make today's world quicker, more advanced, and far more competitive than the one we saw yesterday, yet far less than tomorrow's.

On top of a spirited atmosphere, our planet had to overcome a pandemic that has been active for more than 21 months. Despite the repercussions for millions of people, it presented fresh prospects for a new world. A new range of possibilities, advancements, forecasts, and adaptions have been created. Therefore, it is critical not to look back and to seize the opportunities created by this intense episode, namely: digitalisation of business, the importance of health and well-being, spreads, interculturality and a world without borders, which is becoming increasingly closer, both culturally and geographically.

As stated in Chapter 2, the disruptive advancement of wellness is one of the most potential transitions in sectors. This industry is undergoing a massive digital transformation and is also seeing enormous structural acclaim as people are more worried about their wellness and personal health. Simultaneously, the HoReCa industry will face a disruptive change. The pandemic has expedited the digitalisation of these two sectors, making this transformation necessary. All organisations who remain trapped in the past, refusing to enter this new world of digital, customizability, will lose their path in trade and fall behind in terms of competitiveness.

Several conclusions might be reached regarding the creation of this product. Countless times during informal talks with various persons working in this industry, people were interested in the business, in the method, and most significantly in learning how the food was cooked utilising the *sous-vide* technique. Thus, to allow a higher client engagement, it will be necessary to adopt a testing plan throughout the city of Lisbon at the time of beginning to capture potential consumers with a sample.

Regarding the different dishes to be sold, the strategy would allow customers to eat ethnic cuisine without leaving home. Thus, dishes such as prawn curry, pad-Thai, paella, T-Bone, Italian pasta, among others, could be part of the menu, being represented in Appendix 3 – Menu Example.

Given that the established model was not the best in statistical significance, the author advises that consolidated research with a substantially bigger sample size be developed. In addition, it is recommended that more intense sharing take place through social networks, e-mails, and co-workers, among other channels.

Regarding financial sustainability, regardless of the income statement given, it is critical to estimate all probable expenditures with reasonable accuracy and reliability, enabling the creation of an income statement capable of assisting in forecasting various economic scenarios. In terms of the sales projection, it should be noted that multiple assumptions were made. To accurately estimate the business's sustainability, other financial criteria, such as the method of financing, potential expansions to other cities and countries, and so on, must be studied.

Despite the constraints given, the development of this project will allow it to satisfy the demands of a sizable portion of the Portuguese people. Furthermore, establishing this business will help the Portuguese gain time to take care of themselves, have more leisure time, and consume nutritious, fresh, and multicultural meals.

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7. Appendices

7.1 Appendix 1 – Coding Tree Analysis

Theme	Category	Code	KP1	KP2	KP3	KP4
Major opportunities in the HoReCa channel	Strategies for the Success	Customization	"The power of consumer-specific information is growing, as it allows to create solutions customized to each customer."			"Being able to have products adjusted to each client exponentially increases the demand for our services/products."
		Sustainability	"It is a matter of urgency because, on the one hand, we help the planet, and on the other, we attract more customers."	"We all have an important role to play in adopting an environmentally friendly lifestyle."	"It is an extraordinary way to attract customers."	"It has a duality, given that we have this mission to apply an environmentally friendly strategy, as we serve a larger customer cluster."
	Interface with the digital world	Digital Solutions	"We all know the key role that technology plays in increasing the efficiency of any production."		"It is important to implement data management technologies so that we know our customers."	
		Social media	"The emphasis on social media involvement cannot be underestimated."	"Social media involvement is becoming increasingly crucial and should be accounted for as a significant expenditure."	"Any company that is not active on social media today will be outdated in the next five years."	"It is currently considered one of the pillars of business development."
Major opportunities in the Wellness and Health Sector	Strategies for the Success	Tracking-data environment		"By tracking customer data, it allows creating solutions customized to each customer."	"Although it is still in its early stages, it will be critical in designing solutions that are personalized to our clients."	
		Environmentally-friendly services and products		"Although it is complex for developing this type of	"It is an extraordinary way to attract customers."	

Theme	Category	Code	KP1	KP2	KP3	KP4
				products in the health sector, it is a global need.”		
	Interface with the digital world	Digital Solutions			“Increased service efficiency is aided by providing technology-enabled services.”	
		Social media engagement		“Social media involvement is becoming increasingly crucial and should be accounted for as a significant expenditure.”	“Any company that is not active on social media today will be outdated in the next five years.”	
Favourite Product Features	Features	Home delivery system		“Given that people today live a very busy life, it would be a useful feature.”		“Useful and relevant to your target customers' everyday lives.”
		Point-of-sales 100% cashierless	“While not required, it is a technique to cut long-term expenditures and attract customers.”	“It is an extraordinary way to reduce costs.”	“Although it decreases employment, it is a cost-cutting measure.”	
		Personalised menus	“It is a way to attract more customers.”		“Although it might be costly and difficult to cater to all clients, it can be a great method to attract new customers.”	“Because of the huge number of individuals who have food intolerances at the moment, this feature is critical.”
		Monthly subscription	“Essential”	“Good way to get more revenue”	“Cash points are always good ways to get more revenue.”	

7.2 Appendix 2 – Survey

Hello,

Thank you for taking the time to open the link, it is already a big step, and it will help me if you go forward with answering the few following questions. Please note that all responses will be anonymous.

I am a final year student of the Master in Business, in Católica Lisbon School of Business and Economics.

This questionnaire has been created as part of my Master's Dissertation, which is focused on understanding whether the use of vacuum-sealing technologies, combined with the creation of multicultural food meals sold in stores without a human interface in the city centre, becomes a business opportunity in the market of Lisbon.

I highly appreciate your response and participation in this survey!

Thank you in advance.

→

In which country do you currently reside?

More specifically, in which city do you currently reside?

- Lisbon
- Oporto
- Other

How many times during the week do you usually eat out?

0	1	2	3	4	5	6	7

No, times eating out

How much do you spend on eating out, per meal?

0	3	5	8	10	13	15	18	20	23	25	28	30	33	35	38	40	43	45	48	50

€ spend per meal

For which of this reasons do you normally eat out?

	Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
Social meetings	O	O	O	O	O
Convenience/Commodity	O	O	O	O	O
Work reasons	O	O	O	O	O
Gastronomic experience	O	O	O	O	O

Where do you usually eat during your week?

Near the job

At home

Around my city

Other

More concretely, about eating out, how often do you grab takeaway food per week?

0 1 2 3 4 5 6 7

No. of times grabing takeaway food

More concretely, about eating out, how much do you spend on grab takeaway food per meal?

0 3 5 8 10 13 15 18 20 23 25 28 30 33 35 38 40 43 45 48 50

Money spend per meal

How often do you currently use other similar products?

	Never	Rarely	Occasionally	Frequently	Very Frequently
Uber Eats	○	○	○	○	○
Take-away	○	○	○	○	○
Fast-food	○	○	○	○	○
Frozen food	○	○	○	○	○
Eat at restaurant	○	○	○	○	○

This new product is focused on using vacuum-sealing technologies, combined with the creation of multicultural food meals. These meals would be sold pre-cooked in vacuum packaging to preserve the freshness of the flavours. These products would be sold in stores 100% cashierless, which would use a technological concept where there is no need for cashiers or any registration of products during or after purchase.

How often would you buy these meals?

- Multiple times per day
- Once per day
- 2-3 times per week
- Once per week
- 2-3 times per month
- Once per month
- Once every 2-3 months
- Once every 6 Months
- Once per year

How much would you pay for these meals, per person?

0	3	6	9	12	15	18	21	24	27	30

€ per meal

Please evaluate the following factors accordingly to their importance to your purchase decision

	Not Important	Slightly Important	Moderately Important	Important	Very Important
Price	○	○	○	○	○
Multiculturality	○	○	○	○	○
Accessibility (product available within few meters)	○	○	○	○	○
Taste	○	○	○	○	○
Environmental friendly	○	○	○	○	○

On a scale from 1 to 7, where 1 is not at all important, and 7 corresponds to extremely important, how important it would be for you to have a home delivery system, even if it adds a fee

Not Important		Slightly Important	Moderately Important		Important		Very Important
0	1	2	3	4	5	6	7

Importance

On a scale from 1 to 7, where 1 is not at all important, and 7 corresponds to extremely important, how important it would be for you to have those shops without human interface?

Not Important		Slightly Important	Moderately Important		Important		Very Important
0	1	2	3	4	5	6	7

Importance

On a scale from 1 to 7, where 1 is not at all important, and 7 corresponds to extremely important, how important it would be for you to have a point-of-sales around the city centers?

Not Important		Slightly Important	Moderately Important		Important		Very Important
0	1	2	3	4	5	6	7

Importance

On a scale from 1 to 7, where 1 is not at all important, and 7 corresponds to extremely important, how important it would be for you to have a monthly subscription, with a special price for this package?

Not Important		Slightly Important	Moderately Important		Important		Very Important
0	1	2	3	4	5	6	7

Importance

On a scale from 1 to 7, where 1 is not at all important, and 7 corresponds to extremely important, how important it would be for you to have vegan menus?

Not Important		Slightly Important	Moderately Important		Important		Very Important
0	1	2	3	4	5	6	7

Importance

On a scale from 1 to 7, where 1 is not at all important, and 7 corresponds to extremely important, how important it would be for you to have children's menus?

Not Important		Slightly Important	Moderately Important		Important		Very Important
0	1	2	3	4	5	6	7

Importance

On a scale from 1 to 7, where 1 is not at all important, and 7 corresponds to extremely important, how important it would be for you to have seasonal menus?

Not Important		Slightly Important	Moderately Important		Important		Very Important
0	1	2	3	4	5	6	7

Importance

On a scale from 1 to 7, where 1 is not at all important, and 7 corresponds to extremely important, how important it would be for you to have multicultural menus, as for example Indian menus, Italian menus?

Not Important		Slightly Important	Moderately Important		Important		Very Important
0	1	2	3	4	5	6	7

Importance

On a scale from 1 to 7, where 1 is not at all important, and 7 corresponds to extremely important, how important it would be for you to have desserts menus?

Not Important		Slightly Important	Moderately Important		Important		Very Important
0	1	2	3	4	5	6	7

Importance

On a scale from 1 to 7, where 1 is not at all important, and 7 corresponds to extremely important, how important it would be for you to have personalized menus, produced directly for you, according to your dietary restrictions ?

Not Important		Slightly Important	Moderately Important		Important		Very Important
0	1	2	3	4	5	6	7

Importance

How likely would you be to purchase these meals if it were available in the market today?

- Definitely would
- Probably would
- Might or might not
- Probably would not
- Definitely would not

What do you like most about our new product?

What do you like least about our new product?

On a scale from 0-10, how likely would you be to recommend this product or service to a friend or colleague if it were in the marketplace today?

Not at all likely — Extremely likely

0	1	2	3	4	5	6	7	8	9	10

Gender

Male

Female

Non-binary / third gender

Prefer not to say

Age

Under 20

20-24

25-34

35-50

50-60

More than 60

What is your nationality?

How many dependents do you have?

- No dependents
- 1-2
- 3-4
- More than 4

Level of degree

- No schooling completed
- 9th
- 12th
- Bachelor's degree
- Master's degree
- Other

Are you currently...?

- Employed full time
- Employed part time
- Unemployed
- Retired
- Student
- Working student

What is the level of your annual net income?

- < 10,000€
- 10,000-20,000€
- 20,000-35,000€
- 36,000-50,000€
- 50,000-100,000€
- More than 100,000€

Last question... I identify myself as someone who has the following habits

- Frequent practice of physical exercise
- Healhty diet
- Enviromentally friend
- Traveller addicted
- None of the above
- All of the above

7.3 Appendix 3 – Menu Example