



2.º CICLO

CIÊNCIAS GASTRONÓMICAS

Ghost Kitchen: “KUSINA FILIPINA”

Deena Marjorie Malo Sukanob

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Ghost Kitchen: “KUSINA FILIPINA”/Cozinha Fantasma: “KUSINA FILIPINA”

Deena Marjorie Malo Suganob

Faculdade de Ciências da Nutrição e Alimentação da Universidade do Porto

Orientador: Professor Daniel José Gaios Vaz Carvalho Azevedo (Escola Superior de Hotelaria e Turismo do Instituto Politécnico do Porto)

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Resumo

A cozinha fantasma está a tornar-se um dos conceitos empresariais em rápido crescimento, uma vez que dá oportunidades do que um restaurante tradicional, às pequenas empresas e às empresas em fase de arranque na execução sem arriscar muito em investimento. Isto dá aos proprietários de empresas uma oportunidade de experimentar os seus produtos antes de se comprometerem. Com este tipo de negócio, é possível introduzir uma cozinha étnica como o conceito alimentar da cozinha filipina no mercado tradicional português. A cozinha Filipina é rica em história, cultura e influências que vieram dos países vizinhos como a Malásia e Indonésia, ingredientes e pratos da China, e quando a colonização aconteceu os espanhóis e americanos introduziram mais ingredientes e influenciaram os pratos. Estas influências são altamente notáveis na cozinha. Embora a cozinha seja menos conhecida especialmente em Portugal, existe a oportunidade de estudar a sua introdução no país, uma vez que a cozinha filipina tem o seu potencial para satisfazer o mercado internacional. Dá-se especial enfoque ao mercado português, uma vez que a cultura e a cozinha asiática estão atualmente em expansão no país.

É importante compreender a opinião e o conhecimento da população sobre a cozinha antes de iniciar um negócio. Por essa razão, foi efetuado um inquérito e, posteriormente, foi realizado um teste de sabor de produtos com alguns dos alimentos mais populares das Filipinas. Do teste de sabor fez também parte um questionário acerca da opinião dos participantes sobre a cozinha. Este questionário traz uma resposta ao objetivo principal desta tese, que é se os participantes portugueses responderiam de forma positiva à cozinha Filipina. O plano de negócios é apresentado

para dar uma antevisão de como um negócio de cozinha fantasma com o conceito de cozinha Filipina funcionaria financeiramente.

Palavras-Chave: Cozinha fantasma, Cozinha Filipina, Cozinha étnica

Abstract

Ghost kitchen is becoming one of the fast-growing business concepts as it gives opportunities to small businesses and start-ups on executing a business without risking a lot in investment than a traditional brick-and-mortar restaurant. This gives the business owners a chance to experiment their products before committing. With this type of business, it is possible to introduce an ethnic cuisine like the Filipino cuisine in a traditional Portuguese market. Filipino cuisine is rich in history, culture, and influences which came from their neighboring countries like Malaysia and Indonesia, ingredients, and dishes from China, and when colonization happened the Spanish and American introduced more ingredients and influenced the dishes. These influences are highly noticeable with the cuisine. Although it is less known cuisine especially in Portugal, which offers the opportunity to study on introducing this in the country since Filipino cuisine has it's potential to cater the internationally especially the Portuguese market since the Asian culture and cuisine is currently expanding in the country.

Understanding how the population's opinion and knowledge on the cuisine is important before executing a business. For that reason, a survey was executed and afterward a product taste testing with some of the most popular food in the Philippines was performed which includes a questionnaire for the participants to respond on what their opinion on the cuisine is. This questionnaire brings an answer to the main objective of this project, which is if the Portuguese participants would respond positive to the Filipino cuisine. The business plan is presented to give a preview of how a ghost kitchen business with Filipino cuisine concept would work financially.

Keywords: Ghost kitchen, Filipino cuisine, Ethnic cuisine

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1. Introduction

1.1. Ethnic Cuisine

Ethnic cuisine is based on the geography and culture where the cuisine is found. It is interpreted by different people outside the specific ethnic groups as cuisine derives from the culture and heritage of the specific ethnic groups. These foods are based on their knowledge and local ingredients of their geographic area. They are also defined as the country's cuisine which is culturally and socially accepted by consumers outside the ethnic groups.⁽¹⁾

These foods are usually consumed by tourists for a better appreciation of the culture and heritage of a certain country.⁽²⁾ Ethnic cuisine is frequently described as “other people's food” which implies the idea that ethnic food is more than just foreign or international food. Ethnic cuisine reflects a social status of being “other” which exists in another larger or more dominant culture. It is the foodway of a cultural heritage recognized as not part of the mainstream culture where another culture is more understood as the normal one, and through this the ethnic ones are evaluated and defined in relation to that culture. Distinctive recognition emerges around the ethnicity in that the characteristics recognized as defining it are those that differ from the dominant one. Food is a cultural marker which is often people's first point of contact into a new culture. When a traveler goes to another country or place their way of knowing a new culture is through the food that the place offers. Culinary tourism refers on the tourist's perspective on the otherness and difference, it becomes a negotiation between outsiders and insiders but also between members of the group. Some members

of an ethnicity prefer to highlight the exotic dishes that they offer while some prefers to downplay and emphasize the similarities. ⁽³⁾

Food represents the culture and the nationality of the people who represents it. It also represents home and a safety net that provides security, for expatriate who lives away from home this is a bridge for them to keep them connected to their memories, roots, customs, practices, and palate that was left behind which highlights the major role of foodways in communities. The food's role is a bonding agent within the culture and places that is placed by the people which assists ethnic food in distributing it in the community. Ethnic foods are defined by being different, these foods only get recognized when they get detached from their origin and immerse into a new environment where it makes the difference visible. Thru globalization, it facilitated the distribution of people, culture, and foods to different places by people who move from their original places to another carries their ethnic background and otherness with them. Ethnic food become a signifier of culinary cultural capital in large cities. Ethnic foods fulfill different purpose of different people and is a tool of cultural survival. It also strengthens the cultural ties and social bonds which shares the cultural origins. ⁽⁴⁾

With the use of technology these days, it gives opportunities for cuisines to be known. Social medias like Facebook, Twitter, Instagram, and Tiktok not just connects people but also introduces different culture just with a touch of a finger through everyone's smartphones or computers. It's way easier to share information through this and spread the word. Food has become another topic in popular cultures, the number of people who takes photo of their foods, restaurants and even small food fairs and street foods are increasing which makes food culture a trend especially to younger generations. It

opened new opportunities for the people of different countries and culture to show and promote their food and heritage which increases the interest of international audience. Consumers eventually explore culturally diverse food and take risks on trying them, especially when traveling to those countries that offer ethnic cuisines. Social media and other platforms strengthen the awareness and interest of the tourist and consumers to try ethnic or local and exotic cuisines. One way for a new culture and their food to be recognize is for the indigenous people of the culture to introduce and give knowledge about it to outsiders for it to spread. As mentioned by an American-Filipino chef Paul Qui “Food is not a trend, its heritage and culture, but in order to get exposure, it needs to get noticed”. He also mentioned that food adventuring can also be a true appreciation of cultural diversity and it could produce culinary delights to enjoy. ⁽⁵⁾

1.2. Filipino Cuisine and its influences

1.2.1. Filipino Cuisine

Filipino cuisine is a part of the cultural heritage of the Filipinos, though it is considered one of the least known cuisines in the world. But what does Filipino cuisine is? Some say that Filipino cuisine is influenced by the Malay matrix, Chinese through trading, also Spanish and Americans by colonization.

Philippine archipelago is surrounded by water which gives it a rich food sources especially fresh seafood together with fresh vegetation and coconuts which are the main ingredients of the cuisine.

Filipino cuisine embraced the cooking methods and the ingredients from its Southeast Asian cultural heritage where the early inhabitants of the Philippines came from the

islands which are now called Indonesia and Malaysia. Southeast Asian culinary is highly influenced by Indian and Chinese culture which were developed and preserved by imperial courts with the difficulty of the dishes and excessiveness in the ingredients are used to set the royalties apart. On the other hand, Philippines does not have royal households but instead any of the Filipino cultural traditions originated from elite's homes. Each household has developed their own specialties and passed down to the next generations. From fish sauce to shrimp pastes, Filipinos share this with its Southeast Asian neighbors, but in time and from its unique history the country has developed distinct culinary liking on its own.

As stated by Raymond Sokolov in his book "*Why we eat what we eat*", he mentioned that the Philippines were able to preserve its indigenous foods in the contrary of other cultures that were deeply altered by the Spanish colonial rule. Pre-Hispanic foods are still unchanged up to this day where Filipinos still prepare and serve it the same way as they do before. Native rice cakes or *Kakanin* are a staple in the Philippines. These are usually eaten every afternoon for *merienda* or afternoon snack usually with coffee. *Kakanin* is derived from the Tagalog words "*kain*" which means to eat and "*kanin*" which means rice. *Kakanin* are sweets that are made from two main ingredients that the Philippines has a great amount of abundance, glutinous rice, and coconut milk. These ingredients are usually used in one of two forms. *Galampong* is a way where the glutinous rice is soaked overnight to soften the grains then grinded and strained using a cheesecloth. The soaked rice is usually set aside to ferment overnight or to as long as few days and the fermentation process gives rise to a fluffy *kakanin*. Another method is to simply use the sticky rice grains either whole, split or crushed. *Kakanins* are usually

sweetened with sugar, wrapped, or cooked in banana leaves and traditionally cooked in clay stone called *bibingkahan*. These cakes were initially created to serve as offering to pre-colonial Gods or as gifts to welcome guests and visitors. Using the clay stone are rare these days but many old recipes and cooking methods for making *kakanin* are still used in modern times.

Biko is a local delicacy which is made from glutinous rice and coconut milk with a dark brown sugar topping which is called *latik*. *Biko* got its name from the coffee-colored, sweet coconut curd which gives it distinctive flavor. This is usually an afternoon staple all over the Philippines. It is sometimes topped with a sweet and gluey, dark brown spread which is called *kalamay* which is made of ground glutinous rice, brown sugar, and coconut milk. There are other versions of *Kalamay* from different parts of the Philippines. One type is a delicacy from Baguio city what is called *sundot kulangot* which is a popular souvenir, and another example is from the Central Visayas part, Bohol where they serve their *kalamay* inside halved coconut shells where it is eaten with a spoon.

Another type of rice cake is called *puto* which came from the Malay word *puttu* which means portioned. It is one of the most popular rice cakes in the Philippines, it's a steamed rice cake rather than baked. Traditionally in White color but can be tinged with green or purple to indicate that it's been flavored with *pandan* or *ube*. Its toppings can vary from cheese, sliced of salted egg or even just plain butter to enhance the flavor. *Puto* is usually paired with a dish called *dinuguan* or pork blood stew and *pancit*. This rice cakes varies from the regional part of the Philippines. *Puto manapla* is typically from Negros Island and Iloilo city which is typically eaten with *La paz batchoy* to create

a striking yet balanced contrast between the richness of the noodle soup and the sweetness of the rice cake. *Puto bumbong* is a variety of *puto* which is a Christmas season staple made from a *pirurutong rice* which is a unique type of glutinous rice that is purple in color or almost black and it is soft, sticky, and aromatic once cooked. The mixture is placed inside a chimney-liked tubes and steamed. Once it's cooked it is placed in banana leaves, brushed with margarine, butter or coconut oil and topped with grated coconut, muscovado, or brown sugar and sometimes with sesame seeds or cheese. In the city of Laguna, that is called *puto biñan* which is a variety of *puto* that uses grated cheddar cheese and salted egg or *kesong puti* which is made from Carabao milk that is usually served in bilao or rice winnower. *Puto seco* which translate to “dry puto” in Spanish which is a biscuit-like texture more like a powdery cookie than a steamed cake. *Puto pao* is a *puto* filled with sweet meat filling which is a tribute to the Chinese meat bun and lastly a *Puto maya* which is from Cebu and Davao that is usually eaten with fresh mangoes and hot chocolate which uses sticky rice, coconut milk and sometimes ginger. ^(6, 7) These are just one of the examples of the rice cakes that are native to the Philippines even before the Spanish arrived. But among all the rice cakes in the Philippines, *suman* always comes first in mind.

Suman is made from rice, grains and or roots that is wrapped in banana or coconut leaves and boiled. It is the most primitive and is prepared in the simplest way. The common shape is slim and rectangular, forming the coconut leaf into a tube then the rice, coconut milk, salt and sometimes anise is added then the tube is sealed and tied together with the rest and boiled for at least an hour and half. It is usually dipped in sugar or with *latik*.

The popular type of *suman* is *ibus* which means coconut leaves that are formed into a tube that contains the *suman* rice and the *suman ligia* which is cooked in lye water. It is possible that *suman* originated from *kanin puso* which is an iconic Cebuano Street food. It is a rice wrapped in triangular casing made of woven coconut leaves so it's easy for the farmers to transport which was tied to their waist to keep it convenient as they work on the fields. There are variations of this food from other Southeast Asian countries like Brunei, Malaysia, and Indonesia where it is called *Ketupat*.

Antonio Pigafetta was an Italian explorer who joined Ferdinand Magellan, a Portuguese explorer who discovered the Philippines in 1521. Pigafetta served as Magellan's assistant and kept an accurate journal which later assisted him in translating the Cebuano language which was the first recorded document of the language. On his journal dated from 15-25 of April 1521 he mentioned: "*Then three large dishes are brought in; two with roses and with cakes of rice and millet, baked and wrapped in leaves, and roast fish*". ⁽⁸⁾

Through this document, it showed that *suman* was offered by the native Filipinos which makes it a food that was typical even before the Spanish arrived.

Most *suman* is made with glutinous rice or cassava. In the region of Cebu and Dumaguete, a millet is used for their *suman* which is called *budbud kabog*. In another part of the Philippines, they also add squash together with the sticky rice.

Rice is an important part of Filipino cuisine, Filipinos eat rice for breakfast, lunch, snacks, dinner and even desserts. Filipinos like it steamed either dry or mushy and only with plain water. Leftover cooked rice is usually fried with garlic in the morning

together with the traditional Filipino breakfast which are called “*silog*”. Traditionally, rice is washed and placed in a banana leaf-lined clay pit with water depth of the second line of the middle finger touching the rice. The rice would be covered and simmered over a wood fire until the water is almost over then taken off the heat to let the rice settle and it’s crucial and final stage called “*in-in*”.

Dishes that are made from native sour fruits and vinegars, on how to prepare meat, poultry, seafood, and vegetables and even the spices and condiments. Philippines has its national dish which is called *Adobo*. This dish varies from different household and region, it has different variations, but the main ingredients include vinegar, soy sauce, bay leaf and garlic. The vinegar is the one that defines *adobo* which is traditionally produced a wide variety of fruit vinegars that ranges from different flavors and acidity. Although these days, commercial companies that produces vinegars uses acetic acid rather than fruit juices which overshadowed the natural based vinegars.

There are different types of vinegar that are locally produced in the Philippines. Palm vinegars is one of them where it’s generally called *sukang tuba* since the process of making this vinegar is effortful and time-consuming but it’s becoming more unusual as time pass by. Nipa palm vinegar are locally called *sukang sasa*, *sukang nioa*, or *sukang paombong*. The process of making these vinegars involves a five-year old palm trees which are tapped by bending the stalks and slicing off the fruit bunch then a bamboo tube would collect the sap and transferred to earthen jars and fermented for a few weeks. A fresh nipa palm vinegar is hazy white hue, but it reddens the longer it’s kept which makes the flavor distinctly sweeter with a slightly salty tinge where the sourness intensifies in time. Another palm is used to make a different kind of vinegar although

this type of palm needs to be 10 to 15 years old before they could be harvested to be used to make *Kaong* palm vinegar. It uses the same process as the nipa palm but with sugar plum or *kaong* which is particularly the sap of male inflorescences. Other than that, a tapayan jars is used for the vinegar to ferment which takes about a month. This type of palm vinegar is sweeter and is usually added to drinks. This vinegar is locally called as *Sukang Irok*.

Coconut vinegar is a variety of vinegar where it comes from either fermented coconut water or sap where the color could vary between clear and cloudy to yellow and orange, as for the flavor it could be sharp. This vinegar is locally known as *sukang tuba*.

Another variety of vinegar is made by sugar cane which is a much popular choice than the palm ones. And there are different varieties of Cane vinegar. *Sukang maasim* is one of that variety where the sugar cane is fermented. This type of vinegar is usually used in *adobo*. *Sukang Iloco* is derived from *basi* which is a local wine that is made in Ilocos. *Basi* is made by boiling sugarcane juice which is sealed in tapayan jars and fermented for years. When it's ready, the product would range from dark yellow to brown with a flavor that ranges between sweet and sour. ⁽⁹⁾ In the city of Manila, locally produced vinegar which are made from guava, *duhat* or java plum, coconut, sugarcane vinegar or *sukang Iloko*, *bignay* or Chinese laurel and cashew were being made and sold. These fruit-based vinegars make *adobo* authentic.

Kare-Kare is what Filipinos claim their own, it came from a Tamil word *Kari* that means spiced sauce. This particular dish is cooked in a clay pot which is called *palayok* and the main ingredients are toasted rice, grounded peanuts, and annatto seeds also

without using any salt or spices for the sauce, vegetables like string beans, pak choi leaves and stems, eggplant, usually with ox tripe and banana heart slices which is eaten with a salty *bagoong* and white rice. It is usually served in the same clay pot where it was cooked.

Bagoong is a fermented shrimp paste which is common within Southeast Asia. It is an undigested residue of partially hydrolyzed fish or shrimp which has a salty and slightly cheesy odor. There are different kinds of *bagoong* available in the Philippines but depends on which region and part of the country. *Bagoong Alamang* is made with small shrimps or krill which can be sold fresh or sautéed. This type of *bagoong* has pink tint which was caused by the addition of *angkak* which is a red yeast rice which is a Chinese medicine produced by solid fermentation of cooked non-glutinous rice with *Monascus* species. ⁽¹⁰⁾ *Angkak* is used to color the bagoong. *Bagoong alamang* that is from the area Iloilo is made from shrimp that is locally catch from the Visayan region which is pounded to form a thick paste. Other varieties of *bagoong alamang* are called *aramang*, *uyap*, *dayok*, or *balao*. *Bagoong Isda* is made with fish. This type of *bagoong* has different varieties. *Bagoong balayan* or *Bagoong tamban* is produced in Batangas which uses *tamban* or herring and can be *dilis* or anchovies, these fishes are fermented for six months to a year in traditional jars which are called *tapayan*. This bagoong is fragrant and with slight pungent. *Bagoong monamon* is commonly used in Ilocano dishes which is often used in dishes like *pinakbet* or *dinengdeng*. It uses anchovies to make its texture smoother and has a pungent fishy smell which makes it flavorful. *Bagoong Terong* is also from the Ilocos region, but it's made from bonnet mouths. *Guinamos* is a native from Southern Visayas and Mindanao which is made with anchovies but it's more

distinguishable than *monamon*. It usually has a gray color. *Tinabal* is a bagoong that uses parrotfish which is native to Leyte. *Bagoong Padas* is made from Pangasinan area which uses rabbitfish. This bagoong has a liquid texture. And *Bagoong Sisi* is produced in Roxas city which uses oysters and clams that are harvested from the Visayan region. This type of bagoong is fermented for only three days, and they are ready to be served. This condiment is one of the pillars of Filipino cuisine. ⁽¹¹⁾

Bagoong is made from the main ingredient either fish or shrimp which is washed thoroughly and drained well. Afterwards, the salt is mixed into the drained samples at varying proportions from 1:3 to 2:7 that depends on the bulk of the preparation then allowed to ferment for several months or longer until it develops characteristics flavor and aroma of bagoong. It can be eaten raw or cooked which is used for cooking traditional recipes as flavor enhancer. ⁽¹²⁾

Another indigenous ingredient that can be found in the Philippines is the *Kalamansi lime* which plays a huge role in the cuisine. This fruit is little deep-green colored lime that produce a tiny amount of juice but a powerful one. Filipinos uses this lime to make juices and to add in the marinades and dips. Can be also used to enhance the flavor of some dishes like pancit, kinilaw and grilled fish.

Sinigang is a soup dish that uses an indigenous fruit like kalamansi, tamarind, guava, *kamias* or bilimbi, *siniguelas* or Spanish plum and *butuan* which is a small sour green fruit which is unique to Visayan sinigang. *Sinigang* is also consist of taro, radish, leeks, onions, tomatoes, bok choy, chilies, and water spinach or *kangkong*. It usually uses meat or seafood for protein.

Kinilaw is a dish prepared and immediately consumed as soon as the products are harvested from the sea. The raw seafood is washed in fresh seawater together with either vinegar, lime or citrus juice while trying not to overcook the fresh seafood with the acid from the vinegar or juices. Also seasoning it with grated ginger, chopped onions, chilies and sometimes coconut milk. *Kinilaw* is one of the oldest cooking methods used by early inhabitants of the Philippines. Archaeologist found some “edible discards” of fishbones and remains of fruit core called *tabon-tabon* from thousand years ago. This detail was mentioned in the book called *Memories of Philippine Kitchen, Stories and Recipes from near and far*. Until today some regions from Visayas and Mindanao still uses prehistoric fruits like these where grating, squeezing, and soaking the core of fruit in the water and cleansing the fish in this fruit water before adding it with other ingredients. ⁽¹³⁾

The Philippines offers a lot of ethnic foods especially from the indigenous people of the Philippines which were preserved and still practiced until this day.

The indigenous community lives a simple and resourceful lifestyle. They use whatever available resources they have as utensils and uses banana leaves or “*simat*” as plate even on special events which also serves as part of the presentation of the food. This way of eating is quite similar to traditional practices in India. Banana leaves are large, flexible, and waterproof where they can transmit their aroma to the food which is cooked in it or served on them. Steaming with banana leaves passes a sweet flavor and aroma to the dish. Banana leaves are also convenient and environmentally friendly.

Binakol is a traditional way of cooking by indigenous people of the Philippines where they use bamboo for a cooking pot. They use it as their primary utensil for boiling or steaming.

Aeta, Agtas, or Ayta are the Black race indigenous people who inhabited the mountain regions of Luzon in the Philippines before the Austronesian migration of the Malay and Asian groups.⁽¹⁴⁾ These indigenous people have their way of using *Binakol* where the chicken is cooked inside a piece of bamboo. Marinated overnight in spices and herbs including ginger, garlic, and tamarind leaves, the chicken was placed inside a piece of bamboo chosen for its thickness (a younger tube would crack and not cook the chicken well) and cooked in its juices. *Tinuom* is a dish made from native chicken, tomatoes, onion, garlic, and lemongrass wrapped in banana leaves. ^(15, 16)

Up to this day, Philippines still preserves its indigenous cooking methods which differs from different area of the country. It has diverse ingredients that were grown around the area and the cooking method is how it was and passed to generation and generations ahead.

1.2.2. Chinese Influence

Before the Spaniards arrive to the Philippines, there are some proofs that there were good trading relations with the Chinese. Ancient ceramics from the 10th century which suggests that Filipinos and Chinese have bartered even before colonial times. Some findings, namely the discovery of *Balangays* or trading boats in Butuan in 2013 suggests that the native Filipino ancestors travelled through the Asian seas to trade goods. Apart from China, the early Filipinos also traded goods with other Southeast Asian

nationalities. This shows that Filipino earliest culture was mainly influenced by interacting with the neighboring countries. ⁽¹⁷⁾ The plank vessel was suspected to be centuries older than the ships used by the European explorers in the 16th century. There are also theories that Butuan was the major center of cultural, religious, and commercial relations in Southeast Asia as their balangay reinforces the findings of the earlier excavations about the role of Butuan as a commercial and population center in precolonial Philippines. The seaport had links with Champa and Guandong (China). Seafarers from Butuan were already exploring Asia for over thousand years ago even as early as 1001 AD where the Song Dynasty documented the arrival of the diplomatic mission from the “Kingdom of Butuan”. The trade and settlement routes across Asia connected to Philippine islands were seen even for thousand years which brought good harbors and steady supply of local products. ⁽¹⁸⁾

Some of the Chinese cultural influence appears in the Philippine language especially the *Tagalog* variation. Researcher Chan-Yap mentioned in her study that the Filipino language carry off from the Hokkien dialect. She illustrated that the Chinese influence on the Filipino language is much more than borrowing the words but in describing the food items itself. This Hokkien Chinese influence is undoubtedly noticeable in Filipino Tagalog cookery words which shows how influential it is on the culture and heritage of the Philippines. Some vegetables were brought to the Philippines by the Hokkiens, or they are locally found but the natives were ignorant of their culinary uses. Like *Petchay* which is a Chinese cabbage or *Kintsay* means celery, these are some example loanwords from the Hokkiens. They also introduced different ways of preparing foods like boiling, steaming, and stewing is also a common method among Hokkien speakers in which it's

uncommon for Tagalog speakers, which it is not unexpected that the Tagalogs borrowed a lot in this category. ⁽¹⁹⁾ Through this trading, not just with the language these Chinese traders brought ingredients to the Philippines that are well used up to this day which it defines Filipino cuisine. Ingredients like soybean products (soy sauce), pork, noodles, and vegetables.

Philippine cuisine is a combination of native ingredients together with Chinese ingredients which makes the Philippine cuisine a fusion in which the Filipinos are acknowledging the Chinese influence on the Philippine cuisine. These cooking techniques and cooking ingredients are not only to show the distinctiveness of Filipino cuisine but the creativity in it together with the Chinese cuisine. Hokkien cooking techniques with the Chinese and Filipino ingredients goes back centuries ago. And as years goes by, it has been indigenized throughout Southeast Asia.

There are two main regional variations of Chinese cuisine which made an extreme impact on the Philippine cuisine which are from the Southern Chinese provinces of Fujian and Guangdong. The Chinese culinary influence in the Southeast Asia is an integral part of national cuisines and the culinary lines have become blurred. Chinese cuisine remains separated from the national culinary identities from Southeast Asian cuisines which has been heavily influenced by Chinese cuisine. Throughout the last centuries, noodles are one of the main staples in Chinese cuisine which have been integrate into different Southeast Asian countries. Through centuries of trading, migration, and intermarriage, world's well-known dishes such as Vietnamese pho, which is a noodle soup, Thailand's Pad Thai which is a stir-fried rice noodles in fish sauce and Mee goreng from Singaporean, Malaysian, Bruneian and Indonesian stir-fried wheat

noodles that illustrate profoundly influence of Chinese cuisine. Chinese cuisine totally incorporated into local cuisines with Filipino cuisine also benefitted in the Chinese culinary globalization,

Pancit or *Pansit* for example is a Filipino version of the Chinese noodle dishes which was brought by the Chinese traders to the Philippines during the pre-colonial era. There are different variations of *Pancit* that is available in the Philippines which uses different types of noodles (canton, bihon, egg noodles, rice noodles, etc.), either could be dry or with soup (*Pancit bihon* or *Lomi*), with different sauce bases like shrimp or seafood, chicken, or pork (*Palabok* which uses shrimp sauce and annatto seeds) and with different types of vegetables like cabbages, carrots, green beans and so on. Based on the study from Ysla de Panciteria about the culinary heritage significance of *Pancit* using the heritage documentation approach, they found out that in 20 provinces, 27 cities, and 26 municipalities there's a total of 101 pancit dishes that was well-known for their type of dish and served in different occasions. ⁽²⁰⁾

Chinese food items have found their way into Filipino cuisine. Back in 1594, Binondo was founded as a Chinese town when a royal order for the removal of the Chinese in the Philippines was received. But then Spanish governor Luis Pérez Dasmariñas noticed that the city of Manila which has the largest Spanish settlers still needs some Chinese economic services, so he got a piece of an area across the river from the walled city which is called Intramuros and handed it over to some notable Chinese traders and artisans. From then on, Binondo China town was established. ⁽²¹⁾

Some Chinese restaurants in Binondo still exists until today, *Antigua* which was founded in 1866 by Manuel “Po Kong” Bautista. He named it Antigua which means ancient in Spanish because Bautista said to value things that have proven their worth over time. The current owners stated that Antigua is a Hokkien word that when translated to English means “just enough”. The restaurant is renamed to New Toho Restaurant which is at Tomas Pinpin Street. Their all-time well-known dishes consists of *Sopa de Nido* which is also called Nido Soup or Bird’s nest soup, *Camaron rebosado* which is fried shrimp, *Pinsic Frito* or Fried wonton and *Bijon Tostado* which is toasted fried bihon which still exists up to this day. Clients line up as early as 11 o’clock in the morning and again at 5PM just to buy their best seller which is the Pansit Canton noodles which are served freshly cooked daily. ⁽²²⁾

Another restaurant is called Ilang Ilang restaurant was established from 1908 which is a noodle shop owned by a cook from Xiamen named Mr. Nua and his son Eng Gua and was considered as an upscale restaurant and fully licensed around 1945 but these days they provide more catering services. Ilang Ilang started as a *panciteria* which is a noodle house, it even survived the Second world war and the Japanese occupation in the Philippines. This restaurant is well-known by the wide variety of noodle dishes like *Lomi* (thick noodles cooked in a thick and starchy egg broth). *Rellenong Hipon* (Stuffed shrimps) are usually served with the *Lomi* as it compliments it. Ilang Ilang restaurant has been serving Hokkien dishes to cater Chinese-Filipino clients. ⁽²³⁾

These are some Chinese restaurants in the Philippines that still running up to this day. These influences are common in a Filipino household and practiced daily.

In the Philippines, food items that are ethnically Chinese are stripped of their Chinese ethnicity and replaced with a Filipino national identity which displays a variety of Filipino dishes that incorporates Chinese ingredients and which in fact embodies Chinese origins.

As mentioned before, *Pancit* is one of the well-known Chinese-Filipino fusion cuisine other than that *Lumpia* is also a known Filipino dish which was influenced by the Chinese. It is a popular dish which is derived from the Chinese spring rolls which was brought by the Chinese settlers from Fujian China. The difference between a Lumpia and Chinese spring rolls is the lumpia is thinner and longer than the traditional Chinese spring rolls. It uses a pastry-like wrapper filled with ground meat and vegetables unlike the Chinese spring rolls which are made with shredded pork and marinated in Shaoxing wine and sesame oil with vegetables. Lumpia is much denser than spring rolls as it uses egg to bind and tighten when wrapped. Filipinos use Banana catsup or sweet chili sauce for lumpia while spring rolls use Hoisin dipping sauce. *Lumpia* is usually sold in street stalls, but it is one of the staple dishes served on special and festive occasions. *Lumpiang Shanghai* is rated as one of the best foods in the Philippines by TasteAtlas.

(24, 25)

Another variation of a Lumpia is called *Lumpiang sariwa*, which is a non-fried roll which consists of stir-fried filling of pork, vegetable, dried shrimp, and bamboo shoots which traditionally served with garlic sauce or peanut sauce. ⁽²⁶⁾

These influences from the Chinese made a big impact to the current Philippine cuisine not just through food but also with traditions.

1.2.3. Spanish Mexican Influence

Spanish cuisine has one of the strongest influences on Filipino cuisine. They introduced different ways of cooking and Spanish dishes.

Spanish food was brought by to the Philippines around 1500's. Spain brought pork products like chorizo and ham to the Philippines. Filipinos got to taste olive oil, tomatoes, eggplant, chickpeas, hardboiled eggs, paprika, and saffron which are all evidence of Spanish influence where these dishes and ingredients are welcomed by the Filipino society without wondering about its origin. These foods and dishes were used to satisfy the Spanish culinary demands of emigrants like government officials, soldiers, and priests which became a symbol of colonial power. Spanish dishes are recognizable through their name and preparation. Some examples are *Relleno* which means stuffed, which can be poultry, seafood, and vegetables. Dishes like *Afritada* which means to fry and *Caldereta* which means cooking pot in Spanish but are adapted into dishes by the Filipinos. Both of these dishes use tomatoes as base. From 1565 to 1815 the Galleon trade introduced some dishes and ingredients from other Spanish colony especially Mexico like tomatoes, potatoes, cassava, corn, peanuts, bell peppers, chiles, pineapple, papaya, guava, kaimito, avocados, jicama, chayote, cacao, guyabano, chico which were native to Mexico while in exchange, Philippines traded some of their indigenous ingredients like mangoes, tamarind, rice, and tuba (coconut toddy or wine) to Mexico, Coconut vinegars can even be found on some Mexican cookbooks even today. Some Mexican delicacies even reach the Philippines due to the colonial period. *Tamales*, *Pipian*, *Menudo* and *Balbacoa* are some examples although the names remained, some of the ingredients and cooking process were modified to a Filipino way.

The Filipino *Tamales* uses rice instead corn which what they use in Mexico. *Pipian* uses peanuts instead of pumpkin seeds, the *Menudo* uses tomato sauce, pork, and liver with raisins while the Mexican *Menudo* uses tripe and pig feet with red chili sauce. Mexican *Balbacoa* is slow roasted meat cooked in the pit while the Filipino version uses beef shanks and boiled. One of the most popular dishes that defines Filipino food are also inspired by some Mexican dishes, *Adobo* is one of those dishes where it in Philippines it's a dish made with soy sauce, vinegar, meat, garlic, and bay leaf while *adobar* in Mexico means meats marinated in spices. *Asado* is a certain dish in the Philippines while it means to grill in Mexico. *Empanada* is a popular Mexican dish which is also a Filipino favorite snack. In Philippines the most common filling of *empanadas* would be ground beef sautéed in onions with peas, raisins, and potatoes. In another place in the Philippines called Negros Occidental, it is possible to find a *panara empanada* which is a vegetarian-inspired *empanada* that is filled with green papaya, squash, and mung bean sprouts. In Vigan, Ilocos Sur they offer their famous *empanada*. It is made with ground rice flour and cooked on the stove which is similar to taco shell. This *empanada* is filled with sautéed green papaya and Vigan *longganisa* but before it is sealed a raw egg goes onto the rest of the filling and then closed then fried in a wok with boiling oil, once it's ready it can be eaten with the *sukang iloko*.

In the colonial era, the Spanish dishes are prepared for the elite and for special occasions of the common Filipino, *Noche Buena* has been one of those special occasions that Filipinos love the to celebrate the most. Common Filipino dishes that are served on special occasions were *Embutido*, *Arroz Valenciana*, *Afritada*, *Lechon*, and *Menudo*. Filipinos have adapted some popular Spanish dishes to which ingredients are available

and to fit their taste. Spanish *Chorizos* are an example which is a staple in Spanish homes where they ferment, cure, and smoked the meat which they can eat it without cooking it. While the Filipino version of *Chorizo* is called *Longganisa* which the meat was seasoned and placed inside the case, and it should be fried before eating. Chorizos were usually accompanied with wine, alcoholic drinks, and cheese for Tapas could be added to soups or eaten as it is while the Filipino version *Longganisa* is normally eaten with fried rice and egg for breakfast. In Spain, *Tapas* are like finger foods in small portions which are eaten before meals or in between with wine or alcoholic drinks. While in the Philippines *Tapas* is beef marinated in soy sauce, garlic, and other ingredients, fried in cooking oil, and served with fried rice and egg for breakfast just like the *Longganisa*. These meals we're usually called *Silog* meals (*Sinangag* at *Itlog*) which means Fried rice and egg. There's another food to be paired with *silog* which is called *Tocino* which it means bacon in Spanish but in the Philippines, its Pork meat or chicken that is marinated in pineapple juice with annatto powder for coloring and again fried in cooking oil and mostly served in breakfast or which call in Tagalog "*almusal*".⁽²⁷⁾

Some other Spanish dishes that the Filipinos adapted and still use up to the present time are *Paella*, *Calamares*, *Sardinas*, *Ensalada*, and *Ensaymada*. The Filipino *paella* is adapted from *Paella Valenciana* which is a Filipino household favorite especially on special occasions. *Calamares* has become a favorite street food in Philippines. *Sardinas* is a Filipino budget food which comes in can and it is served with tomato sauce instead olive oil, *Ensalada* comes in two variations, one is a roasted eggplant mixed with chopped tomatoes and onion which it's called *Ensaladang Talong* in the Philippines and another one is eggplant with mangoes, tomatoes and onions which is called *Ensaladang*

Manga. *Ensaymada* is one of the favorite Filipino breads where it even has fillings like *ube*, *monggo* and others. It can be found anywhere especially neighborhood bakeries even households. ⁽²⁸⁾

Spaniards not only brought these dishes to the Philippines, but also some cooking methods that are well integrated into making Filipino cuisine up to this day. They introduced slow cooking, which is used to make *Pochero*, *Cocido* and other Filipino dishes where it is cooked in a low fire, slow method and in one pot. *Guisado* or in tagalog *gisado* is another contribution of a Spanish cooking method. In a dish called *Pochero*, it is important to sauté the garlic until golden brown and the onions are translucent in color with olive oil or oil then the tomatoes are added and the meat. After that it is slow cooked until the meat is tender. Afterwards the vegetables are added which are potatoes, green beans and a native Asian vegetable *Pechay* or *Pak choi* and to counterbalance the umami flavor of the meat stew, a pan fried *saba banana* which is a Filipino plantain is added to the dish. The Spanish-derived *guisdao* techniques provides a layer of flavor to Filipino cuisine that differs the Philippines from its Southeast Asian counterparts in which coconut milk, curry and spices dominate the neighbor countries profile. Spanish recipes are not only inherited but also changed to differentiate it from the original recipe. ⁽¹³⁾

As these recipes were distributed all over the Philippines each region and areas have their own interpretation of the dishes, experimenting and using local ingredients that are native to their area.

Fernandez stated in one of her works that the process of borrowing went from household to household in many years where the borrowers knew consciously or not that they were cooking foreign dishes while modifying it and making it their own.⁽²⁹⁾ Though through all these influences, some parts of the Philippines still preserve some of their cuisines especially the way of traditional cooking.

1.2.4. American Influence

As the Philippines became a colony of the United States of America in 1901, Americans were worried about the nutrition of the Filipinos as they saw that it needed some dietary improvements since the Filipinos are consuming only rice and fish, so they introduced dairy products, canned meats, vegetables, and fruits from the United States. The Philippine government took an active role in improving the Filipino diet by offering cooking classes in the public-school systems where young girls and women were taught how to cook American dishes like biscuits, candies, doughnuts, fried chicken, muffins, ice cream, hot cakes, puddings, and pound cakes which would not be considered as healthy and nutritious options today. Although these contributed also to the Filipino cuisine where the locals started integrating the local ingredients to these American dishes like *Maruya* where a *saba banana* or plantain is mixed into a pancake mix to make banana fritters, some cakes like *Pianono* where it's a typical roll cake but only dusted with sugar instead of icing, and *Fruit salad*.

Americans also introduced the concept of canned goods which Filipinos love up to this day, canned goods like Spam, corned beef, Vienna sausages, canned fruits and All-purpose cream and condensed milk which appear in a lot of different recipes for everyday food and serves as comfort foods. These products are more valued than fresh

fruits, fish, and meats from the local markets. ⁽¹³⁾ One of the biggest American contributions is fast foods and processed foods which are a novelty. Filipinos are so used to experience different types of flavors and even the intense ones, mixing salty, sour, sweet, and spicy and making a different experience of flavor. One example is an American spaghetti where Filipinos turned it into a sweet version with chopped hotdogs. Some American staples like Fried chicken, Hamburgers, Hotdogs, and Ice creams are also well loved by the Filipinos. ⁽³⁰⁾

1.3. Ghost Kitchen

Ghost kitchen is a new type of food and beverage business concept that gives opportunities and supporting new businesses that does not have a brick-and-mortar location or store front where for the ghost kitchen the primary method of operation is take-away, online ordering concept and delivery which gained attention even before the pandemic. Most ghost kitchens these days have their own identities, and they also work on several restaurant concepts. It's becoming an alternative for the normal brick-and-mortar restaurant since it cheaper and much more ideal for start-ups. Ghost kitchen concepts are not always the same, some are in a shared kitchen facility where it is possible to rent out a space to establish a ghost kitchen and there are ghost kitchens that are operated in existing establishments where business owners are able to promote different restaurants. This type of business model involves serving clients by ordering their meals remotely through the website or application of the restaurant or through a third-party delivery platform.

Then as the global pandemic progressed, countless restaurants were forced to shut down as a lot of rules were applied. Like social distancing, limited numbers of guests

in restaurants and even worst quarantine period where unessential businesses were closed ending the traditional dining. As times goes by, ghost kitchens are getting consolidated as business models, associated mainly with convenience and low cost. This startup can support digitally to offers a smooth ordering process, brand marketing and providing reliable customer services. However, this business still needs a comprehensive and well-researched business plan to execute well.

Ghost kitchens are designed for a pick-up and delivery business. It could be operated in a renovated warehouse space, a storage container in a parking lot or a commercial kitchen of a shut-down restaurant. For a restaurateur who wants to start his business from scratch, the ghost kitchen is an affordable option like food trucks, rather than having a traditional restaurant set-up. Remember that there are other expenses on top of this like rent, additional costs, equipment, storage spaces, staff salaries and etc. With this type of business, a good marketing plan should be executed to attract customers and ensure an adequate revenue. Having a partnership with the online ordering and delivery platforms are advised. Having a good social media and search engine optimization as well as professional food photography, menu design and others.

(31)

Ghost kitchens saves a lot in labor since there is no need for that many employees as in a normal brick-and-mortar type of restaurants. Also, a smaller kitchen space when using a shares kitchen space and not needing a dining room, means less money spent on rent which can contribute to maximize profits.

1.3.1. History

The ghost kitchen concept started when in 2015, an article came out which was called “I-Team: Restaurants Use False Identities on Food Delivery Websites” where they tackle the issue of New York’s top customer rated restaurants thru Seamless and Grub Hub and they found that 10% of the restaurants were ghosts which means they had names or addresses that failed to match any listing on the city’s database of restaurant inspection grades. Several of these locations that are operating are non-retail food processing establishments like from apartments or homes in which they don’t have restaurant permits to sell food directly to customers. Afterwards, there virtual brands were taken off the platform and they fact-check the restaurants first for information and give transparency to customers using the delivery applications. ⁽³²⁾

The investigation findings were that some restaurants regularly added multiple listings to aggregate sites for better competition in the market. More listing means more chance that the customers would click on their menu over a rival’s brand.

A commissary kitchen in New York and Chicago named Green Summit Group is one of those unlicensed businesses which NBC found. New York city does not consider commissaries to be a restaurant at that time and yet these companies were cooking food in uninspected kitchens delivered to clients by unassuming Seamless and Grub hub couriers.

These days the commissary concept lies in the ghost kitchen trend where it helps entrepreneurs lower labor costs and rent real estate as diners are less concerned about

their familiarity with restaurants but are more concerned about the quality of food which are delivered at the comfort of their own home or office.

The term Virtual Restaurant was emphasized by Uber Eats by finding a common ground with similar traits in virtual reality and defining as a data-driven, delivery-only concepts operating outside of an existing traditional brick-and-mortar restaurant kitchen. Uber Eats worked with about 1.500 virtual restaurant partners in the U.S and Canada with another 1.000 around the world. The idea behind Uber Eats' virtual kitchens is not just about satisfying customers demand on food delivery or helping restaurants deliver their standard fee but it's about the data and the trends which is found within it. It provides a relevant and increased selection in the marketplace which ideally helps restaurants to reach new customers and increase incremental sales. ⁽³³⁾

1.3.2. Types of Ghosts Kitchen

There are different types of Ghost kitchen. There is an Incubator or Pop-Up kitchen, Kitchen Pods, and the Commissary or Shared Kitchens.

Incubator or Pop-Up kitchens are associated with a traditional brick-and-mortar restaurant but focuses primarily on online orders or deliveries. These businesses already have their own spaces, and it only needs a separate workflow and delivery model that will allow the staff to move and work in an isolated kitchen and reducing online orders that pressures on the brick-and-mortar restaurants staffs. This type of ghost kitchen is ideal for restaurants examining new ways to add revenue to their business and to understand how the local market would react to a new food concept. Even if the particular idea and trial didn't succeed, only a lost in time and effort but not a large

amount of money would be lost and it's easy to recover and try another one. One more reason to try incubator kitchen is to set the business with the current trends in the market. It's a way of exploring the new trends if it could work while keeping the main menu items to serve frequent customers.

Kitchen pod is a low budget and quickest way to launch a new business solution. These pods are small shipping containers that's already come with outfitted kitchens. They are convenient since they are customized for effectiveness and efficiency. These pods are usually cost-effective since they are movable containers which eliminates the expense of a rented space. On the other hand, kitchen pods have its limitation. Zoning laws are complicated for these spaces which limits the business owner from installing the pod in rooms or driveways. Also, working conditions are not the best ones. Keeping safety measures in a small space with no windows is tricky especially for restaurant type of foods and the employee safety is important.

The third type of Ghost kitchen is the most well-known and successful type out of the three which is called the *Commissary kitchen*. This kitchen is a shared kitchen spaces owned and operated by a third-party company or entrepreneur rather than a restaurant. These kitchens usually host multiple restaurants, brands, or concepts under on kitchen where the employees share everything from refrigerator space up to pans. Commissary kitchen provides virtual restaurants with ventilation, sinks, cooking space, storage space, lockers, and even cleaning supplies. Some kitchens offer kitchen equipment and dishwashing services. Some more advanced services are expediting resources, data analytics and even bookkeeping guidance.

Virtual restaurants usually pay for a membership or rent out cooking space along other food entrepreneurs which is paid per hour. Commissary kitchen is the most preferable option for restaurants looking to leverage a ghost kitchen's benefits without having substantial up-front costs.

A commissary kitchen offers a financial advantage for operators looking to start a business using a ghost kitchen. Electricity costs, rents, leasing a building or purchasing kitchen supplies and equipment are one of the overhead costs that involves in starting and functioning a business. So, commissary kitchen or shared kitchens are the best solution in reducing these costs significantly. ⁽³⁴⁾

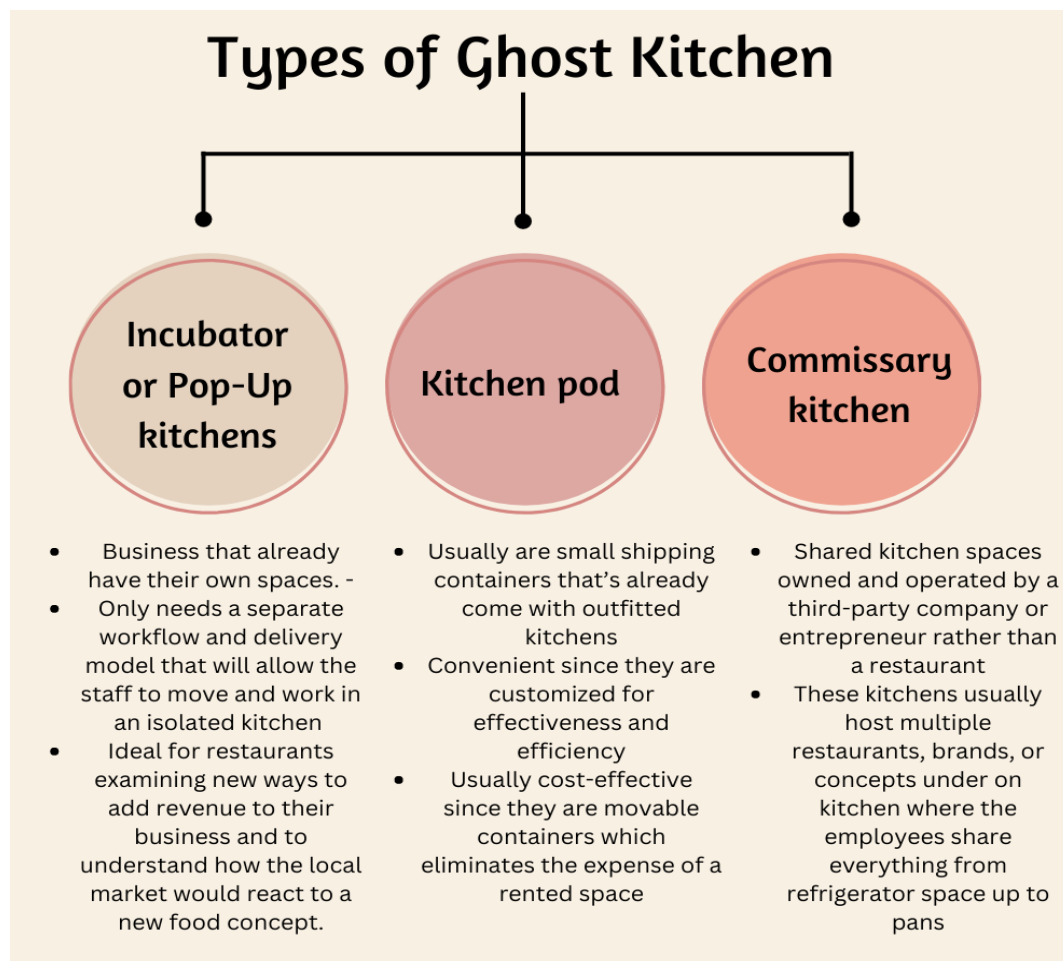


Figure 1 - Types of Ghosts Kitchen

Source: (from the author)

1.3.3. Market Data

The idea of Ghost kitchens sparks a huge demand in different parts of the world especially in Asia and the United States of America. In Asia, Singapore-based Grab opened 42 Dark kitchens even before the pandemic started. The global industry of Ghost kitchen is expected to grow 12% each year which is worth about US\$139.37 Billion by 2028 according to Researchandmarkets.com. 4.3 billion people occupying 60% of the international market are from Asia-Pacific. Euromonitor is an international research group who provides a global business intelligence, market research and analysis. They estimated that there are 7.500 cloud kitchens that are operating in China and 3.500 in India compared to 1500 in United States and 750 in Britain. China's food ordering and delivery market is already at its US\$62 billion in 2018 while the US industry is about US\$800 billion. The pandemic sped up the industry by about five years. ^(35, 36)

In the US, Ghost Kitchen has become a trend. There are more restaurants that operates with multiple names and identities. Consumers may not realize that they have ordered from a specific restaurant and their food is being produced and delivered from a different restaurant, usually local restaurants developed by a local chef or owner. by a local restaurant using a different name and having a different concept. Usually, these kitchens ranges from unique concepts developed by a local chef or owner.

Mr. Beast is a famous YouTuber who founded the *Mr. Beast Burger* which is operating in 900 multiple locations all over United States. He started his fast-food chain in Wilson, North Carolina thru a Ghost kitchen concept and is now a successful franchise. ⁽³⁷⁾

More businesses are adapting to the ghost kitchen concept, another example is a venture called GhostKitchenSA who have seven different ghost kitchen concepts (*Outlaw Burger, Miss Mazy's Amazin' Chicken, Firebelly Wings, Crave Burger, The Wing Dynasty, Wild Wild Wing and Outlaw Burger.*) which operates in the one restaurant kitchen is called “*Los Patios*” in San Antonio, Texas. Chefs Stephen Paprocki and Adrian Cruz together handle the menus and preparation for each restaurant. They also added a dine-in concept at the same location which is called *Gun slingers* which also offers delivery service. All their ghost kitchen meals are available for pickup or delivery via Uber Eats, Postmates, Grub Hub and DoorDash apps. They also have an active social media page where they post daily to keep up their digital presence online to spread the word about their food.

James Garofalo who is a chief operating officer of “*Goddess and the baker*” which is a café that operates in several locations in Chicago and one in Brookfield who is now operating twelve ghost franchises in his kitchen at his Brooklyn café (*Monster Mac, the Big Melt, Grilled Cheese Society, Miss Mazy's Amazin' Chicken, Toss It Up, CraveBurger, Outlaw Burger, Ghost Grille, Firebelly Wings, Wild Wild Wings, the Wing Dynasty and HotBox by Wiz, from rapper Wiz Khalifa.*).

Based on Mr. Garofalo, Delivery-app orders enter into one tablet and the takeout containers comes in all the same except for the branded one that have stickers in it. The recipes are from Nextbite Company which is a Virtual-restaurant concept which offers fifteen different restaurants to choose from where they all have the recipes of the menu and the suppliers to get the ingredients from. They offer a low-cost investment which starts from \$100,000 and any commercial kitchen owner or operator

can have a partnership with them. Nextbite takes 45% cut of the sales but handles all the delivery-app fees. The setting is ideal from business owners since there's no need to worry about menu development and modifying his own brand. Business owners are not just buying these brands for their recipes nor names but they're buying a solution to a problem all small restaurants are facing right now which is visibility. ⁽³⁸⁾

1.3.4. Ghost Kitchen in Portugal

Portugal is currently entering to the ghost kitchen trend as it gives more opportunities for small business owners or even current business owners to expand and try new products to offer. In Lisbon, WEAT gastronomic hub or Culinary Cowork offers a space for clients to start their own ghost kitchen. They have the facilities with all the necessary equipment to prepare and serve foods. A restaurant called *Kojin* by Gonalo Bouceiro and Ana Alves which offers Asian cuisine operates with WEAT gastronomic hub. Their most popular dish is an Oxtail bao-buns which are Asian buns. They also offer Chow Mein chicken, gyozas and Korean BBQ chicken. They are only available for take-away or delivery which is the main point of ghost kitchens where they have partnerships with Uber Eats and Bolt foods while on the weekend they offer their own delivery service for a 2€ fee. ⁽³⁹⁾

Another ghost kitchen is located at *Campo de Ourique* neighborhood in Lisbon which is called All to go which offers a quality contemporary cuisine where they even allow their clients to combine dishes from different restaurants. There are 6 different restaurants that works under All to go. Smile to go which offers healthy cuisines like veggie burgers, Asian bowls, salads, and wraps. Sushi to go which offers sushis, sashimis, poke bowls, and even vegan sushi option. Pizza to go, for pizzas. Burgers to go for burgers and

selected cheese, Sanduba to go for sandwiches, bagels and hotdogs, Chicken to go for finger foods like fried chicken and fries and Sweet to go for spoonful and bite-sized desserts. Their customers could also pick for a menu which offers menu from each concept. There are six combinations that they currently offer, Shrimp bowl, 12-piece combo with drinks and dessert, half portion of fried chicken with fries, Poke sake Maguro, pepperoni pizza with drink and dessert, *Mata bicho* burger also with fries, drinks and dessert, Brie sandwich, Roast beef wrap with drink and dessert, wrap feta and 20-piece vegetarian combo drink and dessert. ⁽⁴⁰⁾

There are other kitchens that are available to do a ghost kitchen which are mostly located in Lisbon, one called *Kitchenette* by Joana Duarte which is located at *Campo de Ourique*. Another one is located at Picos area which is called Now Kitchens by João Fernandes and Elisa Veiga. And as mentioned before, WEAT offers these spaces too for people to explore. These spaces are giving opportunities for new projects and new brands which gives the people a way to become creative in the food market. It's also mentioned that in the coming months more Virtual spaces brands are entering the Portuguese market like the Cloud kitchens brand. ⁽⁴¹⁾

In Porto, a businessman Antonio Matos is one of the franchisees of MFD Foods. MFD Foods is one of the very successful dark kitchens in Europe where their business model consists of 18 famous brands within the same kitchen operation. They carefully optimized their menu which are developed by chefs and optimizing ingredients, offering the customers a diverse dish and gives high profits for the investors.

Antonio Matos who owns a traditional restaurant in Vila Nova de Gaia used the structure and employees on implementing the dark kitchen model. Since the pandemic hit, it affected the profitability of the restaurants which made him decide to open new brands for delivery service which the franchisor provided the business were implementing new menu and diverse range of strategies together with digital marketing and social networks. ⁽⁴²⁾

As ghost kitchen gets more recognized, certain businesses are adapting to the trend as it gives good opportunities to expand the business and increase the income.

1.3.5. Business Models of a Ghost Kitchen

Like a traditional brick-and-mortar restaurants, ghost kitchens also vary and scope different dining style.

Independent Ghost Kitchen business model is a ghost kitchen where an independent kitchen prepares a single menu to order in a kitchen without a storefront. Usually, this type of model partners with third-party deliveries, this kitchen leaves prepared orders for the partnered delivery service to pick up at the area. They are usually dependent on the third-party apps to receive orders though they don't own their customer's data which means they couldn't interact or retain customers.

Another type of business model which is a *Multi Brand Ghost Kitchen business model* which works the same way as the independent ghost kitchen, but the difference is the multi brand uses a single kitchen space to prepare a multiple virtual restaurant menu. This concept creates more ways to reach customers and increases total sales through multiple dining concepts.

Operator Managed Ghost Kitchen business model is when a traditional restaurant creates a virtual restaurant menu in their kitchen. The restaurant does not list their virtual menu concept on their physical menu and the customers place their order through third-party delivery applications or the virtual restaurant website or mobile application.

A *Mid Ground Ghost Kitchen business model* is where they prepare orders in kitchen with small storefront and the customers can pick up the orders if they prefer. This type of kitchen may cost more in terms of the rent, but it also decreases the third-party or own delivery costs. Clients can directly order through mid-ground ghost kitchen, giving operators an ongoing access to their customers. Also, this kitchen offers a wider clientele base since majority of customers prefers convenience of eating at home without paying a delivery fee.

Lastly, a *Brand Owned Ghost Kitchen Business model* is a type of kitchen where they only sign with a single third-party delivery service and only accepts orders on that platform. Some third-party deliveries prefer brand ownership as it gives them exclusivity on the market and control over the businesses that uses them. As it's the third-party delivery has the customer's data and access. Although this type of kitchen is at the mercy of the third-party delivery service they use since delivery services can continually raise fees since the virtual restaurant couldn't make a change without losing all their clients and start over. Having a limited delivery service has its risks but also rewards. Since it's a brand owned, the delivery application company would want the owner to succeed and will often force them to succeed and push more business their

way. It will appear higher in the application's search page and would receive other advertising aides. ⁽⁴³⁾

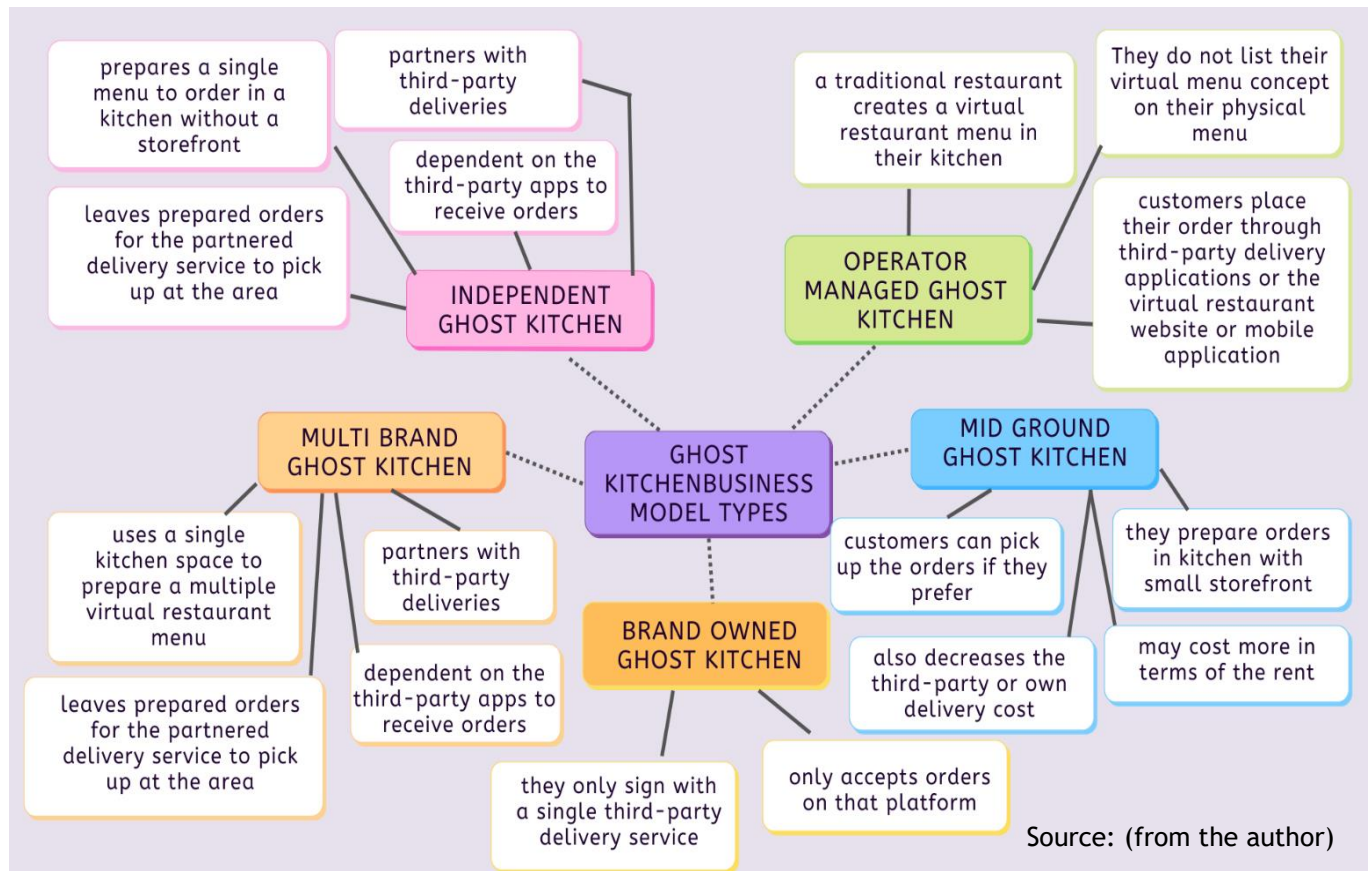


Figure 2 - Ghost kitchen business model types

1.3.6. Pros and Cons of a Ghost Kitchen

There are pros and cons of having a ghost kitchen. The pros are it is possible to test out menu without impacting the original brand and having the flexibility to test new concepts, turning off online ordering if demand is greater than supply, fewer staff are needed like front-of the house staffing and dining space, lesser waste when using the same ingredients as a normal restaurants and virtual brand. Virtual brands are the ones who provide marketing and support, they easily target and gather customers demographic from specific geographic locations, they also reach new customers and

create new sales opportunity and finally they can operate when host restaurants are open or closed while minimizing risks. Shorter opening timeline, since most of the equipment exists whether working in a commercial kitchen space, or an existing restaurant space, lower tech costs since third-party delivery services provide the tablets to receive incoming orders and handle all the online payments and finally fewer required permits, only the bare minimum of restaurant permit is needed.

And for the cons, third party delivery are expensive since they charge 15% to 30% on every order. Though this can be stepped aside by offering pickup or making an in-house system for online ordering directly and in-house deliveries. Though, ordering and delivery in-house increases payment processing fees for payments. There is an inconsistency in temperature and delivery hour which is a loss of time for the customers if it wasn't deliver on time. Also, there are no interaction between the employees and the customers. The hospitality concept was removed where the customers wouldn't be able to experience the customer service in terms such as welcoming guests, table service, and so forth, which can impact staff workplace satisfaction, also creating own online platform can be challenging. Extra storage is needed since some kitchens are shared space where there are limited space to work with and use. Marketing challenges, since ghost kitchen does not have store fronts, buying marketing packages from the third-party platforms and investing in social marketing takes time and money. Lack of customer data since the third-party platforms do not share this so in order to promote to more and previous customers paying for third-party marketing packages. And finally, ghost kitchens would have a hard time in rural locations, ghost kitchen needs high

volume of orders to be profitable and rural areas may be lacking of customer base to support the operation. ^(37, 44)

Some ghost kitchens are modeled for franchises, especially some restaurant chains trying to remodel their business to recover from a loss due to the pandemic. Even though it offers growth and opportunities for diversification, they are still hurdles to get over from. Location is one of the most important factors for a ghost kitchen to work where it's easier to distribute the products. Knowing the consumer demographics and competition around the area. Knowing the service area that the third-party services can cover, also the cost of delivery is a major factor for the ghost kitchen, When the consumer orders the food online, determining the location and the time of delivery is important. Another factor is knowing that although there are no more overhead costs of a dining room and front-of-house staff, there are more marketing costs and delivery costs. And the most important factor for a ghost kitchen is customer satisfaction and reviews, having new customer relationship is fragile. Twenty-seven percent of consumers stop ordering from restaurants after a bad experience and Seventy-seven percent find long wait times to be a deal-breaker. Estimating customer satisfaction is a key of long term success. ⁽⁴⁵⁾

PROS	CONS
Menu Flexibility	Third-party delivery service can be costly
Control over orders when it becomes too overwhelming	No direct customer interaction which removes the hospitality concept

Fewer manpower needed	Increase in fees for payments
Lower tech costs	Marketing challenges
Fewer permits required	Lack of customers data
Shorter opening timeline	Difficulty in rural locations
Lower risk	Delivered goods wouldn't be always delivered at the correct temperature

Source: (from the author)

Table 1 - Pros and Cons of a Ghost Kitchen

1.3.7. Technologies used in Ghost Kitchen

As the food delivery industry set-off especially in the pandemic time, it paved way for new business opportunities like ghost kitchens. As commercial and brick-and-mortar restaurants shifted to delivery and take-out, they need to modify their technologies. Managing different remote kitchens. and virtual brands from a single platform is the main key in managing a ghost kitchen. These technologies could help these business owners to adapt to the new way of delivering their services to their customers at ease.

Having a good Point of Sale (POS), Online Ordering System, Ordering Applications, Kitchen Display System (KDS), Inventory Management and Reporting and Analysis tool are the main technological requirement for a ghost kitchen to work well.

Companies offers a Point-of-Sale system that updates the menus on the company's website and mobile application as well as the third-party delivery applications. These POS accepts orders and once an order has been placed online via website or mobile application it goes to the restaurant's POS system then the order will automatically be sent to the Kitchen Display System (KDS) and finally when it's done the customer would

receive update via mobile app, text message or email that their order is being delivered. This POS also manages payment processing and inventory updates in one single platform. Some of these POS also have location-aware technology where it is integrated with GPS-enabled web app which automates contactless pick-up. Having this type of POS that is open to integrations with third-party solutions increases efficiency. This not only saves times and reduces the risks of errors which mean it can cut some of the labor costs for the company.

Other than having an efficient POS, having a Reporting and Analytics tool is another key in running a ghost kitchen. This gives the entrepreneur a valuable insight of what's happening to their business so it's easier for them to make changes and decisions. Making sure there are the right number of people working, reducing waste by managing an effective stock management and even in creating a profitable menu where it's easier to identify the top seller from the rest. By having the right reporting tool, it will help the business cost checked and profits flowing.

As mentioned above, these POS systems comes with different applications but the most essential part of it are the delivery applications. With the ghost kitchen business, delivery applications are what matters the most since this business does not operate as a normal brick-and-mortar restaurant. Without this application the ghost kitchen would not have anything, so this is this application has the most important role. Delivery services like Uber Eats, Glovo and other are reachable just with the few clicks on the mobile phone or computers. Though these services charges differently by percentage in commissions as mentioned before. Even though partnering with online deliveries, it

is also important to consider implementing a personal restaurant website or mobile application for accepting orders as an additional sales channel.

Another great factor in having a POS system is it can manage the inventory efficiently. It can track daily stock consumption and when it needs more it can prompt the manager. It helps in reducing wastes and keeping food cost under control which also enhances menu profitability.

And finally, another part is to have a Kitchen Display System which can optimize order and preparation time. In a fast-paced ghost kitchen, order preparation takes 10-12 minutes if it's to deliver the order within 30 minutes. When the order is received, the KDS system will update, and the kitchen staff can view and prepare the order immediately. This makes the kitchen flow efficiency in the maximum, and it enables to identify any problems or lags to further optimize the preparation time. Having all these technology in one platform ensures efficiency and supports a smooth functioning ghost kitchen. ⁽⁴⁶⁾

1.3.8. Marketing the Ghost Kitchen

Having a good marketing strategy is an important part of having a ghost kitchen. As explained before this type of business does not have a direct customer contact which makes it difficult for this business to build its profile in the market, but with an effective marketing plan it will allow to reach more customers and make more sales.

Most of the marketing would be placed online, like social media presence and an attractive website. Focusing on platforms that is wide reach like Facebook, Instagram, TikTok and Twitter. Social media offers digital marketing that are easy and affordable

with social media advertisements. Also, by using the online platform business owners can promote specials and limited-time discounts to their followers. Offering discounts to new clients and encouraging users and clients to post about the business and the food on their own and the business social media pages.

Instagram is the best social media application in highlighting foods and products through photos and videos. This platform has over a billion users, and this is where most customers post their reviews with photos and videos. Also, it's easy to interact with customers directly in the comment.

Facebook allows customers to see the business through Business page and it also allows the business owners to pay for advertising service in an affordable price. Since it has a 3 billion users, it pulls customers in by making them aware of the certain promotion and special offers. Also, with this platform it's easier to add in a website or the third-party delivery application link so it can bring the customers directly in one click.

Twitter is another social media platform where to promote. By using hashtags and retweets the brand, it's easy to use and promote especially in building brand identity.

TikTok is one of the most popular one these days, more and more brands are using this social media application in promoting their brand and restaurants. Younger audiences are in this application so it's the most advisable application if the main target market are younger audience. By showcasing some dishes by filming a short video and by creating a video that suits the brand could also help in promoting in this platform.

Once the customers have tried the product and services the next thing is to retain the customer. Offering incentives and rewards to keep the customers coming back is a way,

loyalty cards, discounts on their next purchases, special offers when they are endorsed by a friend by using a generated code to purchase or reward points when they come back more times. These incentives could help the attract and retain customers and at the same time earn. Building a strong relationship with the customers is important in this type of business especially since this is not a normal type of food business. With these things it's easy to promote and encourage the customers to come back.

Online referrals and reviews are also a way to get found quickly online. When customers leave reviews on the social media platform, it helps the business to be on top of the search sites. By doing this, it's advisable to give the customers incentives when they leave a positive review.

Another thing to consider is advertise online where the company can pay for paid advertisements where the owner pays every time the customers click on the ad which means they only pay when the customer shows interest to it. This is a good way to boost traffic and it's easy to monitor the effectiveness of the ads and to adjust the price base of the performance.

Managing feedbacks and reviews are also important because it gives a perspective of what the customer thinks of the products, services, and the restaurant overall. Customer's opinion matter, therefore, it is important to reply to the reviews especially the negative ones. By doing this it would make the customer presence seen and letting them know that their opinions were heard and appreciated.

Email Marketing thru newsletters is one of the effective tools. Once obtaining the customer's email, it's easier to email them weekly or monthly in keeping them updated

of what's happening or if there are promotions and offers instore for them. This could update them to order again or get them engaged to the offer. This could be a powerful tool to foster loyalty and repeat business.

Having all these social media accounts is a big factor but also having an attractive website gives more customer potential, it could give the customers more insight about the brand and act as a pathway where they could find all the links to the business' social medias, menus and even place an order. By having appealing photos and videos on the website it could help customers in. Also, include some buttons where it would attract the customers to act, like "Get 10% off your first order" etc. Hiring a professional help to set-up and maintain the website is important since this website is like the restaurant ambience for the customer, investing in a good website is crucial to success.

Keeping the menu attractive with accurate descriptions and unique names for the meals in the website and social media accounts are vital. Making sure the branding and design are the same on all platforms and the menu are consistent. Considering which dishes are best for traveling and efficient to produce since in this business every second counts and it's important for the food to arrive in a good condition.

And finally, analyzing the online traffic. Finding out who the customers are, what they like the most, where they are from, and what is their average age. With this it's easier to target the customers with the right information through the right communication channel. This will help retain and engage with new customers. (47, 48)

1.3.9. Distribution

A Ghost kitchen's methods of distribution are mainly by either delivery, pick-up or take away or all of them which is far more different than a normal brick-and-mortar restaurants. A brick-and-mortar restaurants offer dine-in services and also delivery but there are usually limited parking for delivery drivers and defective operational workflow which develops slower deliveries, more room for error and interrupted dine-in experience. ⁽⁴⁹⁾

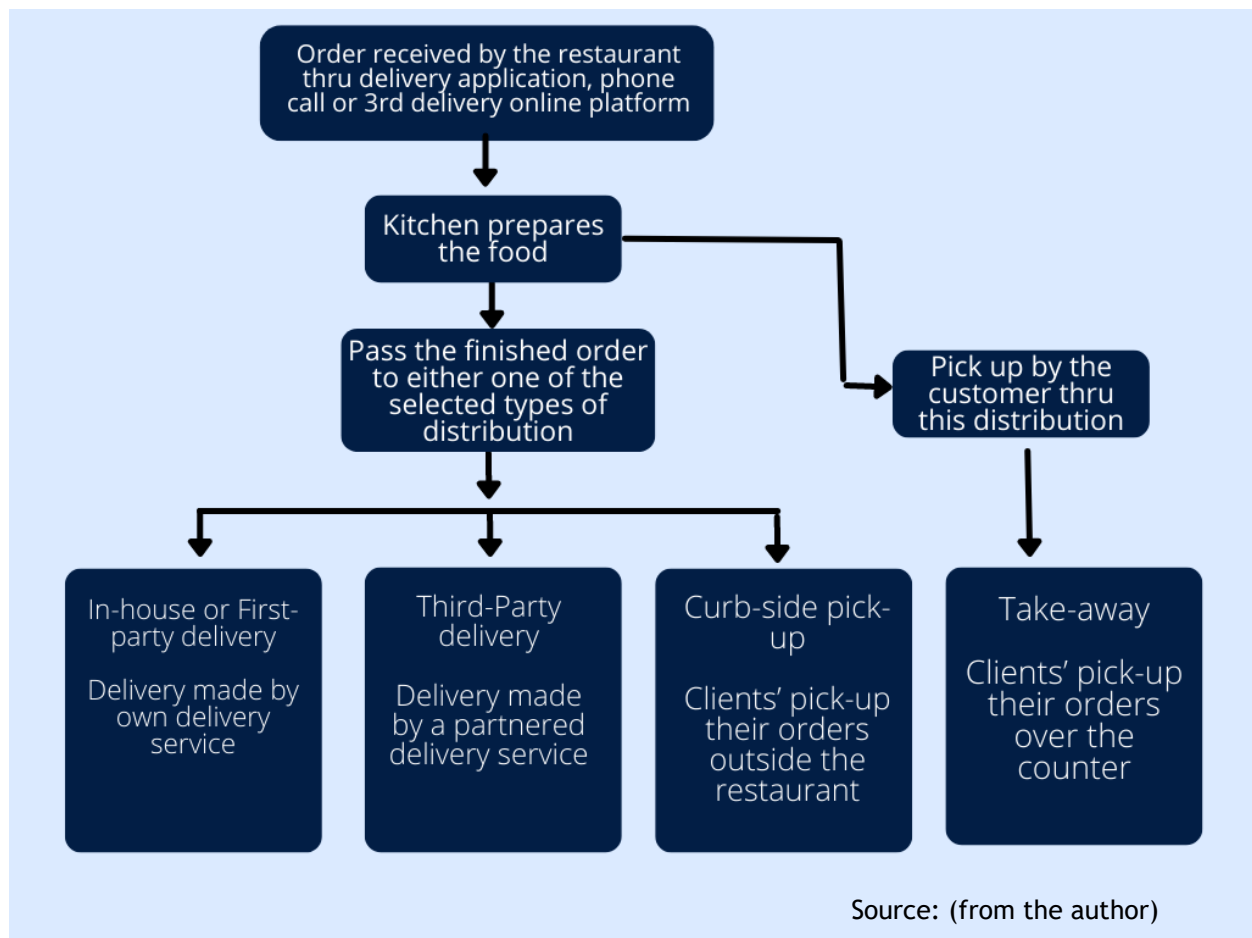


Figure 3 - Distribution process of a Ghost Kitchen

1.3.9.1. In-house or First-Party Delivery

Offering an own delivery service gives control over the delivery process in terms of speed, service, and quality with a variable cost of running it by the company itself. Many customers prefer to order directly from the restaurants without going to another delivery services.

In-house delivery or First-Party delivery service is when a business uses their own resources and employees to deliver the food. This type of delivery allows the company to take control of the customer-facing presence and allows them to change and personalize anytime as the business grows and shifts. Having this delivery means that it has it's own dedicated application and website which both look and interact by own preference. By owning and controlling an own delivery service, many restaurants prefer to do this by having their own delivery staff and vehicles to get goods from the store or kitchen location to the customer's home, office, or preferred location. Businesses chooses this business model if they can't partner up with a third-party service or reliable service provider.

Operating an own delivery service on top of day-to-day operations is exhausting especially on time and resources but it allows to have a complete control over the customers experiences, starting from the incoming order to the time the customers receive it. Having an in-house delivery means the owner is solely responsible for not letting the standards slips especially on busy times. It also means of covering all the costs of delivery drivers and maintain the vehicles. On the other hand, one of the benefits of having in-house delivery is that the access to the customer data is available which can be used for promotions, retargeting clients, and offering loyalty reward

programs. Restaurants could build a stronger relationship with their local customers through this and it's a major factor in running a good business. It's more reliable and much more affordable on the other hand. (50, 51)

One of the positive factors of having an In-house service is ***having complete control*** over the delivery process which helps the business meet customers expectation. Even if a mismanagement issue occurs, it'll be easier to resolve the problem without communicating to a third-party delivery service. With this, it's easier to manage the delivery operation and training the delivery staff which can increase efficiency in delivery operations by setting procedures and guidelines. Alternatively, there are delivery management software available which automates and streamlines the entire delivery mechanism. ***Giving a better service for customers in which it creates better delivery experiences*** which can be a big factor for the business as having a good delivery experience for customers is crucial for getting them order again. By having an in-house delivery system, it'll be easier to train the delivery staff and, it's possible to choose what product and model to offer for delivery. From receiving orders to executing delivery, it gives the business owner the control through the entire delivery. Another advantage of an in-house delivery system is it is possible to ***reduce delivery time***. By having an own in-house deliver, it's possible to execute deliveries faster as soon as the order is prepared since there is no need on waiting for the delivery service to arrive. By optimizing the delivery time, it'll increase the number of orders served in each timeframe which affect the business reputation greatly. In-house delivery service can help in ***better profit margins*** which gives the business an increase on revenue and retain better profits. It also eliminates recurring costs and other hidden commissions

associated with third-party services. With third-party services, some restaurants must adjust their prices online to compromise the commission fees which prevents some clients from ordering but having an in-house delivery, it is possible to omit these percentages which makes it possible to offer lower menu prices and making delivery attractive to customers. ***An increase in brand's loyalty*** gives guarantees that the business is not overshadowed by the same third-party delivery services that other businesses also use. When the business handles their own food delivery, it is rewarding to the existing customer base the convenience and could potentially gain more repeat business and referrals. It can also help the business to be differentiate from the competition by keeping the brand perception consistent. With in-house delivery, it's easier to ***eliminate communication barriers between the business and the customers*** as the only point of contact is between the two parties and no other outside parties involve. Getting in touch with the customer throughout the order cycle is a good way to maintain relationship which could help the business. It makes it easier to obtain feedback and at the same time implement changes if necessary. Personal communication gives a positive effect on the customer's experience and with in-house service it gives better customer satisfaction while reducing any potential communication breakdowns in terms of orders and deliveries. And finally, it gives a ***better order management*** where it is easier to update the online delivery menu and other necessary changes without reaching to another service company. In-house delivery system requires a proper investment and resources to help the restaurant function efficiently. It could help the business in the long run by managing, collecting,

monitoring and analyzing data in which could help every part of the delivery cycle that can improve operation, reduce costs and improve customer satisfactions. (52)

For the disadvantages, the first would be *spending on maintaining the website, application and POS system* since these things are needed to be routinely monitored, maintained, and upgraded to properly handle delivery demands. Having *less exposure and less popularity* is another disadvantage for an in-house delivery since this type of delivery does not provide the same exposure as having third-party delivery services offer. Having to pay *insurance and reimbursement costs* can also be a disadvantage for having the in-house delivery as it accumulates more on the expenses of the business. Setting up a personal in-house delivery services requires more investment in terms of time and money. Having extra employees for deliveries, managing vehicles which includes insurance, gas and maintenance needs a certain budget to keep it running. Also, having lack of expertise in running a smooth in-house delivery could affect the business especially in terms of customer experience and business reputation. (53, 54)

Having an in-house delivery service could be beneficial for the business as it helps to communicate directly to the customers and providing them better experience and at the same time, reducing costs related to third-party delivery services. Which can be a good choice for business but may not work for businesses that are just starting which can cost them a lot of money to put out.

Advantages	Disadvantages
Having complete control	Spending on maintaining the website, application, and POS system

Giving a better service for customers in which it creates better delivery experiences	Less exposure and less popularity
Reduce delivery time	Insurance and reimbursement costs
Better profit margins	
An increase in brand's loyalty	
Eliminate communication barriers between the business and the customers	
Better order management	

Source: (from the author)

Table 2 - Advantages and Disadvantages of a first-party delivery

1.3.9.2. Third-Party Delivery

Third-Party delivery has become an alternative for in-house delivery service for the restaurants. These platforms can provide thousands of customers access to business products, expanding the brand visibility in the area and allowing them to increase sales for off-premises dining. Third-party delivery partnership helps struggling businesses on staying open and preventing

Third-party delivery partnership helps struggling businesses on staying open and preventing them from shutting down after COVID-19 pandemic arises. These companies are gaining popularity over five years since more people want convenience. Before the pandemic hits, most restaurant owners and operators were having a hard time with the cost of third-party services where some hits up to 30% and even more. But when the

pandemic hits, third-party services became an essential for business operators since delivery services made extra efforts in working with restaurants to add incentives and makes fees more manageable. Major cities in the United States even moved there temporarily cap the amount of fees third-party delivery services could charge.

A reliable third-party service could keep the revenues coming in for the business especially for restaurants who doesn't have in-house delivery platform. These third-party delivery providers create an easy and streamlined way to add off-premises services quickly. Restaurants can partner with a third-party delivery aggregator that have strong market presence and they can generate the revenue very quickly even if they can't integrate the app into the point of sale or POS systems until later time. Though, restaurant owners need to understand that third-party deliveries are both operational and marketing costs. Google has partnered with some third-party delivery companies which expands restaurant's reach even further. Just by searching in Google consumers can already order online without downloading a third-party application. Also, restaurants can use unique delivery packaging especially for third-party delivery to convert customers to their loyalty program and keep them coming back. Before closing a deal with a third-party delivery, restaurant owners should research the best service provider for them to know which company works well for their brand. Business owners needs to know which services are operating in their area, also consider what incentives they offer, what percentage of each check the service charges and whether consumers around the area uses third-party delivery services or if the consumers prefer to order straight from the restaurant.

Third-party delivery services are certainly not a new concept but with the right approach these services can be more valuable than ever helping businesses and set themselves for success now and in the future. ⁽⁵⁵⁾

Like the first-party delivery service, the third-party service has its own advantages and disadvantages on its own.

For the advantages, Third-party deliveries offers a lot of ***marketing opportunities*** especially through their applications as these companies markets themselves and their partners through website and the apps which makes it easy to order foods. Many services have loyal followers who uses the delivery service rather than going to the restaurant's website. Third-party services let it users to search by restaurant name, cuisine, or specific food. And just by being in this network it increases visibility and attracts new customers who are using the application. It also attracts younger clients and busy families who uses the applications more often. It also gives a priority placement, promoted listing, and featured offering when the owner decides to pay extra to promote the restaurant. Third-party delivery services also help the restaurant to expand their audience by updating their menu without risking so much.

Another advantage is ***saving on payroll and liability*** since working with third-party delivery services, they handle all the delivery services, payment for the delivery drivers, insurances, maintenance, and liability. Having an own delivery service needs its own budget, vehicle is necessary which also needs insurance and maintenance, on top of that a reliable driver is needed which also includes an insurance and salary. With the third-party delivery services, they cover all this which the business owner doesn't have to worry about.

Having ***non-exclusive contracts*** is also an advantage since there's no limitation to only have one delivery service. In fact, it is possible to add a third-party delivery service on top of own delivery and takeout option which gives an opportunity to reach more audiences and attract new customers where it can also help handle more deliveries especially busy time. Adding more services to the business gives it more complexity to the ordering and accounting process and even by adding more tablets to the service station. But if the restaurant has a good POS system that could integrate all the delivery services that the business is currently using, it could make the input, process, and track orders easier. And finally, it gives ***more time to focus on the core of the business***. By outsourcing own delivery services, it could give more time to concentrate on other things in the business and in-house operations since it lessens the worries on maintaining things that involves the own delivery.

For the disadvantages, the first one is ***It has high commission fees and other expenses***, which gives the business the burden of having lesser profit than usual since most of the companies ask for 30% of every ticket including the sales tax and credit card processing fees which is often higher than handling them by oneself. It may be possible to negotiate with the services to lower fees, but it would depend on what it can also bring to the table like unique cuisine, customer volume or location. Another disadvantage is being ***Vulnerable to competition***, since third-party delivery service is open for every business, the competition is high. Having this service may give an increase in visibility but so as the competitors, giving the potential customers to choose based on the price, location, cuisine, rating on the app and even photos of the food. ***Lack of control*** is one of the disadvantages that could ruin the restaurant reputation

as certain things that is associated with having a third-party delivery services like delivery time, or incidents of mishandling, cold or damaged goods and even rude deliver staff could affect the brand's reputation and would lose clients with it also gaining bad review which would affect the chances of getting new clients. Even if in times it's not the restaurant's fault, all the burden ends up to them. Also, having a third-party delivery means having no control directly to applications in changing the menu and pricing. There are times that necessary prices increase in the business and this change does not reflect on the application resulting with dissatisfied customers who can't get their order. With a third-party delivery service, it may cause some *lack in customer loyalty* as many times customer's does not even look at the restaurant name but rather look at the type of food available. Also, it loses the communication opportunities between the business and the customers like feedbacks, suggestions and even complaint handling since the application is not with the business' total control. With third-party delivery service, only the delivery personnel contacts with the customers which affect the impression on how the delivery went. This could give a big disadvantage to the business' *reputation and brand* especially if the delivery is unsuccessful or disappointing to the customers. Lastly, the *technology provided by the third-party delivery service*, by having different tablets for each service can be confusing on which can be overwhelming for the restaurant personnel to handle on peak hours of the day. It adds more confusion when it comes to tracking the third-party delivery sales and costs especially on checking the earnings and keeping track if the payments coming in. ⁽⁵⁶⁾

Choosing which one is the best option depends on the type of business the restaurateur has; it gives the best solution on the matter but in the end, it goes down to the specific needs of the business. Third-party deliveries are favorable by most businesses since it can make up for small margins with extremely high volumes. Quick service restaurant benefits from this since they offer high-volume of orders and helps them utilize these services to deliver more to the clients. Start-up businesses and companies are looking for more affordable option to execute and deliver to more clients which a third-party delivery can offer together with a lower head cost.

Thru third-party delivery, it also gives solution to restaurants who does not have extra fund to have their own in-house delivery but still expands their audience and marketing.

On the other hand, higher-end businesses benefit more on the first-party deliveries. This type of delivery incurs more costs which needs more funds. Although, in the long run it maximizes more profit. This type of delivery service gives companies the control and freedom needed for highly customizes the delivery service they prefer.

Every business, their end goal is to make profit, but for that they need to find a way to maximize their distribution to gain more profit. Delivery model in the business costs is a possible way to influence company's growth, it's best to make sure that the model is suitable for the business in sustaining it in the long term. ⁽⁵⁷⁾

Advantages	Disadvantages
Marketing opportunities	High commission fees and other expenses
Saving on payroll and liability	Vulnerable to competition

Non-exclusive contracts	Lack of control
More time to focus on the core of the business	Lack in customer loyalty
	Reputation and brand
	Technology provided by the third-party delivery service

Source: (from the author)

Table 3 - Advantages and Disadvantages of a Third-party delivery

1.3.9.3. Delivery Applications

In the United States, there are several Third-party deliveries available all over the country which is some are even available outside. Each Third-party delivery have different specifications, and different pros and cons.

Grubhub is one of the best food delivery services overall, it's available in over 4.000 cities in the U.S, London, and U.K. They partner with a large variety of different restaurants which makes them more accessible and more reachable for the clients. They deliver from restaurants to, nationwide chains and even from smaller businesses. With their application, consumers can easily locate for restaurants or the cuisine they prefer around their area. Ordering through the application can be done and even tracking the orders, all hassle-free and free of charge. Grubhub users can also take advantage of some special deals that are offered in the application. Thru their application, customers can pay thru multiple payment methods.

Their fees and delivery fees per minimum order varies per restaurant, the consumers can also subscribe for 9,99\$ per month for free deliveries.

DoorDash also have 4.000 cities around the United States, Canada, and in Australia. They offer variety of cuisines from fast food to sushi and features easy ordering which includes quick reordering from the client's favorite list. It is also possible to track orders and schedule delivery time. Search engines usually recommend DoorDash when the client searches for a restaurant. They also have a monthly subscription for 9,99\$ per month and this reduces service fees when the clients subscribe to DashPass. The application also includes "Yum Score" which rates the restaurant works with DoorDash, this feature helps the client to get their food quickly, hot and fresh. Another feature DoorDash offers is they let the clients order alcohol and mixers from local wine and liquor stores where it is allowed by the local laws.

Seamless, which is a part of GrubHub is available at 4.000 locations in the U.S, London and U.K. Same as GrubHub, they also have a subscription fee of 9,99\$ per month to save on delivery costs and still use the application for free even without subscribing. Seamless has the biggest coverage in New York partnering with big restaurant chains to local food joints.

UberEats is one of the well-known third-party deliveries around the world. They operate in 24 countries and around 500+ cities around the world. UberEats works the same way as how the clients book a ride through Uber, with the application the clients can pay with credit card or Uber credits in the account, which also gives the client to tip the drivers. The clients can also track the foods and schedule a delivery. Though Uber have a 15% service fee, but they also offer subscription for 9,99\$ per month with Eats Pass which makes the delivery free, with an additional 5% discount on orders over 15\$.

Instacart is a third-party delivery for groceries. Instacart specialized in delivering groceries like household goods and in some places even alcohol. They partner with 20.000 retailers across North America, and they even deliver ready-to-eat meals if the local stores offer it in their stores. They deliver the goods straight to the client's door or just drop-off service in minimizing contact. They offer Instacart express which costs 9,99\$ per month and with-it clients can get their goods deliver faster. Otherwise, clients need to a delivery fee attached on each order which can accumulate. They operate in 5.500 cities in the U.S and Canada.

Caviar was bought by DoorDash in 2019 which operates in 28 cities and regions in U.S. This application offers a real-time GPS for deliveries from rich selection of local restaurants which offers pick-up to save on delivery charges. Caviar offers exclusive deals, and it focuses less on fast foods which they emphasize other restaurants.

Postmates operates in 4.200 cities in the U.S and they are part of Uber company. They offer 24/7 service depending on which restaurant operating hours. Clients can order foods to household supplies from local restaurants and stores. They include delivery charges and surge prices especially every peak hour but with their subscription of 9,99\$ they offer unlimited service which removes surge pricing during peak hours.

ChowNow focuses on local restaurants instead of food chains to allow the clients to find local goods around the area. They're commission-free which means that the client's bill won't have unexplained fees. They're available in 18 cities and regions across U.S.

Delivery.com varies in 100+ cities in the U.S. They just don't offer food delivery but also delivers groceries, laundries, and alcohol. They also feature group ordering that

lets the clients split the orders within the neighbors and roommates to minimize the number of deliveries coming and going.

GoPuff offers deliveries on foods, household goods and even over-the-counter medicines. This app is considered as a mobile convenience store that brings the client what they need. They offer up to 2.000 products in their catalog and a convenient flat delivery fee of 2\$. They also offer a monthly subscription of Fam membership for 5,95\$ for frequent users. They operate in 170+ areas in the United States. ⁽⁵⁸⁾

These delivery companies have exploded in the United States especially when the pandemic hit. With this success these companies expanded to other parts of the world including Portugal.

In Portugal, there are several third-part food delivery companies that operates, and most food delivery have 30 to 45 minutes estimated delivery time. This includes placing the client's order, the restaurant accepting the order, preparing the meals and delivery to the order location. The places where it has the best access to a great variety of deliveries in Portugal is in Lisbon. They have Uber Eats which offers 24 hours option like McDonald's and Glovo who does not only delivery foods but other else like groceries, medicines and even household items and these are the biggest two third-party deliveries in the market and, they have smaller ones which is one of them called *NoMenu* which is now called *Please*.

NoMenu or please started from 1998 with 10 restaurants, menu brochures and telephone orders. They are the first home-delivery company in Portugal which was founded by Lorenzo Herrero who arrived in Portugal 25 years ago and he worked as the

head of operations at Telepizza and previously worked in Spain and Mexico. Knowing the market, he had an idea where bringing a delivery service that gathered several restaurants in one platform. The idea was not new bit in Portugal it was a revolution, although it was late *delivery market*. Lorenzo and his business partner Jorge Ferreira have seen this market in other countries, and they just needed to replicate it. By the year 2000, the technology was not that evolved yet, so they relied on to call center services in Lisbon and sent partnerships to over 100 restaurants and only 10 responses came back though some of those company (*Solar dos Nuntos, Solar dos Presuntos and Zeno*) still operates with Please until today. Introducing this new concept in Portugal was tough since Portugal is a conservative country which makes it difficult to enter the market and it was a difficult to work with small businessmen since it was hard to make them understand the concept of noMenu was. The company started growing by 2005 when they launched their first website which was already innovative that time but then when 2013 came and their online sales were residual since people doesn't use internet as much as they do now, the clients prefer to do everything by phone and even through this day they still gather orders by call centers. They expanded to other cities naturally as the increase of number and profile of restaurants are available for delivery. When noMenu started, around 30 to 40% of orders were Portuguese foods that came by phone after customers looked at the menu that was distributed in leaflets. While these days, the Portuguese preferences have changed especially in gastronomy from Italian foods to hamburgers and to sushi's even healthy and vegetarian foods has gained space in orders. By 2019, the entrepreneur admits that they suffered a significant drop and that's when they started some changes then by 2020 the pandemic hits and the

confinement period brought growth although timid. By then they gave the business a total transformation where they replaced *noMenu* to *Please*. As biggest third-delivery services entered the market they lost younger audience so they rebranded the company and opened a platform which appeared fresh, intuitive, and user-friendly where the clients could pay thru bank services like MBway. Their strongest operation is in Lisbon, but they already reached 18 other regions in the country, such as Porto, Aveiro, Figueira de foz, Sines and more. NoMenu was developed to help restaurants to increase their income. ⁽⁵⁹⁾

Another smaller one is *Comer em Casa* and Takeaway.com which operates restaurants that offers food from 12NN to 10PM. These delivery companies include the charges by ordering with them.

In Porto, there's also same delivery options as the ones in Lisbon while other locations like Coimbra and Madeira they have BringEat. In Ponte Delgada, Aveiro, Guimarães and Braga they have *Comer em Casa* and in Évora and Faro they have Comidas.pt. ⁽⁶⁰⁾

1.3.9.4. Curbside Pick-up

Other than Third-party deliveries and in-house delivery, another option for a Ghost kitchen is a curbside pick-up. A curbside pick-up is a service where the customers can pick their orders from outside the store or somewhere else rather than being sent to their home. Curbside pick-ups are not a new concept, it started way back 1921 where the restaurant staff bring the food to the customers in their car at the drive-in restaurants with carhops.

For almost 10 decades, consumers demand a more convenient services which makes big chains to offer pick up delivery services for the past years. With the technology these days, it's easier to do order and pick-up especially it is more convenient and flexible options for the customers.

“Buy online, pick up in store” or “click and collect” has become a trend especially with the technology era and curbside pick-up works in similar way. They place their order and put the location on where they prefer to pick it up after that the payment is done when checking out. The order details would be sent, and the merchant would let the clients when it's ready for collection to the client's preferred pickup location.

With the pandemic happening, curbside pickup makes a safer option for customers as it limits their contact with someone from outside their household. Though even after the pandemic, curbside pickup is one of the most preferred delivery type services for number of reasons.

First, curbside is quicker. These days clients prefer to get their products quickly as possible. As soon as the clients checked out online, they don't want to wait more since deliveries sometime could take a while, instead they'll go straight to the location and just pick-up as soon as it's ready which makes curbside delivery quicker and efficient.

Another reason is it's less stressful, customers don't have time waiting for their orders especially waiting in line so ordering and picking it up at the allocated time makes everything smooth and less stressful for the clients. Also, for clients with disabilities or elderly, this option has the staff member place their orders straight to their vehicles.

Customer satisfaction and avoiding mishaps is another reason were picking up the goods are way better than having things especially foods delivered since there are times that mishaps happen. Thru curbside pickups, it minimizes potential damages before the clients receives the goods. Even so if a potential damage or accident happen, the business can easily fix the problem and that can make a better customer experience and reduce the risk of receiving a negative review. Satisfied clients would likely come back again and even tell their colleagues and friends about the services and could even drive future online sales.

Less to no shipping fees or charges which saves the customers a lot more in money. Instead of using delivery, curbside pickup does not charge fees which also ensure that the customer is happy with their product before they leave.

And finally, it minimizes social interactions, Curbside pickup minimizes person to person interactions, without affecting the convenience of flexibility for the customer. Safety precaution become a core aspect of consumer behavior as more consumers experience the convenience of picking up an online order without leaving their vehicles. ⁽⁶¹⁾

As we progressed to the technology era, this type of service has become a convenience for customers around the globe. Everyone has their mobile devices and computers and with the rise of online orders and shopping together with the current pandemic, this solution could help businesses in operating efficiently and keeping it safe while giving the employees and customers comfort and peace of mind.

1.3.9.5. Take away

Take away is a meal cooked and bought at a shop or restaurant but taken somewhere else, often home, to be eaten, or the shop or restaurant itself. ⁽⁶²⁾ Take away is a popular service in quick service restaurants, then other restaurants adapted this service to attract more clients without investing in improvements within the premises. This also gives convenience to the consumers who prefers to eat at the comfort of their home or offices. Customers prefer high-quality foods that's easy to order, pick-up and consume on their preferred schedule. Take-out is a popular choice of service since it's convenient and it's much cheaper than having it delivered since there's no need on paying extra cost for transportation. Implementing this type of services needs some considerations to make it work efficiently. Offering a takeout during lunch or dinner service hours means there will be additional orders on top of the dining offer that the restaurant does which will add to the workload of the kitchen staff. Also, it needs a dedicated staff to take the orders for take-away service and a dedicated chef and kitchen team who can handle an increase of orders at peak times since this will be a crucial to a successful takeaway service. It's also necessary to consider the costs of having a takeaway service. To execute it well, investing in tools to facilitate orders, adding additional staff or hours and food ordering and take-out supplies like containers, plastic cutleries, and bags are necessary. Consider marketing the takeaway service to loyal guests, use this as a leverage for this service. It can help plan out the takeaway menu options and figure where to market the service well. ⁽⁶³⁾

Just like a delivery service, takeaway service helps to increase sales especially on times that the dining room is empty and nights when customers aren't out to eat or even

when the dining area is full, Takeaways are the option to some people. On the other hand, takeaway can cause some disadvantages for the business and the customers. Takeaway lowers the food quality since putting a hot food in a box changes its texture and temperature which does not match the plates that is serve in the dining room. It may end up as a disappointment to the customers so it's necessary to review the takeaway menu that fits perfectly to this type of service. Takeaway service also gives no control over the food once it goes out to the customer. Unlike in the dining service, if the guest is not satisfied or unhappy with the food it is still possible to control or do something about it. But with takeaway, it's impossible to do that which could affect the relationship with the client and other future clients. Even so, takeaway service is another way for the restaurant to increase sales and it's the best to maximize it as much as possible. Writing a to-go menu that only includes food items that travels well and changing the way how some items are plated or packed to keep the food quality as close as dine-in as possible. Items that are supposed to be eaten best when crispy or crunchy is probably not the best items to include to-go menu. Picking the best to-go boxes that works best with the food item to make it look decent and appetizing also efficient for the work staff to handle. Adding an additional staff for the takeaway service could also help but not totally necessary when there is enough staff in the room, just proper scheduling could help managing it well. ⁽⁶⁴⁾

Having an extra service like a takeaway in a ghost kitchen restaurant is a service that needs to be considered and added since these services is much more alike as having delivery service but more likely as a curbside pick-up where the customers doesn't need to pay extra cost just to get their orders which is an advantage for both parties.

The difference between the curbside pickup and take away is that curbside pickup is a process of ordering food in advance then receiving it outside the store or at a designated location at a designated time. This is much faster and more convenient than a store pick-up as there's no necessity in entering the store. At the same time ordering is far easier using the company's website or application. Meanwhile, a takeaway is a process of ordering inside the restaurant and picking up the order. It is not as convenient as a curbside pickup as the customers need to wait for their order.

2. Objectives

This project has two main objectives:

1. Understand the Portuguese acceptance of Filipino cuisine.
2. Study the feasibility of developing a Filipino food concept based on a ghost kitchen business model.

As for the specific objectives:

- 1.1. Conduct a survey to assess the knowledge and acceptance of Filipino cuisine.
- 1.2. Conduct a product testing to understand people's real acceptance and the need for changes/adaptations to the original recipe.
- 2.1. Understand the different models of operating a ghost kitchen.
- 2.2. Develop a business plan to validate feasibility.

3. Methods

This chapter is to describe the tools used to execute this study. The literature review was used to understand the origin of the subjects starting from Ethnic cuisine, Filipino cuisine, and Ghost kitchen. This review is needed to learn more about how the ghost kitchen operates which is helpful on making a business plan.

The survey was used to evaluate the knowledge of the participants regarding Filipino cuisine. This survey consists of questions regarding what they think about the cuisine, how they knew about it, if they knew about it, etc.

It was distributed thru email within the university premises for the students, professors, and faculty staff to answer. The data gathered was collected and it was inputted into an excel file to be analyzed with the use of descriptive analysis. All the responses were analyzed using the total amount of the response and from there it was summarized from which has the most response to the least. The data were used on assessing the knowledge of the participants particularly on the cuisine itself.

The product testing was made to know if the Portuguese would accept Filipino cuisine. This test was executed between two universities with the cooperation of the students and professors as the participants. All the dishes were only labelled with numbers and no explanation of the dish were declared to keep its identity anonymous since it is easy to search about the dish using the internet. All the data that were collected was also analyzed using descriptive analysis as it was easier to summarize the responses of the participants regarding whether they like the dish or not by using scale system.

The business plan is used to evaluate if the business would be feasible. For this *Finicia* was used to understand where the business would go for the next five years. As seen on the business plan, it shows that the investment, sales, cost of goods, manpower, evaluation and different scenarios on what will happen if the sales go down 10%, what if the cost of goods goes up 10% or what will happen if both fluctuations occur simultaneously.

3.1. Survey

The objective of the survey is understanding the knowledge of the Portuguese and foreign citizens living in Portugal on what a Filipino cuisine would be. This survey has not been executed before since Filipino cuisine is not as well-known as other Asian cuisine that currently exists in Portugal. The survey was distributed inside University of Porto and in Instituto Politécnico do Porto Escola Superior de Hotelaria e Turismo. It was publicized from the 26th of October to 31st December 2021 which was sent thru email and Google forms was used for the questionnaire. The demographics of the respondents were also collected with the survey to recognize the age, gender, occupation, and area of residency. It gives the necessary information for the study to take place especially on recognizing the knowledge of the participants about Filipino cuisine. It is also intended to give a better outlook on what the respondents think about the cuisine, how did they know or learn about it, if they have tried a certain dish and where they tried it, and if they haven't then what are their expectation would be. Portuguese and foreign citizen that are living in Portugal and in different age groups are targeted to answer this questionnaire. The survey questionnaire consists of multiple

choice and checkboxes questions where they also have a space to input answers if it wasn't stated in the questionnaire.

A survey is a type of questionnaire that shows questions that are related to the research subject where it's in either form, content or number of questions which vary accordingly to the research subject. A survey is not just a simple data collection tool since it shows accuracy of the data that were gathered and would depend on the methods that was used in the surveys. ⁽⁶⁵⁾

The data that were collected were analyzed to see the context of what Filipino cuisine is from a foreign perspective. For data analyzing, Microsoft Excel was used to organize the data easily. From there it was summarized, and the percentage was added to understand the data collected. A descriptive analysis is used to analyze the data. The data were rearranged to its specific location together with the same answers for easier summarization of responses. To make it less complicated, graphs, tables and pie charts were made to show and give a better perspective of the results.

Descriptive analysis is a transformation of raw data into a structure that is easier to understand and explain thru rearranging, ordering, and manipulating data to develop a descriptive information. ⁽⁶⁶⁾ The frequency was measured to understand how many times the certain response was selected and modified it to overall percentage to see which one has the most response and which one has the least.

After analyzing the data collected thru the survey, a detailed menu for a taste test was planned. All the data that was collected was used to understand which dishes would be

the best to introduced to the participants. Using a survey method is one of the most efficient ways on collecting data without complications.

3.2. Product Taste Testing

Taste testing is an important part of this project where it would give an actual information from the survey that was made. Taste testing would give a better insight since the participants would get the opportunity to try and taste the foods. With the taste testing, another set of questionnaires were provided. The questionnaire consists of questions about the dishes that were served and how it is for the consumers. All dishes were unnamed and only presented in numbers to identify which dish it is to evaluate.

Two different types of taste testing were made to see which type of testing is suitable for this type of project. The first test was made in Faculdade de Ciências da Nutrição e Alimentação da Universidade do Porto where a technical type of testing was implemented.

The test was organized inside the University with the help of the course director and with the students of Mestrado de Ciências Gastronómicas as participants together with other faculty members and employees.

Participants were introduced in the Sensory Analysis room and all the dishes were placed in cups with the product number to test and the questionnaires is placed in each booth for the participants. The test lasted within 30 minutes per group. Around 30 participants attended the testing.

The second test was made in Instituto Politécnico do Porto Escola Superior de Hotelaria e Turismo where the test is made in a restaurant casual dining type to see if this type of testing is to understand if this type of testing works well with this type of study.

The test was organized with the help of the professors in charge of the kitchen laboratory. With their approval, a google form inscription was made and released thru the university email for the participants to sign up. Reservations were made so each participants have their time scheduled to control the number of participants in each time schedule with 30 minutes interval each. Each participants have their time scheduled. Around 45 participants attended the testing which composed of students and professors.

Participants were introduced in a dining area where each dish are served in a typical restaurant setting but still labelled with numbers to identify which dish, they are testing.

The dishes presented were the following:

For the appetizers, the first one is a Filipino spring roll called *Lumpiang Shanghai* which consists of ground meat, carrots, celery, onion, garlic, spices, seasonings, and egg as a binder wrapped in spring roll wrapper and fried. *Lumpiang Shanghai* was the first choice since based on the popularity of it amongst the Filipino and foreign citizens. Also a survey made by a website called Taste Atlas, they ranked *Lumpiang Shanghai* with 4.8 stars which is one of the best dishes in Southeast Asia. ⁽⁶⁹⁾ The *Lumpiang Shanghai* is paired with a locally produced *Banana ketchup* which matches well with the dish as the ketchup is sweeter than a tomato ketchup.

Kwek kwek is a typical street food dish which is commonly seen all over the Philippines especially Manila. It's a boiled quail egg rolled in flour and dipped in batter which consists of flour, cornstarch, seasonings, annatto powder and water then deep fried until the batter is cooked. *Kwek kwek* was chosen since this type of street food is not as bizarre as other street foods from Philippines since it's just made with quail eggs. Most Filipino Street food is considered as exotic as most of them consists or made from livestock innards. *Kwek kwek* is paired with a sweet sauce which is also commonly found in street food carts. The sauce is made with water, sugar, garlic cornstarch, soy sauce and seasonings.

And as for the final appetizer, *Okoy* was served. *Okoy* is made of vegetables like beansprout, cabbage, carrots, and onion together with shrimps, but crab sticks were used as a substitute. Then the vegetables and shrimp are covered with batter made with rice flour, wheat flour, seasonings and water then fried in oil. It is served with a vinegar dipping sauce which consists of Cane vinegar, sugar, onion, garlic, *Okoy* is one of the traditional side dishes in the Philippines therefore it was chosen. All 3 appetizers have their own different identities in the Filipino cuisine which is why they were chosen to be presented. Also, all these 3 dishes can be easily modified into a vegetarian dish. The main dish that was presented was called *Binalot na Adobo*, which means the dish is wrapped in a banana leaf. *Adobo* is the most recognizable dish from the Philippines, it is treated as the national dish of the Philippines that is why it was chosen to be served and tested. *Adobo* is made with meat either chicken or pork can also be vegetables, together with garlic, vinegar, soy sauce, bay leaf, peppercorns, and spices. It is

simmered until cooked. Then it was wrapped in banana leaf together with steamed rice, tomato and salted egg salad and onion bits hence the name *Binalot na Adobo*.

For the desserts, the first one is called an *Ube bar* which is a favorite afternoon snack among the Filipinos. This dessert was chosen because of the *Ube* ingredient since this ingredient is one commonly found and used in the Philippines. Also, the purple color gives more curiosity to the people who's trying it as they're trying to figure out why it is in that color. This dessert is made with flour, sugar, eggs, *Ube* extract and powder, butter, milk, and coconut. It is baked and rolled in coconut.

Bibingka is a traditional Christmas that can be found all over the Philippines on Christmas season. This dessert is made with rice flour, sugar coconut milk, butter, salted duck egg, cheese and coconut. It uses a banana leaf as a liner and baked in a terracotta oven. This was chosen to give the testers a sample of cake type Filipino dessert which also uses a banana leaf.

Turon is a Filipino street food snack which is also commonly found all over the country. It is usually made with a specific banana species called *Saba* and wrapped in spring roll wrapper then fried in oil with brown sugar. Sometimes, jackfruit is added with the banana. As it was difficult to find this specific banana, Madeira banana was used together with jackfruits and mango as an addition to give it more tropical experience. This dish was chosen as it is different than most desserts.

Lastly, *Palitaw* is a traditional Filipino rice cake which is made from glutinous rice flour and water. Dropped in a boiling water and once it floats it is collected and dried. Once dried, it is rolled in sugar with sesame seeds. This dish was chosen to see how the

people react to the sticky texture of the dessert since this type of dessert is commonly found in Asia but not in Europe.

Appetizer	<i>Lumpiang Shanghai</i>	531			
Sauce	<i>Banana Ketchup</i>	741			
Appetizer	<i>Kwek- Kwek</i>	246			

Sauce	Sweet Sauce	249	
Appetizer	Okoy	485	
Sauce	Vinegar mix	951	

Main Dish	<i>Binalot na Adobo</i>	672	
Dessert	<i>Ube Bar</i>	372	
Dessert	<i>Bibingka</i>	284	

Dessert	<i>Turon</i>	642	
Dessert	<i>Palitaw</i>	845	

Table 4 - Dishes presented

Source: (from the author)

3.3. Taste test Questionnaire

While conducting the taste test, a questionnaire was distributed for the participants who participated for the test. The questionnaire was used to know the opinion of the participants regarding the dishes that they're trying. This taste test questionnaire is one of the key parts of this project as it gives out the important data which is the opinions of the participants.

The questionnaire for the taste test on the other hand uses a scale system to identify the responses efficiently since all the responses can be easily understandable as per the use of percentage which is a Descriptive analysis. A questionnaire survey is used to gather statistical information on the actions of the public through the set of questions

which is distributed thru mail, internet or by person and sometime by phone. A questionnaire focuses on acquiring information which is appropriate on analyzing statistical data that were collected. All the responses that were acquired from the questionnaire survey is compiled and analyzed to get an accurate result. A questionnaire is administered to a group of participants which are randomly selected.

(67)

With the data that were collected it could give an insight of how Filipino cuisine would fit with the Portuguese palate. The first part of the questionnaire is composed of scale system which rates from 1 for really unpleasant up to 5 to really pleasant, by using this it would be easier to understand their opinion on each dish and to summarize all the responses to get the total percentage of their preference. The dishes are rated per category starting from the visual aspect, aroma, taste, texture, and overall points. Also, questions like if they will choose this on the menu and how much were they are willing to pay for the dish were also asked. As for the other questions, their opinion on the drinks that would fit the dishes were also asked, if there are unfamiliar flavor for the participants, if they would eat these types of dishes at a restaurant setting, and if the flavors were adequate to their taste.

	1 - Really unpleasant	2 - Unpleasant	3 - Neither pleasant nor unpleasant	4 - Pleasant	5 - Really pleasant
Visual aspect					
Aroma					
Taste					

Texture					
Overall points					

Source: (from the author)

Table 5 - Questionnaire's table

3.4. Business Plan

A simplified business plan is used to foresee how will the business run in a 5-year timeline. A project analysis file called *Finicia* which is developed by *IAPMEI* is used to calculate the data in giving an estimated values for Sales, Variable costs which includes Food & Beverage costs, Packaging costs and Distribution costs and Staff costs. It is an essential part of the study to understand if the business is viable in a long run. A business survival is associated with its financial position and performance in the long run, where it should show that the business is returning its profit which is adequate in providing the return of investments and gain profits. Business plan is the main structure in starting a business where the company can use this data to manipulate the future activity for the proposed goals. It shows a full-scale proposed image of the activity of the company to make it run smoother and easier also proposing new ideas to evaluate, projects and also allowing communications with current or potential partners, suppliers, clients, or financiers. ⁽⁶⁸⁾

The business plan is used as a tool to start-up the business and to understand if the business is viable in the five-years' time.

It gives a preview on what the costs are in starting this type of business and to foresee the outcome of the business and what changes should be done to make the business profitable and long lasting. This overviews the business' future.

The business plan which can be found in this document shows the initial investment needed to start, manpower needed, cash flow, credit needed, expenses, and expected income. This describe and analyze the opportunity for the business.

The business plan relates to a setting of a kitchen for take-away and delivery where the space is already equipped and ready to use.

 IAPMEI Parcerias para o Crescimento		Investimento				
		Empresa: Kusina Filipin Euros				
Investimento por ano	2022	2023	2024	2025	2026	2027
Propriedades de investimento						
Terrenos e recursos naturais						
Edifícios e Outras construções						
Outras propriedades de investimento						
Total propriedades de investimento						
Activos fixos tangíveis						
Terrenos e Recursos Naturais						
Edifícios e Outras Construções						
Equipamento Básico	1 000					
Equipamento de Transporte	4 500					
Equipamento Administrativo	1 000					
Equipamentos biológicos						
Outros activos fixos tangíveis						
Total Activos Fixos Tangíveis	6 500					
Activos Intangíveis						
Goodwill						
Projectos de desenvolvimento						
Programas de computador	350					
Propriedade industrial						
Outros activos intangíveis						
Total Activos Intangíveis	350					
Total Investimento	6 850					
IVA	23%	541				

Source: (from the author)

Figure 4 - Investments

Based on the business plan, the main investment would be for the distribution service since kitchen that business will be renting would be fully equipped with the necessary equipment. Only necessities like pots, pans and utensils would be bought with the initial investment that goes under *Equipamento basico*. Under *Equipamento de Transporte*, a motorbike was purchased to execute first-party delivery service. And as for the *Equipamento administrative*, this investment is for the POS system to use organize and tracking inventory of stocks, tracking of orders and delivery, etc. Lastly, for the POS system for the computer and other active tangible costs.

The average price for the dishes was based on the taste test results and the opinion of the participants. From there the selling price was acquired and applied to the business plan.

	Taste test average price	Business plan selling price
Appetizer	4,70€	5,00€
Main dish	8,825€	9,00€
Dessert	3,46€	3,50€

Table 6 - Pricing

Source: (from the author)

First Year	Average selling price	5,00 €	9,00 €	3,50 €	(W/VAT)
Month	Customers per month	Entrada	P.Principal	Sobremesa	Gross sales
Jan	318	7%	100%	4%	3 021 €
Feb	426	1,8%	100%	30%	4 317 €
Mar	630	27%	100%	39%	7 359 €
Apr	564	32,7%	100%	17%	6 335 €
May	750	31,25%	100%	12%	8 238 €
Jun	960	29,25%	100%	27%	10 959 €
Jul	1374	56,5%	100%	61%	19 186 €
Aug	1272	81%	100%	59%	19 205 €
Sep	1062	51,25%	100%	50%	14 141 €
Oct	1158	40,25%	100%	63%	15 289 €
Nov	1464	38,25%	100%	44%	18 216 €
Dec	1302	2%	100%	46%	13 929 €

Source: (from the author)

Figure 5 - Monthly sales report first year



IAPMEI
Parcerias para o Crescimento

Empresa:

Kusina Filipina

Euros

Vendas + Prestações de Serviços

	2022	2023	2024	2025	2026	2027
Taxa de variação dos preços			2,00%	2,00%	3,00%	5,00%

VENDAS - MERCADO NACIONAL	2022	2023	2024	2025	2026	2027
Entrada	0	21 520	24 246	28 451	34 465	44 931
Quantidades vendidas		4 304	4 754	5 469	6 432	7 986
Taxa de crescimento das unidades vendidas			10,46%	15,04%	17,61%	24,16%
Preço Unitário		5,00	5,10	5,20	5,36	5,63
Prato Principal	0	101 520	108 780	118 722	134 537	158 173
Quantidades vendidas		11 280	11 850	12 679	13 950	15 619
Taxa de crescimento das unidades vendidas			5,05%	7,00%	10,02%	11,97%
Preço Unitário		9,00	9,18	9,36	9,64	10,13
Sobremesa	0	17 430	19 521	23 649	30 499	42 086
Quantidades vendidas		4 980	5 468	6 494	8 132	10 687
Taxa de crescimento das unidades vendidas			9,80%	18,77%	25,21%	31,42%
Preço Unitário		3,50	3,57	3,64	3,75	3,94
Produto D *	0	0	0	0	0	0
Quantidades vendidas		0	0	0	0	0
Taxa de crescimento das unidades vendidas						
Preço Unitário		0,00	0,00	0,00	0,00	0,00
TOTAL	0	140 470	152 547	170 822	199 500	245 190

Source: (from the author)

Figure 6 - 5 years sales report

The first year is to gain customers by entering the market. As shown in the sales report there would be an increase as the months pass by and by reaching the month of June up to December, the increase in sales was anticipated. An increase in sales would be expected on the following years as there would be more customers coming in.



EMPRESA: Kusina Filipina
Euros

CMVMC - Custo das Mercadorias Vendidas e Matérias Consumidas

CMVMC	Margem Bruta	2022	2023	2024	2025	2026	2027
MERCADO NACIONAL			38 684	41 933	46 791	54 424	66 502
Entrada	76,00%		5 165	5 819	6 828	8 272	10 784
Prato Principal	71,00%		29 441	31 546	34 429	39 016	45 870
Sobremesa	76,60%		4 079	4 568	5 534	7 137	9 848
Produto D *							
MERCADO EXTERNO							
Produto A *							
Produto B *							
TOTAL CMVMC			38 684	41 933	46 791	54 424	66 502
IVA	15,00%		5 803	6 290	7 019	8 164	9 975
TOTAL CMVMC + IVA			44 487	48 223	53 810	62 588	76 477

Source: (from the author)

Figure 7 - CMVM

The cost of goods depends per each dish. 24% for the appetizers and the desserts with the packaging included since the materials, transportation of goods and labor on making these dishes are lower than the main dish with 29%. The primary ingredients needed for *Kwek-kwek* were just quail eggs, flour, cornstarch, salt and pepper and water which does not have expensive ingredients for this the cost of good is lower than the gross margin which same goes to the dessert. The packages are bought in bulk which cost lower and could be included with the cost of goods.

FSE - Fornecimentos e Serviços Externos

		2022	2023	2024	2025	2026	2027
Nº Meses			12	12	12	12	12
Taxa de crescimento				3,00%	3,00%	3,00%	3,00%

	Tx IVA	CF	CV	Valor Mensal	2022	2023	2024	2025	2026	2027
Subcontratos	23,0%	10,0%	90,0%	350,00		4 200,00	4 326,00	4 455,78	4 589,45	4 727,14
Serviços especializados										
Trabalhos especializados	23,0%	100,0%								
Publicidade e propaganda	23,0%	100,0%		200,00		2 400,00	2 472,00	2 546,16	2 622,54	2 701,22
Vigilância e segurança	23,0%	100,0%								
Honorários	23,0%	100,0%		40,00		480,00	494,40	509,23	524,51	540,24
Comissões	23,0%	100,0%								
Conservação e reparação	23,0%	30,0%	70,0%	300,00		3 600,00	3 708,00	3 819,24	3 933,82	4 051,83
Materiais										
Ferramentas e utensílios de desgaste rápido	23,0%	40,0%	60,0%	100,00		1 200,00	1 236,00	1 273,08	1 311,27	1 350,61
Livros e documentação técnica	23,0%	50,0%	50,0%							
Material de escritório	23,0%	30,0%	70,0%	40,00		480,00	494,40	509,23	524,51	540,24
Artigos para oferta	23,0%		100,0%							
Energia e fluidos										
Electricidade	23,0%	15,0%	85,0%	400,00		4 800,00	4 944,00	5 092,32	5 245,09	5 402,44
Combustíveis	23,0%	35,0%	65,0%	1 000,00		12 000,00	12 360,00	12 730,80	13 112,72	13 506,11
Água	6,0%	100,0%		80,22		962,60	991,48	1 021,23	1 051,86	1 083,42
Deslocações, estadas e transportes										
Deslocações e Estadas	23,0%	50,0%	50,0%							
Transportes de pessoal	23,0%	100,0%								
Transportes de mercadorias	23,0%	100,0%								
Serviços diversos										
Rendas e alugueres	23,0%	100,0%		800,00		9 600,00	9 888,00	10 184,64	10 490,18	10 804,88
Comunicação	23,0%	30,0%	70,0%	200,00		2 400,00	2 472,00	2 546,16	2 622,54	2 701,22
Seguros		100,0%		250,00		3 000,00	3 090,00	3 182,70	3 278,18	3 376,53
Royalties	23,0%	100,0%								
Contencioso e notariado	23,0%	50,0%	50,0%							
Despesas de representação	23,0%	50,0%	50,0%							
Limpeza, higiene e conforto	23,0%	100,0%		150,00		1 800,00	1 854,00	1 909,62	1 966,91	2 025,92
Outros serviços	23,0%	50,0%	50,0%	100,00		1 200,00	1 236,00	1 273,08	1 311,27	1 350,61
TOTAL FSE						48 122,60	49 566,28	51 053,27	52 584,87	54 162,41
FSE - Custos Fixos						26 606,60	27 404,80	28 226,95	29 073,75	29 945,97
FSE - Custos Variáveis						21 516,00	22 161,48	22 826,32	23 511,11	24 216,45
TOTAL FSE						48 122,60	49 566,28	51 053,27	52 584,87	54 162,41
IVA						4 970,56	5 119,67	5 273,26	5 431,46	5 594,40
FSE + IVA						53 093,16	54 685,96	56 326,53	58 016,33	59 756,82

Source: (from the author)

Figure 8 - FSE Other expenses

According to the FSE, the gas consumption is the highest fee where it showed 12.000€ and an increase to 12.360€ the following year. Since business plan assumes that this Ghost kitchen operation is done with its 100% own distribution. By analyzing the literature review and learning about the pros and cons of a first-party delivery and

third-party delivery, it was decided that since the business is on a small scale but in a controlled environment it was preferred to try it in an own distribution since there are the means to do it. An investment on the motorbike and personnel to handle the deliveries were part of the business initially. It was decided to proceed with this type of distribution to have a full control of the distribution making sure it will run smoothly, having the products reach the customers on time and with qualities.

Therefore, for the fuel for the motorbike, 1.000€ per month was allotted since the delivery would limit up to 15KM radius from the location. An estimated cost of 2,69€ fuel consumption in 15KM distance was calculated. Although not all deliveries would frequently be at that radius so the costs could be lower than 2,69€ per trip.

For other expenses, an amount of 350€ a month or 7€ per hour for part-time employees who will work on days that have high volume of orders (Friday and Saturday). This could vary per month, but it is assumed that in a month this employee would do 5-6 hours a day with a total of 4.200€ a year with a grow rate of 3% the following year.

Marketing costs is 200€ per month since most marketing is done online and other marketing strategies that are affordable.

For the conservation and repairs, an estimated amount of 300€ per month was applied and 40,00€ per month for the bookkeeper. For the rapid use tools and utensils, 100€ a month and for the office materials 40€ a month.

For the electricity an amount of 400€ is allotted and 80,22€ is for the water bill. Communication is 250€ and insurance is 250€.

Gastos com o Pessoal

	2022	2023	2024	2025	2026	2027
Nº Meses		14	14	14	14	14
Incremento Anual (Vencimentos + Sub. Almoço)						

Quadro de Pessoal (n.º pessoas)	2022	2023	2024	2025	2026	2027
Administração / Direcção		1	1	1	1	1
Administrativa Financeira						
Diretores de produção e qualidade						
Engenheiro informático						
Comercial/Marketing						
Manutenção				1	1	1
Distribuição		1	1	1	1	1
Operadores diurnos		1	1	1	2	2
Operadores noturnos						
Encarregados						
TOTAL		3	3	4	5	5

Remuneração base anual - TOTAL Colaboradores	2022	2023	2024	2025	2026	2027
Administração / Direcção		16 683	16 683	16 683	16 683	16 683
Administrativa Financeira						
Diretores de produção e qualidade						
Engenheiro informático						
Comercial/Marketing						
Manutenção				9 048	9 048	9 048
Distribuição		9 048	9 048	9 048	9 048	9 048
Operadores diurnos		10 010	10 010	10 010	20 020	20 020
Operadores noturnos						
Encarregados						
TOTAL		35 741	35 741	44 788	54 798	54 798

Outros Gastos	2022	2023	2024	2025	2026	2027
Segurança Social						
Órgãos Sociais	23,75%	3 962	3 962	3 962	3 962	3 962
Pessoal	23,75%	4 526	4 526	6 675	9 052	9 052
Seguros Acidentes de Trabalho	2,00%	715	715	896	1 096	1 096
Subsidio Alimentação - nº dias úteis/mês x subsidio	99,00	3 267	3 267	4 356	5 445	5 445
N.º meses subsidio alimentação (meses)		11	11	11	11	11
Comissões & Prémios						
Órgãos Sociais						
Pessoal						
Formação						
Outros custos com pessoal						
TOTAL OUTROS GASTOS		12 470	12 470	15 889	19 556	19 556

QUADRO RESUMO	2022	2023	2024	2025	2026	2027
Remunerações						
Órgãos Sociais		16 683	16 683	16 683	16 683	16 683
Pessoal		19 058	19 058	28 105	38 115	38 115
Encargos sobre remunerações		8 488	8 488	10 637	13 015	13 015
Seguros Acidentes de Trabalho e doenças profissionais		715	715	896	1 096	1 096
Gastos de acção social		3 267	3 267	4 356	5 445	5 445
Outros gastos com pessoal						
TOTAL GASTOS COM PESSOAL		48 211	48 211	60 677	74 354	74 354

Source: (from the author)

Figure 9 - Manpower

As for the manpower there are 14 months of work months. For the first year there 3 employees in the business. 1 for administration, 1 for production and 1 for distribution. The monthly salary per employee is administration is 1.300€, production 780€ and distribution 705€. To this it's necessary to add the social security, insurance, food allowance and annual leaves.



Empresa: Kusina Filipina
Euros

Demonstração de Resultados Previsional

	2022	2023	2024	2025	2026	2027
Vendas e serviços prestados		140 470	152 547	170 822	199 500	245 190
Subsídios à Exploração						
Ganhos/perdas imputados de subsidiárias, associadas e empreendimentos conjuntos						
Varição nos inventários da produção						
Trabalhos para a própria entidade						
CMVMC		38 684	41 933	46 791	54 424	66 502
Fornecimento e serviços externos		48 123	49 566	51 053	52 585	54 162
Gastos com o pessoal		48 211	48 211	60 677	74 354	74 354
Imparidade de inventários (perdas/reversões)						
Imparidade de dívidas a receber (perdas/reversões)						
Provisões (aumentos/reduções)						
Imparidade de investimentos não depreciáveis/amortizáveis (perdas/reversões)						
Aumentos/reduções de justo valor						
Outros rendimentos e ganhos						
Outros gastos e perdas						
EBITDA (Resultado antes de depreciações, gastos de financiamento e impostos)		5 452	12 836	12 300	18 138	50 172
Gastos/reversões de depreciação e amortização		1 634	1 634	1 634	1 518	143
Imparidade de activos depreciáveis/amortizáveis (perdas/reversões)						
EBIT (Resultado Operacional)		3 818	11 202	10 665	16 620	50 029
Juros e rendimentos similares obtidos	0	153	281	394	573	1 067
Juros e gastos similares suportados						
RESULTADO ANTES DE IMPOSTOS	0	3 970	11 483	11 059	17 193	51 096
Imposto sobre o rendimento do período	0	834	2 411	2 322	3 610	10 730
RESULTADO LÍQUIDO DO PERÍODO	0	3 136	9 071	8 737	13 582	40 366

Source: (from the author)

Figure 10 - Profit and loss statement

The profit and loss statement shows that the earnings before taxes and earnings after taxes are positive even in the first year because the initial investment is low, one of the advantages of using a fully equipped ghost kitchen, reaching the maximum profit at the fifth year with 40,366€.



IAPMEI

Parcerias para o Crescimento

Empresa:

Kusina Filipina

Avaliação do Projecto / Empresa

Na perspectiva do Projecto (Pré-Financiamento = 100% CP)	2022	2023	2024	2025	2026	2027	2028
Free Cash Flow to Firm	-8 572	14 269	11 026	11 110	16 114	41 456	-9 016
Taxa de atualização $R_u = R_f + B_u \cdot (R_m - R_f)$	5,50%	5,50%	5,51%	5,52%	5,54%	5,56%	5,59%
Factor de actualização	1,00	1,055	1,113	1,175	1,240	1,309	-
Fluxos atualizados	-8 572	13 525	9 906	9 458	12 999	31 681	-6 890
Fuxos atualizados acumulados	-8 572	4 952	14 858	24 316	37 315	68 996	62 106
Valor Actual Liquido (VAL)	62 106						
Taxa Interna de Rentabilidade	157,21%						
Pay Back period (arred ano inteiro)	1 Anos						

Source: (from the author)

Figure 11 - Final evaluation

As for final evaluation the business as a pre-financed with an update rate of 5.5% the project produces a *Valor Actual Liquido* (VAL) of 62.106€ that is the investor getting a return of investment, along with generation wealth. A payback period within a year which is a good result and with *Taxa Interna de Rentabilidade* of 157.21%. These values make the project to be reliable and the business feasible.

Impact of different scenarios:

What happens if the sales go down 10%?


IAPMEI
 Parceiros para o Crescimento

Empresa: Kusina Filipina
 Euros

Demonstração de Resultados Previsional

	2022	2023	2024	2025	2026	2027
Vendas e serviços prestados		138 318	150 122	167 977	196 054	240 697
Subsídios à Exploração						
Ganhos/perdas imputados de subsidiárias, associadas e empreendimentos conjuntos						
Variação nos inventários da produção						
Trabalhos para a própria entidade						
CM/VMC		38 168	41 351	46 109	53 597	65 423
Fornecimento e serviços externos		48 123	49 566	51 053	52 585	54 162
Gastos com o pessoal		48 211	48 211	60 677	74 354	74 354
Imparidade de inventários (perdas/reversões)						
Imparidade de dívidas a receber (perdas/reversões)						
Provisões (aumentos/reduções)						
Imparidade de investimentos não depreciáveis/amortizáveis (perdas/reversões)						
Aumentos/reduções de justo valor						
Outros rendimentos e ganhos						
Outros gastos e perdas						
EBITDA (Resultado antes de depreciações, gastos de financiamento e impostos)		3 817	10 994	10 137	15 518	46 757
Gastos/reversões de depreciação e amortização		1 634	1 634	1 634	1 518	143
Imparidade de activos depreciáveis/amortizáveis (perdas/reversões)						
EBIT (Resultado Operacional)		2 182	9 359	8 503	14 001	46 614
Juros e rendimentos similares obtidos		134	247	342	498	963
Juros e gastos similares suportados	3					
RESULTADO ANTES DE IMPOSTOS	-3	2 316	9 607	8 845	14 499	47 577
Imposto sobre o rendimento do período		486	2 017	1 857	3 045	9 991
RESULTADO LÍQUIDO DO PERÍODO	-3	1 831	7 589	6 988	11 454	37 586

Source: (from the author)

Figure 12 - Scenario 1 profit and loss statement



IAPMEI

Parcerias para o Crescimento

Empresa:

Kusina Filipina

Avaliação do Projecto / Empresa

Na perspectiva do Projecto (Pré-Financiamento = 100% CP)	2022	2023	2024	2025	2026	2027	2028
Free Cash Flow to Firm	-8 548	12 898	9 560	9 386	14 023	38 720	-8 915
Taxa de atualização $R_u = R_f + B_u \cdot (R_m - R_f)$	5,50%	5,50%	5,51%	5,52%	5,54%	5,56%	5,59%
Factor de actualização	1,00	1,055	1,113	1,175	1,240	1,309	-
Fluxos actualizados	-8 548	12 226	8 589	7 991	11 312	29 590	-6 813
Fuxos actualizados acumulados	-8 548	3 678	12 266	20 257	31 569	61 160	54 346
Valor Actual Líquido (VAL)	54 346						
Taxa Interna de Rentabilidade	140,45%						
Pay Back period (arred ano inteiro)	1	Anos					

Source: (from the author)

Figure 13 - Scenario 1 final evaluation

Based on the figure above, based on the profit and loss statement the earnings before taxes and earnings after taxes were also positive in the first year although the *Valor Actual Liquido* (VAL) lowered to 54.346€ from 62.106€ and the *Taxa Interna de Rentabilide* went from 157.21% to 140.45%. But, it is still viable since there's only a slight decrease in the sales as the payback period still stays at 1 year.

What happens the cost of goods goes up 10%?



Empresa: Kusina Filipina
Euros

Demonstração de Resultados Previsional

	2022	2023	2024	2025	2026	2027
Vendas e serviços prestados		140 470	152 547	170 822	199 500	245 190
Subsídios à Exploração						
Ganhos/perdas imputados de subsidiárias, associadas e empreendimentos conjuntos						
Variação nos inventários da produção						
Trabalhos para a própria entidade						
CMVMC		42 553	46 126	51 471	59 866	73 152
Fornecimento e serviços externos		48 123	49 566	51 053	52 585	54 162
Gastos com o pessoal		48 211	48 211	60 677	74 354	74 354
Imparidade de inventários (perdas/reversões)						
Imparidade de dívidas a receber (perdas/reversões)						
Provisões (aumentos/reduções)						
Imparidade de investimentos não depreciables/amortizáveis (perdas/reversões)						
Aumentos/reduções de justo valor						
Outros rendimentos e ganhos						
Outros gastos e perdas						
EBITDA (Resultado antes de depreciações, gastos de financiamento e impostos)		1 584	8 643	7 621	12 695	43 522
Gastos/reversões de depreciação e amortização		1 634	1 634	1 634	1 518	143
Imparidade de activos depreciables/amortizáveis (perdas/reversões)						
EBIT (Resultado Operacional)		-51	7 009	5 986	11 178	43 379
Juros e rendimentos similares obtidos	0	114	208	282	415	853
Juros e gastos similares suportados						
RESULTADO ANTES DE IMPOSTOS	0	63	7 217	6 269	11 593	44 231
Imposto sobre o rendimento do período	0	13	1 515	1 316	2 434	9 289
RESULTADO LÍQUIDO DO PERÍODO	0	50	5 701	4 952	9 158	34 943

Source: (from the author)

Figure 14 - Scenario 2 profit and loss statement



Empresa: Kusina Filipina

Avaliação do Projecto / Empresa

Na perspectiva do Projecto (Pré-Financiamento = 100% CP)	2022	2023	2024	2025	2026	2027	2028
Free Cash Flow to Firm	-8 572	11 277	7 719	7 421	11 827	36 223	-9 097
Taxa de actualização $R_u = R_f + B_u \cdot (R_m - R_f)$	5,50%	5,50%	5,51%	5,52%	5,54%	5,56%	5,59%
Factor de actualização	1,00	1,055	1,113	1,175	1,240	1,309	-
Fluxos actualizados	-8 572	10 689	6 934	6 318	9 541	27 681	-6 952
Fuxos actualizados acumulados	-8 572	2 117	9 051	15 369	24 910	52 592	45 640
Valor Actual Líquido (VAL)	45 640						
Taxa Interna de Rentabilidade	119,61%						
Pay Back period (arred ano inteiro)	1 Anos						

Source: (from the author)

Figure 15 - Scenario 2 final evaluation

The profit and loss statements show that there is a -51 loss on the first year but still profitable after the next years. Though, the VAL loss 16,466€ and the *Taxa Interna da Rentabilidade* loss 37.6%.

What happens if both fluctuations occur simultaneously?



IAPMEI
Parcerias para o Crescimento

Empresa: **Kusina Filipina**
 Euros

Demonstração de Resultados Previsional

	2022	2023	2024	2025	2026	2027
Vendas e serviços prestados		138 318	150 122	167 977	196 054	240 697
Subsídios à Exploração						
Ganhos/perdas imputados de subsidiárias, associadas e empreendimentos conjuntos						
Varição nos inventários da produção						
Trabalhos para a própria entidade						
CMVMC		41 985	45 486	50 719	58 956	71 966
Fornecimento e serviços externos		48 123	49 566	51 053	52 585	54 162
Gastos com o pessoal		48 211	48 211	60 677	74 354	74 354
Imparidade de inventários (perdas/reversões)						
Imparidade de dívidas a receber (perdas/reversões)						
Provisões (aumentos/reduções)						
Imparidade de investimentos não depreciáveis/amortizáveis (perdas/reversões)						
Aumentos/reduções de justo valor						
Outros rendimentos e ganhos						
Outros gastos e perdas						
EBITDA (Resultado antes de depreciações, gastos de financiamento e impostos)		-0	6 859	5 527	10 159	40 215
Gastos/reversões de depreciação e amortização		1 634	1 634	1 634	1 518	143
Imparidade de activos depreciáveis/amortizáveis (perdas/reversões)						
EBIT (Resultado Operacional)		-1 635	5 224	3 892	8 641	40 072
Juros e rendimentos similares obtidos		96	172	232	343	752
Juros e gastos similares suportados	3					
RESULTADO ANTES DE IMPOSTOS	-3	-1 538	5 396	4 124	8 984	40 823
Imposto sobre o rendimento do período			810	866	1 887	8 573
RESULTADO LÍQUIDO DO PERÍODO	-3	-1 538	4 587	3 258	7 097	32 250

Source: (from the author)

Figure 16 - Scenario 3 profit and loss statement

Na perspectiva do Projecto (Pré-Financiamento = 100% CP)	2022	2023	2024	2025	2026	2027	2028
Free Cash Flow to Firm	-8 548	9 946	6 299	5 751	9 801	33 572	-8 994
Taxa de actualização $R_u = R_f + B_u \cdot (R_m - R_f)$	5,50%	5,50%	5,51%	5,52%	5,54%	5,56%	5,59%
Factor de actualização	1,00	1,055	1,113	1,175	1,240	1,309	-
Fluxos actualizados	-8 548	9 428	5 659	4 897	7 906	25 655	-6 873
Fuxos atualizados acumulados	-8 548	880	6 539	11 435	19 342	44 997	38 124
Valor Actual Líquido (VAL)	38 124						
Taxa Interna de Rentabilidade	102,88%						
Pay Back period (arred ano inteiro)	1 Anos						

Source: (from the author)

Figure 17 - Scenario 3 final evaluation

The profit and loss statement showed a huge decrease on the first year with a loss up to -1.635€. Although it is still profitable on the next years the VAL was divided in half from the original business plan. Where in the original it had 62.106€ and with this it has the VAL amounting 38.124€. As for the *Taxa Interna da Rentabilidade* had a 54.33% loss.

3.5. SWOT Analysis

S Strengths	W Weakness	O Opportunities	T Threats
• New gastronomic experience • New business model in the market • There are no physical customers to worry about while handling take-away and delivery orders • Specialized menu specific for takeout and delivery • Large space is not necessary since there's no dine in customers to accommodate • Less expenses on restaurant dine-in furniture and equipment	• No store front available for clients • Third party deliver could be expensive • Foods could end up in a different temperature when it arrives to the customers • No interactions with the customers • More attention to orders incoming through the tablet provided by delivery apps	• Less manpower needed • More promotions done thru social media platforms • Lesser costs than a normal brick-and-mortar restaurant	• Other Ethnic cuisine restaurants with store fronts • There is more well-known Ethnic cuisine • More restaurants are offering deliveries which means more competition

Source: (from the author)

Figure 18 - SWOT Analysis

4. Results

The survey was publicized, and it garnered 739 participants. Out of all these participants, 231 answered that they already heard about Filipino cuisine which is 31% and 508 responded that they haven't heard about Filipino cuisine which is 69%.

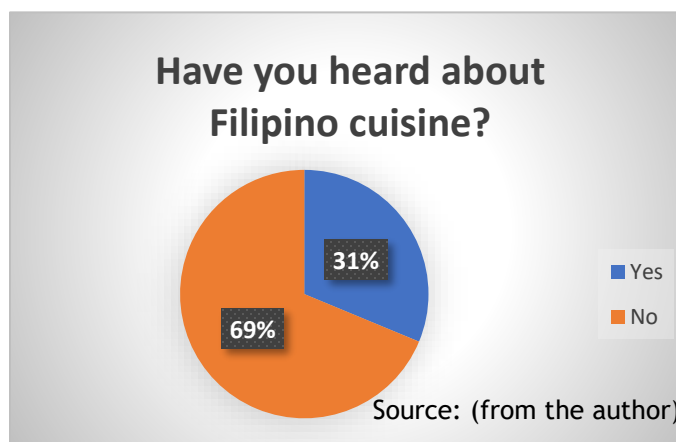


Figure 19 - Have you heard about Filipino cuisine?

How? Como?		Percentage
Internet (Youtube, Facebook, Twitter, etc.)	158	38,7%
Television	115	28,2%
With Friends	44	10,8%
Books	25	6,1%
With Family	22	5,4%
Colleagues	11	2,7%
Foreign Countries	5	1,2%
Restaurants	3	0,7%
Cooking workshops	1	0,2%

Table 7 - How did you hear about it?

Source: (from the author)

The majority participants knew about Filipino cuisine mostly from the internet and television shows. The internet gives more curiosity to its users which is a good way of promoting the culture and cuisines of different countries. With the results it is not surprising that only few participants knew about the cuisine through other ways since Filipino cuisine is not as well-known as other Asian cuisines.

The result for this table is interesting as majority of the participants heard about the cuisine but never tried it. But for the participants who tried it, they chose the dishes that are favored by Filipinos and other nationalities who have tried the cuisine. *Pancit*, *Adobo*, *Crispy Pata*, *Kare-Kare* and *lumpiang Shanghai* were always preferred by the Filipinos especially when there are gatherings and events.

What Filipino foods have you tried?		Percentage
Never Tried	63	25,3%
Pancit (Bihon, Canton etc.)	37	14,9%
Adobo	28	11,2%
Crispy Pata	22	8,8%
Kare-Kare	21	8,4%
Lumpiang Shanghai	18	7,2%
Lechon	12	4,8%
Sinigang	10	4,0%
Pinakbet	8	3,2%
Longganisa	6	2,4%
Binagoongan	4	1,6%
Binagoongan	4	1,6%
Sisig	4	1,6%
Dinuguan	2	0,8%
Palitaw	2	0,8%
Kalamay	1	0,4%
Lapu Lapu	1	0,4%
Chamorado	1	0,4%
Balut	1	0,4%
Bibingka	1	0,4%
Siomai	1	0,4%
Rice cakes	1	0,4%

Halo-Halo	1	0,4%
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Table 8 - What foods have you tried?

Source: (from the author)

It is understandable that on this table it showed that majority haven't tried it since they only knew it from either the internet or other sources. It is interesting that 44 participants tried it from a restaurant which could be from either outside of Portugal or in the Southern part of Portugal since there are no Filipino restaurant currently existing in the Northern part of Portugal. As for the participants respond to with friends or with family, it is also understandable that the recipes for these dishes are accessible online and could be easily done even by a non-Filipino.

Where did you try it?		Percentage
Never tried	145	53,5%
Restaurants	44	16,2%
With Friends	24	8,9%
Foreign Country	24	8,9%
With Family	22	8,1%
Celebrations and Gatherings	12	4,4%

Table 9 - Where did you try it?

Source: (from the author)

What do you think or expect Filipino cuisine would be?		Percentage
Spicy	383	26,5%
Savory	339	23,5%
Fresh	197	13,6%
Bitter	23	1,6%
Bland	13	0,9%
No idea	4	0,3%
Sweet and Spicy	1	0,1%

Umami	1	0,1%
Tastes Good	1	0,1%
Fruity (Lemon, lime, coconut, etc.)	1	0,1%
Fatty	1	0,1%
Fishy	1	0,1%

Table 10 - What do you think or expect Filipino cuisine would be?

Source: (from the author)

The result for this table is interesting as most of the participants responded that they think the dishes of the cuisine are spicy. This could be influenced by the neighboring countries like Japan, South Korea, Thailand, and others since most of the dishes from these countries consists of spicy ingredients.

For the question *Would you be interested in trying Filipino cuisine?* 705 respondents said yes while 34 answered no. Next question *Would you be interested in eating at a Filipino restaurant in the future?* 697 answered Yes while 42 answered No.

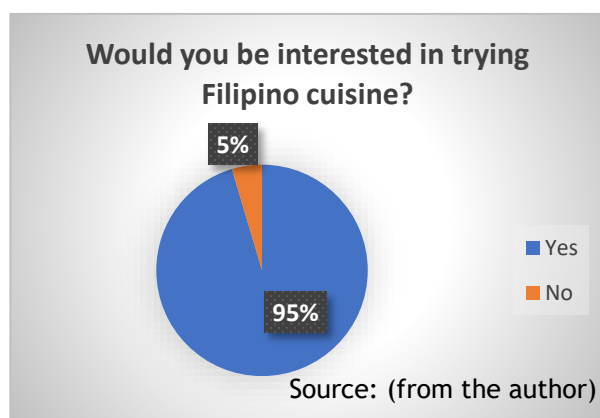


Figure 20 - Would you be interested in eating at a Filipino restaurant in the future?

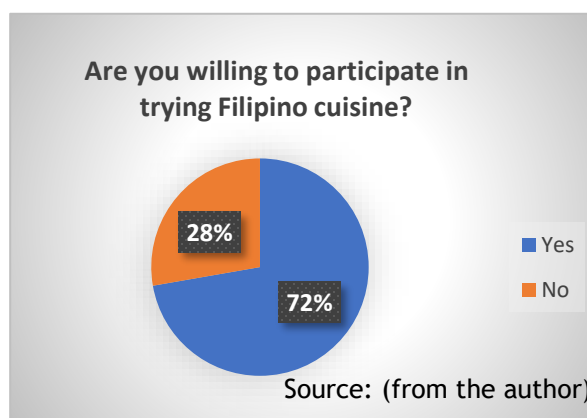


Figure 21 - Are you willing to participate in trying Filipino cuisine?

And for the last question, *are you willing to participate in trying Filipino cuisine?* 534 answered Yes and 205 answered No.

Most of the participants are from ages 18-24 and 25-30 which are from young adults. This age group are more open on trying new cuisines and learning about it. While it is understandable that participants older than 49-54 years old are less interested in trying new cuisines.

Most survey participants were Female with 496 and the male participants were 233. As for other gender, there are 10 who's either non-binary or they prefer not to say.

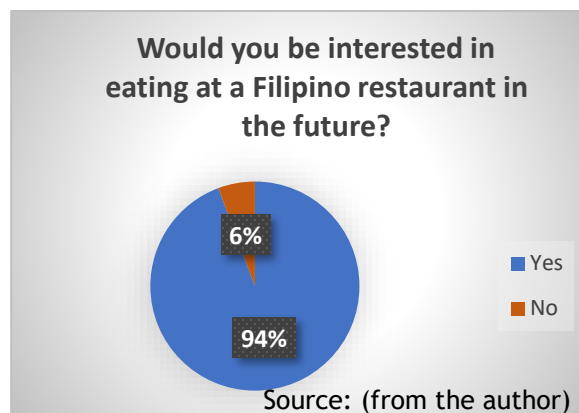


Figure 22 - Would you be interested in trying Filipino cuisine?

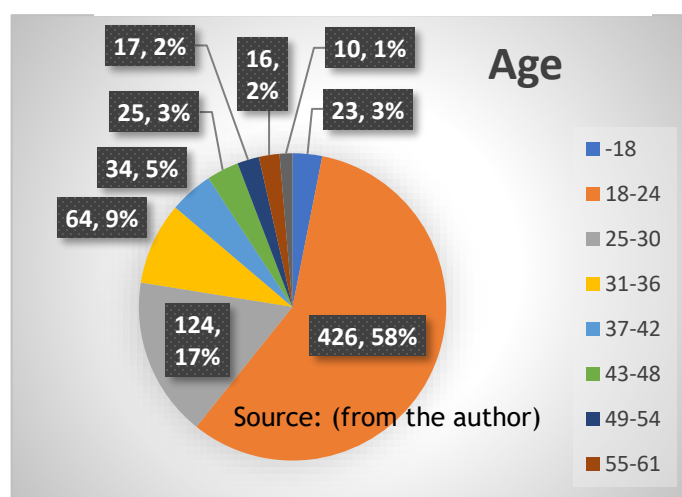


Figure 23 - Age

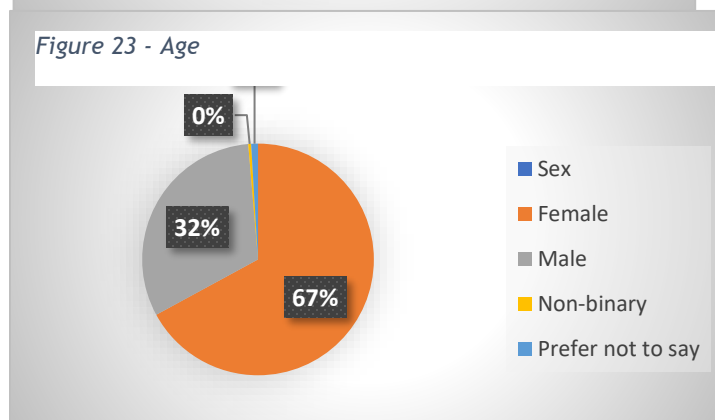


Figure 24 - Gender

Source: (from the author)

The result for the occupation is expected as the survey was distributed with the university.

Occupation		Percentage
Students	536	73%
Others	138	19%
Professors	45	6%
Nutritionists	20	3%

Table 11 - Occupation Source: (from the author)

Same as the occupation results, it was also expected that there were more participants from Porto as it was distributed inside the university.

Area of Residency		Percentage
Porto	418	56.6%
Others	116	15.7%
Vila Nova de Gaia	73	9.9%
Matosinhos	51	6.9%
Maia	34	4.6%
Vila do Conde	14	1.9%
Gondomar	13	1.8%
Aveiro	10	1.4%
Braga	10	1.4%

Table 12 - Area of residency

Source: (from the author)

As for the last part of the survey questionnaire, the nationality of the participants was asked. Out of 739 participants, 584 were Portuguese which is 79% of the total participants, 107 were Brazilian which is 14%, 8 Mozambican which is 1%, 3 participants each were Angolan and Iranian which is 0% while 2 participants each were American, Chinese, French, Italian, Lithuanian, Spanish and Venezuelan which is 2%, while 20 participants were from different nationalities each which is 3%.

Nationality		
Portuguese	587	79.4%
Brazilian	107	14.5%
Others	45	6.1%

Table 13 - Nationality

Source: (from the author)

After the survey was evaluated, a planned taste test was executed and a total of 78 participants participated to this test that was executed at Faculdade de Ciências da Nutrição e Alimentação da Universidade do Porto and at Instituto Politécnico do Porto Escola Superior de Hotelaria e Turismo. There are total of 3 appetizer, 1 main dish and 4 desserts for the taste test.

The next table shows the results of the taste test. For the first appetizer, the result shows that most participants think that this dish is pleasant and really pleasant but for the overall rating the participant think it's pleasant. Majority also responded that they would pick this from the menu and the banana ketchup pairs well with the dish. The participants also got a chance to try the dish with different sauces and sweet sauce also suits the dish.

Appetizer: 531 Lumpiang Shanghai					
	1 - Really unpleasant	2 - Unpleasant	3 - Neither pleasant nor unpleasant	4 - Pleasant	5 - Really pleasant
Aspect		2 (3%)	19 (25%)	39 (51%)	16 (21%)
Aroma		2 (3%)	8 (11%)	41 (54%)	25 (33%)
Flavor			1 (1%)	30 (38%)	48 (61%)
Texture			4 (5%)	32 (42%)	41 (53%)
Overall			1 (1%)	41 (58%)	29 (41%)
Would you pick this on the menu?	Yes	No			
	74 (97%)	2 (3%)			
Sauce: 741 Banana Ketchup					
	Yes	No			
	67 (87%)	10 (13%)			

Other sauces:	249 Sweet sauce	951 Vinegar			
	5 (56%)	4 (44%)			

Table 14 - Lumpiang Shanghai results

Source: (from the author)

The table below show's the next appetizer's result. The results shows that the dish is pleasant based on the respondents. But for the overall rating, the participants answered it is neither pleasant nor unpleasant. They also responded that they would pick this if it's on te menu and the sauce fits well with it though it can also be paired with banana ketchup.

Appetizer: 246 Kwek- kwek					
	1 - Really unpleasant	2 - Unpleasant	3 - Neither pleasant nor unpleasant	4 - Pleasant	5 - Really pleasant
Aspect		2 (3%)	16 (20%)	35 (44%)	26 (33%)
Aroma		1 (1%)	33 (42%)	27 (35%)	17 (22%)
Flavor		3 (4%)	24 (30%)	30 (38%)	22 (28%)
Texture		5 (6%)	23 (29%)	27 35%)	23 (29%)
Overall		2 (3%)	27 (37%)	23 (32%)	21 (29%)

Would you pick this on the menu?	Yes	No			
	39 (53%)	35 (47%)			
Sauce: 249 Sweet Sauce					
	Yes	No			
	57 (76%)	18 (24%)			
Other sauces:	741	951			
	Banana ketchup	Vinegar			
	7 (64%)	4 (36%)			

Table 15 - Kwek-kwek results

Source: (from the author)

The next table is for the final appetizer, it shows that majority of the participants respond that it's pleasant even the overall response. They also respond that they will pick this on the menu and the sauce fits the dish well although it can also pair with the sweet sauce.

Appetizer: 485 Okoy					
	1 - Really unpleasant	2 - Unpleasant	3 - Neither pleasant nor unpleasant	4 - Pleasant	5 - Really pleasant

Aspect		9 (12%)	21 (27%)	37 (48%)	10 (13%)
Aroma			26 (33%)	32 (41%)	20 (26%)
Flavor			5 (6%)	43 (56%)	29 (38%)
Texture			14 (19%)	37 (49%)	24 (32%)
Overall			10 (14%)	41 (59%)	19 (27%)
Would you pick this on the menu?	Yes	No			
	55 (83%)	11 (17%)			
Sauce: 951					
Vinegar					
	Yes	No			
	47 (65%)	25 (35%)			
Other sauces:	741 Banana ketchup	249 Sweet Sauce			
	7 (39%)	11 (61%)			

Table 16 - Okoy results

Source: (from the author)

As for the main dish, the table below shows that majority answered that this dish is pleasant even with the overall rating and the participants will pick this on the menu.

Main dish: 672 Binalot Adobo					
	1 - Really unpleasant	2 - Unpleasant	3 - Neither pleasant nor unpleasant	4 - Pleasant	5 - Really pleasant
Aspect	2 (3%)	14 (18%)	35 (44%)	27 (34%)	2 (3%)
Aroma	2 (3%)	3 (4%)	8 (10%)	36 (45%)	31 (39%)
Flavor		4 (5%)	10 (13%)	40 (51%)	25 (32%)
Texture		3 (4%)	25 (32%)	30 (39%)	19 (25%)
Overall		3 (4%)	10 (14%)	38 (52%)	22 (30%)
Would you pick this on the menu?	Yes	No			
	53 (69%)	24 (31%)			

Table 17 - Binalot na Adobo results

Source: (from the author)

For the desserts, the first table shows the response on the first dessert which gives a very positive response as the participants think this dish is pleasant or really pleasant with the overall rating of pleasant. Also, majority replied yes if they will pick this if it's on the menu.

Dessert: 372 Ube Bar					
	1 - Really unpleasant	2 - Unpleasant	3 - Neither pleasant nor unpleasant	4 - Pleasant	5 - Really pleasant
Aspect			10 (13%)	35 (45%)	33 (45%)
Aroma			5 (7%)	35 (46%)	36 (46%)
Flavor		1 (1%)	7 (9%)	37 (45%)	37 (45%)
Texture		2 (3%)	12 (16%)	42 (55%)	20 (55%)
Overall			4 (5%)	45 (62%)	24 (62%)
Would you pick this on the menu?	Yes	No			
	59 (79%)	16 (21%)			

Table 18 - Ube bar results

Source: (from the author)

The next table shows the second dessert, the participants think that this dish is neither pleasant nor unpleasant with majority of them would not pick this if it's on the menu.

Dessert: 284 Bibingka					
	1 - Really unpleasant	2 - Unpleasant	3 - Neither pleasant nor unpleasant	4 - Pleasant	5 - Really pleasant
Aspect		3 (4%)	12 (14%)	34 (41%)	34 (41%)
Aroma		9 (12%)	34 (44%)	18 (23%)	17 (22%)
Flavor	1 (1%)	15 (18%)	27 (33%)	26 (31%)	14 (17%)
Texture	1 (1%)	12 (15%)	15 (19%)	31 (40%)	19 (24%)
Overall	1 (1%)	9 (13%)	22 (32%)	20 (29%)	17 (25%)
Would you pick this on the menu?	Yes	No			
	31 (42%)	43 (58%)			

Table 19 - Bibingka results

Source: (from the author)

The third dessert is shown on the table below. Majority replied with the dish being pleasant even with the overall rating and most of the participant replied that they will pick this if it's on the menu.

Dessert: 642 Turon					
	1 - Really unpleasant	2 - Unpleasant	3 - Neither pleasant nor unpleasant	4 - Pleasant	5 - Really pleasant
Aspect		2 (2%)	24 (29%)	36 (44%)	20 (24%)
Aroma		3 (4%)	18 (23%)	33 (41%)	26 (33%)
Flavor	3 (4%)	8 (10%)	10 (12%)	26 (32%)	35 (43%)
Texture		6 (7%)	12 (15%)	32 (40%)	31 (38%)
Overall		5 (6%)	14 (18%)	33 (42%)	26 (33%)
Would you pick this on the menu?	Yes	No			
	59 (73%)	22 (27%)			

Table 20 - Turon results

Source: (from the author)

The table below is for the last dessert which shows that the dish has it's pleasant or neither pleasant nor unpleasant with the overall rating of neither pleasant or unpleasant although the participants don't think that they will pick this if it is offered in the menu.

Dessert: 845 Palitaw					
	1 - Really unpleasant	2 - Unpleasant	3 - Neither pleasant nor unpleasant	4 - Pleasant	5 - Really pleasant
Aspect		5 (6%)	12 (16%)	47 (61%)	13 (17%)
Aroma	2 (3%)	4 (5%)	23 (29%)	36 (46%)	13 (17%)
Flavor	4 (5%)	19 (24%)	30 (38%)	18 (23%)	7 (9%)
Texture	8 (11%)	25 (33%)	14 (18%)	19 (25%)	10 (13%)
Overall	3 (4%)	16 (21%)	26 (21%)	22 (29%)	8 (11%)
Would you pick this on the menu?	Yes	No			
	28 (38%)	46 (62%)			

Table 21 - Palitaw results

Source: (from the author)

As for the table below, it shows which drinks fits well with the dishes presented. For the appetizer it's beer, the main dish it's red wine and for the dessert it's water.

Appetizer:			
Beer	31		25%
Water	17		14%
Juice	12		10%
Soda	8		6%
Red wine	6		5%
Main dish:			
Red wine	24		27%
Beer	18		20%
White wine	18		20%
Juice	10		11%
Cola	7		8%
Dessert:			
Water	29		39%
White wine	15		20%
Juice	15		20%
Red wine	7		9%
Cola	4		5%
Beer	3		4%
Porto wine	1		1%

Moscatel	1		1%
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Table 22 - Results on what drinks should be paired Source: (from the author)

Other questions were also asked, and it's shown at the table below. Majority of the participant says there are unknown flavors to them. Majority replied they would try these dishes if it's at a restaurant setting and, they replied that the dishes suit their taste.

Is there an unknown flavor?			
Yes	35		53%
No	31		47%
Would you eat this is a restaurant?			
Yes	73		96%
No	3		4%
Does the flavor suit your taste?			
Yes	68		93%
No	5		7%

Table 23 - Other questions results Source: (from the author)

The findings of the survey and the questionnaire gave more clear idea on how this research would go in the future.

5. Discussion and Conclusion

The outcome of the survey and taste test questionnaire results have given an idea that Filipino cuisine are still unknown for most of the Portuguese population, mainly because it's a country in Southeast Asia and not that known to the general unlike other Southeast or Asian cuisines. Based on the survey, 69% of the participants answered that they don't know the Filipino cuisine. By the results of the first survey regarding the knowledge of the participants, most of them would want to try the food which consists of mostly younger participants ages 18 to 30 (75%), it shows that this population are more adventurous and open minded on trying new foods. They are also willing to know more about the culture since the interest Asian cuisine and culture in Portugal has grown within the latest decade, it is noticeable these days with the growth of sushi restaurants and now Asians style buffets. The internet also provides a good source of information on learning the country, the cuisine, and the culture. As seen on the results of the study, 37.8% of the respondents knew Filipino cuisine thru the internet. Whether it's from the social media, YouTube and even just by using Google or other search engines. With these tools, Portuguese are becoming more curious with other cuisines that trying them either at an existing restaurant here in Portugal or going to another country or the target country just to taste the food. It is interesting to know that the participants who has an idea about the cuisine knew about the dishes Adobo together with Pancit, Crispy pata, Lumpiang Shanghai and Kare-kare since these are the most popular ones. And on the other side, it is also interesting to know what do the participants who have no idea what the cuisine is think about it. 23.5% of those participants think it is savory while majority with 26.5% is spicy which is common with other Asian cuisines. By

knowing this information, it is advisable to serve dishes that are savory and less spicy to attract the Portuguese palate. The result of the survey also shows that 95% who participated are willing to try the cuisine and 72% wanted to participate in the product taste testing. Out of all the participants, 73% were students and from there 67% were Female. Since the survey was distributed within the university, the participants were mostly students with 73% who lives in Porto which were 56.6% and most of them were Portuguese with 79.4%. With these findings, it is noticeable how interested the younger Portuguese population on trying and knowing Filipino cuisine.

The taste test questionnaire showed that the participants are interested with the cuisine since majority had positive reactions with the food. Although, some food that were presented does not fit the Portuguese palate. Two of the dessert dishes had fewer positive response which were the *Palitaw* and the *Bibingka* even though these were the Filipino population favorites and the most traditional desserts out of all four that was presented. It's understandable with the *Palitaw*, since this dish has a distinctive texture is made with glutinous rice flour which makes it sticky. This texture is not common with the Portuguese cuisine which makes it different for the participants who tried it and with that, only 38% replied that they will try it again.

While for the *Bibingka*, the participants think it's a normal cake and there is nothing special about it with only 42% would try it again. These values are lower than other desserts like the *Ube bar* with 79% and *Turon* with 73% of pick rate from the menu. Out of all the appetizers that were serve the *Lumpiang Shanghai* has 97% while the *Kwek-kwek* has the lowest but still positive pick rate with 53%. While the main dish which is the *Binalot na Adobo* got 69% pick rate which is also high. The results gave positive

outcome since most of the participants with 96% respond that they would eat these dishes in a restaurant setting although there is unfamiliar flavor for 53% participants. But then, 93% respond that these flavors suit their palate. The dishes presented shows that it has potential to enter the Portuguese culinary market and it also shows that Filipino cuisine would work in Portugal with the acceptance of the population.

As for the business plan, it was decided that the initial investment was allotted for the distribution equipment since it was analyzed that renting an equipped kitchen space is more appropriate in starting a Filipino ghost kitchen business concept. Also, relying on the first-party delivery service is more convenient than having multiple different distribution since having a third-party delivery service costs more than having own distribution. It is also more convenient and easier to manage especially the delivery time. Additionally, it gives better profit margin and better order management where it will create better customer service and delivery experience which could increase customer's loyalty to the brand. Based on the business plan, it showed that even on the first year there's a profit since the investment on the business is low. This is one of the advantages of a ghost kitchen since there is a low risk of losing investment. Therefore, the business is viable.

The first main objectives of this study were to understand the Portuguese acceptance of the Filipino cuisine. To execute this, a survey was made to assess the knowledge and acceptance of the population to Filipino cuisine and by executing a product taste testing to understand the populations' approval and the needs for changes or adaptations to the original recipe to fit the population's palate.

And the second main objective is to study the feasibility of developing a Filipino food business by using a Ghost kitchen business model. To do this, it was needed to understand the different operating models of a ghost kitchen and to develop a business plan to validate the feasibility.

For the survey, it was concluded that the participants ages 18-30 were more open on trying new cuisines. By knowing this detail, it was shown that to execute a Filipino cuisine business the target market should be with that age group. Promoting using the internet mostly social media, video platform and others would also help attracting customers from since majority of the participants knew about the cuisine through this method. It was also concluded that the majority of the participants are willing to try the cuisine with 72% sayings yes, 94% saying yes to eat in a Filipino restaurant in the future.

As for the questionnaire, it was concluded that savory dishes were more preferred by the participants especially dishes like the *Lumpiang Shanghai*. Although desserts were another thing since there were mixed opinion regarding it. *Ube bar* was preferred with its distinctive taste and *Palitaw* was disliked for its texture. Changes for some dishes are necessary to fit the Portuguese palate. Overall, majority still responded that if a restaurant was established in the Northern Portugal, they would go and eat the cuisine.

For the business plan it was concluded that it was feasible since there are no losses seen even with the other scenarios shown. The research shows how efficient a ghost kitchen would be for a start-up business with a low investment and low risk.

In Portugal there are a few businesses that are starting to use this concept which shows that this type of business is viable in the long run especially with the technology and social media which takes a big part on promotion in this current era. It is easier to run this business since it has a flexible menu to test especially introducing a foreign food to a traditional country and having less manpower needed to operate also gives a positive impact to the business. Entering a traditional market is crucial since most Portuguese especially the older generations are more inclined into their traditional ways and more distant on trying new cuisines but as the younger generation becomes more experimentative and curious especially to other country's cuisine and culture, this gives a pathway for new opportunities for new business concepts with international cuisines. With this study, using the ghost kitchen concept and introducing a Filipino cuisine, it could give the Portuguese a new culinary experience.

For the packaging, using banana leaves is more sustainable since these packaging are biodegradable which is eco-friendly than using plastics. Banana leaves are traditionally used in Philippines as packaging. They are prepared by collecting them from the tree, afterwards, they are washed and dried, and then they are ready to be used. One disadvantage with this packaging is that in time, there will be insufficient supply of leaves, and the period it takes for them to regenerate could be long. An alternative option could be the sugar cane fiber packaging, which are also sustainable and eco-friendly. These are also durable, albeit more expensive than the banana leaves.

Other opportunities could also be used to expand the business' exposure. Offering menus for catering and events, ready to eat meals for supermarkets, freezer meals and cook at home meals. These ways of distribution could not just help with the exposure,

but also with the profit itself. Partnering with a catering service company could give the business a good source of profit, while also giving the catering company an opportunity to provide a new and different concept for their clients. Ready to eat meals to provide for supermarkets can help customers easily try the products, without the struggle of ordering it through the application and waiting for it to get delivered. Also, freezer meals and cook at home meals where the customers can grab the dish and prepare it at home. These opportunities are good examples of how the business could increase its profit and exposure, as this type of distribution could cater to different areas of the country.

Although this study has its limitation since it consists of limited data collection process as the survey was only distributed within the university premises and sharing it outside audiences is challenging. Also, executing the taste test with audiences outside the university is complicated since the survey was limited to the participants from the university. This project could give a better perspective if it was executed for audiences outside the university since the target market are not just students and professors but other audiences as well. The study for the business plan was also limited for the reason of the insufficient time we had and so we didn't have the ability to define exactly the investment and that's why we have decided that to assure that our operational assumptions are correct mainly the sales, cost of goods, cost of labor and other costs.

6. References and Bibliography

1. Kwon D. What is ethnic food? *Journal of Ethnic Foods*. 2015; 2
2. Ting H, Fam K-S, Jun Hwa JC, Richard JE, Xing N. Ethnic food consumption intention at the touring destination : The national and regional perspectives using multi-group analysis. *Tourism Management*. 2019; 71:518-29.
3. Long LM. CULTURAL POLITICS IN CULINARY TOURISM WITH ETHNIC FOODS. Scielo Brazil. 2018
4. Arvela P. Ethnic food: the other in ourselves. Australia: University of Wollongong; 2013. Disponível m: <https://ro.uow.edu.au/lhapapers/1104/>.
5. Eddy J. Food for Thought? The Cultural Appropriation of Food in Contemporary Media. *SKASE JOURNAL OF LITERARY AND CULTURAL STUDIES (SJLCS)*. 2019; 1(2)
6. Dizon E. Ever Wonder Why Puto Bumbong Is Violet? (It's Not Ube). 2017. Disponível em: <https://www.spot.ph/eatdrink/the-latest-eat-drink/71115/guide-philippine-rice-cakes-a00196-20170816-lfrm3>.
7. Kakanin: The History of 7 of Our Favorite Sticky Rice Snacks. Pepper PH. Disponível em: <https://pepper.ph/the-history-behind-7-of-our-favorite-kakanin/>.
8. Pigafetta A. Journal of Antonio Pigafetta. The Philippine Diary Project.
9. Uy SL. The Different Varieties Of Philippine Vinegar. Food Philippines. Disponível em: <https://foodphilippines.com/listed/the-different-varieties-of-philippine-vinegar/>.

10. Bibhu Prasad Panda SJMA. Production of angkak through co-culture of *Monascus purpureus* and *Monascus ruber*. Scielo Brazil. 2010
11. Simpas J. Types of Bagoong: A Guide to Bagoong Alamang, Isda, and Sisi. Disponível em: <https://pepper.ph/types-of-bagoong/>.
12. Olympia MS. Fermented Fish Products in the Philippines. NCBI.
13. Dorotan ABaR. Memories of Philippine kitchens : stories and recipes from far and near. 2006.
14. Diakite P. Aeta: The African Natives Who Originally Inhabited The Philippines. Travel Noire. 2021. Disponível em: <https://travelnoire.com/aeta-african-natives-philippines>.
15. Buergo AN. A CENTURY OF CULTURE: Madalagnons boast ‘authentic’ tinuom delicacy. Daily Guardian. 2021
16. Armando M. Hisuan J, Myrna T. Luceño and Mary Ann C. Garrido. INDIGENOUS COOKING METHODS AND PRACTICES IN CENTRAL PANAY. CENTRAL PHILIPPINE UNIVERSITY. 2015
17. Mawis AVL. Chinese flavor in Philippine history. Inquirer. 2019. Disponível m: <https://business.inquirer.net/271299/chinese-flavor-in-philippine-history>.
18. Dimacali T. Massive Balangay ‘Mother Boat’ Unearthed in Butuan. 2017
19. Cui X. Hokkien Chinese Borrowings on Cookery in Tagalog. Theory and Practice in Language Studies. 2012; 2
20. Mercado JMT, Andalecio ABP. Ysla de Panciteria: a preliminary study on the culinary heritage significance of pancit using the heritage documentation approach—the case of Luzon Island, Philippines. Journal of Ethnic Foods. 2020; 7(1):19.

21. Wickberg E. The Chinese Mestizo in Philippine History. *Journal of Southeast Asian History*. 1964; 5(1):62-100.
22. Avila MT. How Toho, the Philippines' Oldest Restaurant, Plans to Conquer 100 More Years. *Esquire Magazine*. 2019. Disponible en: <https://www.esquiremag.ph/food-and-drink/food/toho-story-branches-a00227-20190624-lfrm3>.
23. Osorio D. Ilang-Ilang Restaurant Serving 'lomi' since 1910. *The Manila Times*. 2004. Disponible m: <https://www.manilatimes.net/2004/09/08/life-and-times/ilang-ilang-restaurant-serving-lomi-since-1910/687536>.
24. Lumpiang Shanghai.
25. Zhu M. Lumpia Shanghai (Filipino Spring Rolls). 2020. Disponible en: <https://omnivorescookbook.com/lumpia-shanghai/#:~:text=Lumpia%20was%20passed%20on%20to,while%20spring%20rolls%20are%20fatter>.
26. Santanachote P. Beyond Egg Rolls: 9 Spring Rolls Everyone Should Know About. *Thrillist*. 2015
27. Tayag C. The Spanish origins of our Filipino food, and vice versa. *The Philippine Star*. 2021. Disponible m: <https://philstarlife.com/article/817493-spanish-origins-filipino-food>.
28. Staff J. Spanish Foods That Became Part of the Local Cuisine. 2022
29. Kirshenblatt-Gimblett B, Fernandez DG. Culture Ingested: On the Indigenization of Philippine Food. *Gastronomica*. 2003; 3(1):58-71.

30. PH P. Why is American Junk Food so Popular in the Philippines? Disponível em: <https://pepper.ph/american-food-popular-philippines/>.
31. Canter A. Understanding Digital Business Models: Virtual Restaurants And Ghost Kitchens. Forbes. 2022. Disponível em: <https://www.forbes.com/sites/forbesbusinesscouncil/2022/01/20/understanding-digital-business-models-virtual-restaurants-and-ghost-kitchens/?sh=3a3411617f7f>.
32. Stulberger CGaAGaE. I-Team: Restaurants Use False Identities on Food Delivery Websites. NBC New York. 2015. Disponível em: <https://www.nbcnewyork.com/news/local/seamless-restaurant-grubhub-fake-eatery-unregulated-kitchen-investigation-i-team-new-york-city/2013699/>.
33. Sherred K. Why 'ghost' restaurants are changing the delivery game. Restaurant Dive. 2019
34. Guida G. 3 Types of Ghost Kitchens and Which One Is the Best Business to Start. Go cheetah. 2021. Disponível em: <https://www.gocheetah.com/blog/types-of-ghost-kitchens-best-for-you/>.
35. Kelso A. How the pandemic accelerated the US ghost kitchen market '5 years in 3 months'. Restaurant Dive. 2020. Disponível em: <https://www.restaurantdive.com/news/how-the-pandemic-accelerated-the-us-ghost-kitchen-market-5-years-in-3-mont/585604/>.
36. 'Ghost kitchens' boom in Asia as Covid-19 pandemic sparks huge demand. The Straits Times. 2021. Disponível em: <https://www.straitstimes.com/asia/east-asia/ghost-kitchens-boom-in-asia-as-pandemic-sparks-huge-demand>.

37. Turner A. Restaurateurs embrace ghost kitchens in a spooky COVID world. Greenville Journal. 2021. Disponível em: <https://greenvillejournal.com/eat-drink/restaurateurs-embrace-ghost-kitchens-in-a-spooky-covid-world/>.
38. Conrad M. You've Heard of Ghost Kitchens. Meet the Ghost Franchises. The New York Times. 2021. Disponível em: <https://www.nytimes.com/2021/02/25/dining/ghost-kitchen-mrbeast-burger.html>.
39. Guerreiro A. Kojin: a nova dark kitchen de Lisboa tem os melhores pratos da street food asiática. NIT; 2021. Disponível em: <https://www.nit.pt/comida/restaurantes/kojin-nova-dark-kitchen-de-lisboa-com-o-melhor-da-street-food-asiatica>.
40. Marketeer. Há uma nova dark kitchen em Campo de Ourique com sete restaurantes. 2022. Disponível em: <https://marketeer.sapo.pt/ha-uma-nova-dark-kitchen-em-campo-de-ourique-com-sete-restaurantes/?photo=1>.
41. Vivo D. Cozinhas "chave na mão" ajudam a lançar novos negócios. Nunes DF. 2022. Disponível em: <https://www.dinheirovivo.pt/empresas/cozinhas-chave-na-mao-ajudam-a-lancar-novos-negocios-14694361.html>.
42. News D. Franchising de cozinhas exclusivas para delivery com 9 marcas na mesma operação faz sucesso em Portugal. BrandNews. 2022. Disponível em: https://portaldlnews.com/noticias?id=110423%2Ffranchising-de-cozinhas-exclusivas-para-delivery-com-9-marcas-na-mesma-operacao-faz-sucesso-em-portugal&fbclid=IwAR0WvbgzcBJQMvSmGyNABu68dsBipuo6CgPOUmp0OCC9RY1AlDDBn2-Gphs_aem_AZRnTPQv_cx8R2JIY2Cbzv6-

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43. McCauley C. What Is a Ghost Kitchen? Webstaurant Store. Disponível em: <https://www.webstaurantstore.com/blog/2348/what-are-ghost-restaurants.html#models>.

44. King M. What Is a Ghost Kitchen? Types, Strategies, and Stats. FitSmallBusiness. 2021. Disponível m: <https://fitsmallbusiness.com/what-is-ghost-kitchen/>.

45. Adams C. How successful ghost kitchens are built. Restaurant Dive. 2021. Disponível m: <https://www.restaurantdive.com/news/how-successful-ghost-kitchens-are-built/602685/>.

46. Oracle. Essential Guide to Ghost Kitchens Disponível em: <https://www.oracle.com/pt/a/ocom/docs/industries/food-beverage/essential-guide-to-ghost-kitchens.pdf>.

47. Deliverect. 10 tips for marketing your dark kitchen online. Disponível em: <https://www.deliverect.com/en/blog/dark-kitchens/10-tips-for-marketing-your-dark-kitchen-online>.

48. MenuDrive. Tips on Ghost Kitchen Marketing. Disponível em: <https://www.menudrive.com/tips-on-ghost-kitchen-marketing/>.

49. Kitchens C. What is a ghost kitchen?: the ultimate guide for your restaurant. 2022

50. WATSON C. WHAT IS IN-HOUSE DELIVERY AND WHY DO YOU NEED IT? Lunch Box. 2021

51. Sinha S. In-House Versus Third-Party Food Delivery: Which is Better for Restaurants? Light Speed. 2020

52. Why An In-House Delivery System Can Give Your Restaurant The Edge. The Restaurant Times.
53. G M. In-House vs Third-Party Food Delivery: Which is Better? Partstown. 2022
54. Robinson M. Third-Party vs In-House Delivery: Online Ordering. Onpoint by Speedline. 2021
55. Beagleman S. Third-Party Delivery Is More Important Than Ever. Forbes. 2020. Disponível em: <https://www.forbes.com/sites/stevenbeagelman/2020/07/24/third-party-delivery-is-more-important-than-ever/?sh=3c4ad084cc69>.
56. King M. Pros & Cons of Third-Party Food Delivery Services. FitSmallBusiness. 2020
57. In-House vs. Third Party Delivery Services: Tips for a Profitable Delivery Service. Universal Processing. 2020
58. John Corpuz KW. Best food delivery services in 2022: Grubhub vs Uber Eats vs Doordash. 2022. Disponível em: <https://www.tomsguide.com/best-picks/best-food-delivery-services>.
59. Real FD. 23 anos depois, a NoMenu mudou. O que aconteceu à primeira empresa de entrega de comida ao domicílio em Portugal? Observador. 2021
60. Food Delivery in Portugal, From Your Favourite Restaurant to Your Door. BePortugal. Disponível em: <https://beportugal.com/food-delivery-portugal/>.
61. Mullin G. What is Curbside Pick Up and Why Offer It To Your Customers. 2020. Disponível em: <https://sufio.com/blog/curbside-pick-up-coronavirus-shopify/>.
62. Cambridge Dictionary. Take Away. Disponível em: <https://dictionary.cambridge.org/dictionary/english/takeaway>.

63. Costa K. Takeout or Delivery: Does Your Restaurant Need It? Upserve by Lightspeed. 2017. Disponível em: <https://upserve.com/restaurant-insider/takeout-delivery-restaurant-need/>.
64. Pros and Cons of Takeout and Delivery. Salt & Cayenne. Disponível em: <https://saltandcayenne.com/tip-jar/pros-and-cons-of-take-out-and-delivery/>.
65. Gürbüz S. Survey as a Quantitative Research Method. In.; 2017.
66. Zikmund WG. Research Methods: Basic Data Analysis: Descriptive Statistics.
67. Preston V. Questionnaire Survey. In: Kitchen R, Thrift N, editores. International Encyclopedia of Human Geography. Oxford: Elsevier; 2009. p. 46-52.
68. Ciumara T. IMPORTANCE OF BUSINESS PLANNING IN AN ENVIRONMENT LACKING ECONOMIC PREDICTABILITY. Studii Financiare (Financial Studies). 2010; 14:147-51.
69. Legaspi J. Lumpiang shanghai and tortang talong dominate Taste Atlas' Southeast Asia food ranking. Manila Bulletin 2022

7. Annex

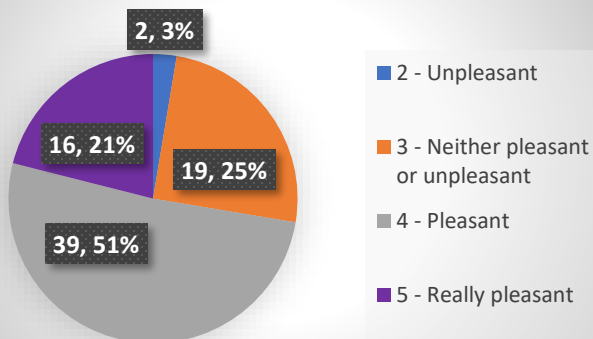
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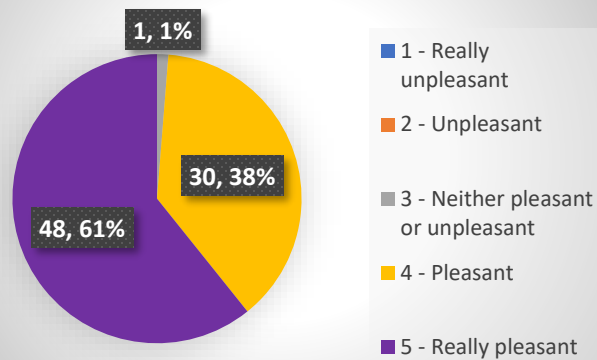
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LUMPIANG SHANGHAI

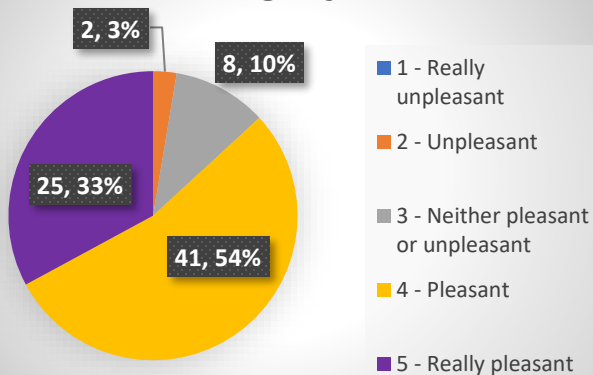
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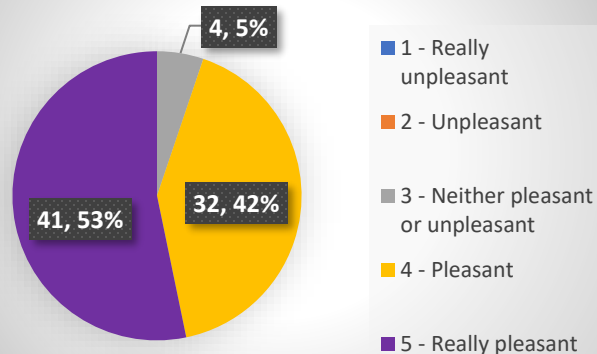
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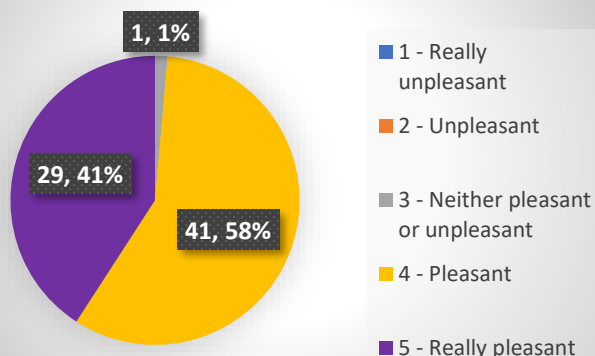
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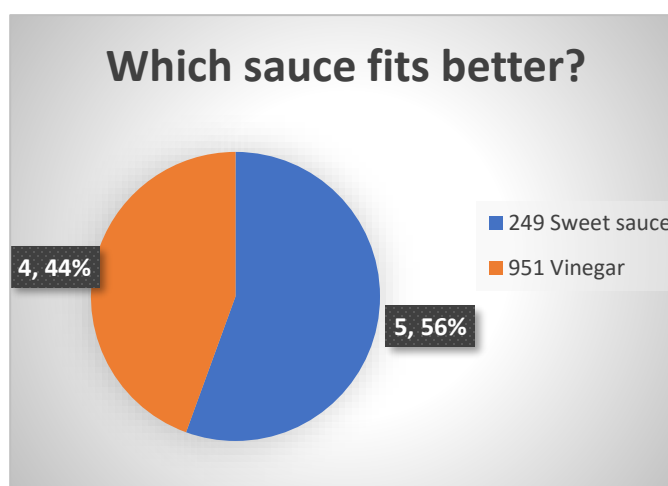
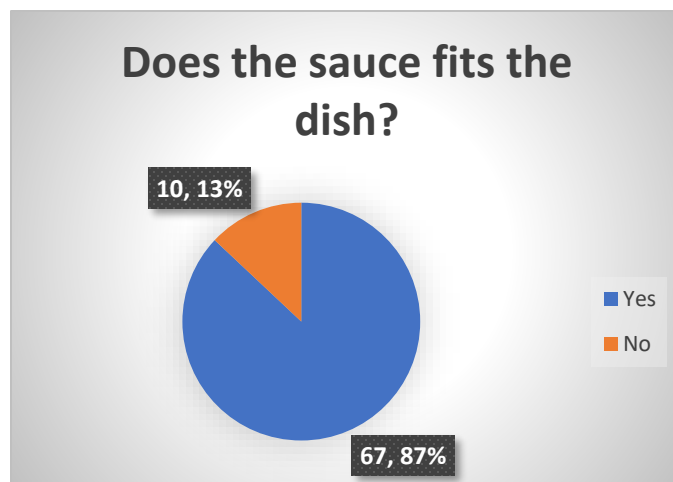
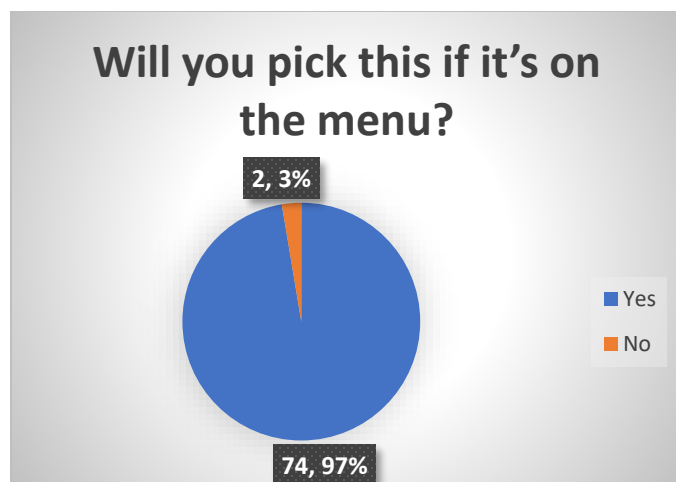
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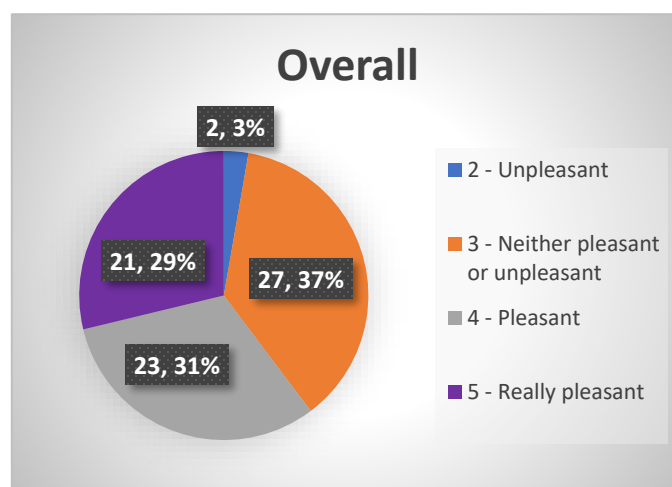
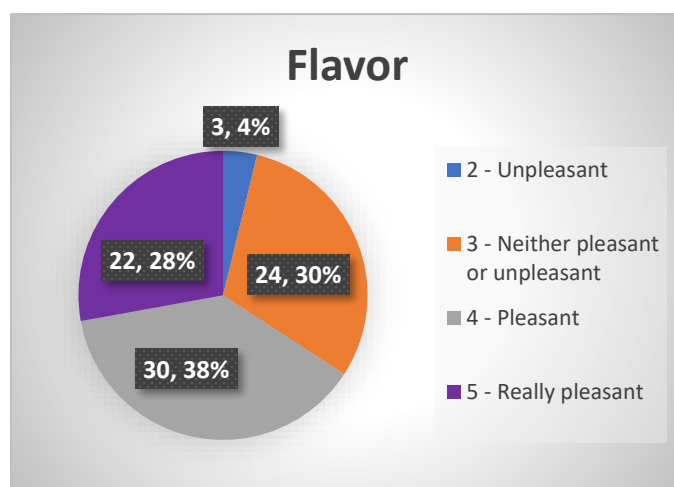
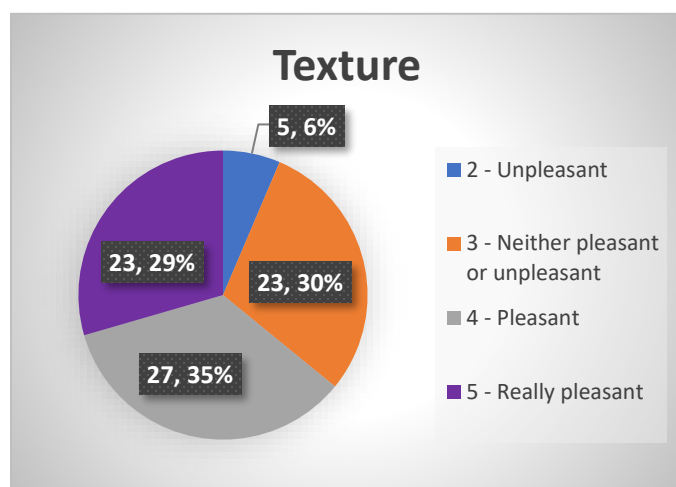
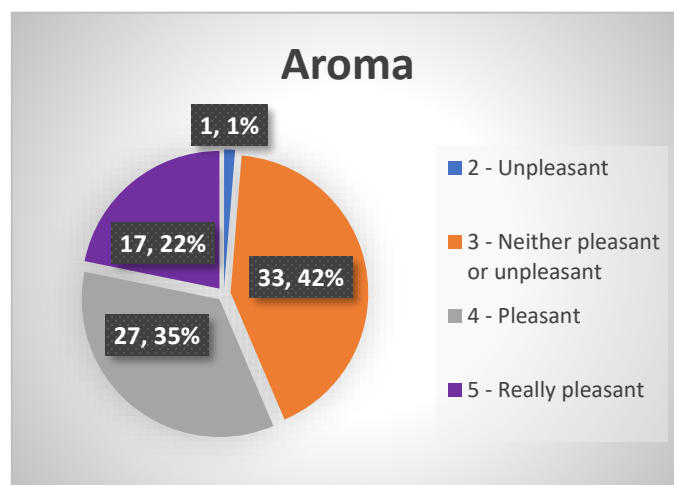
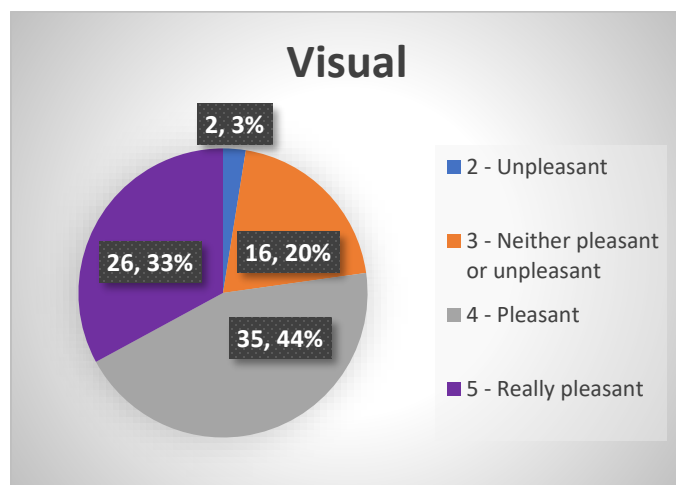


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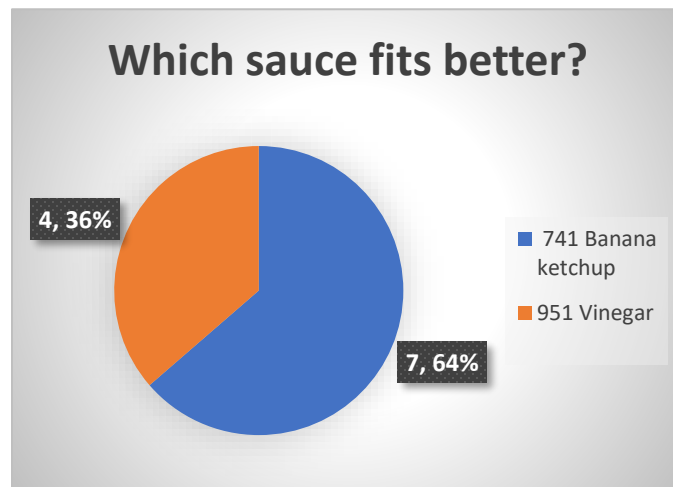
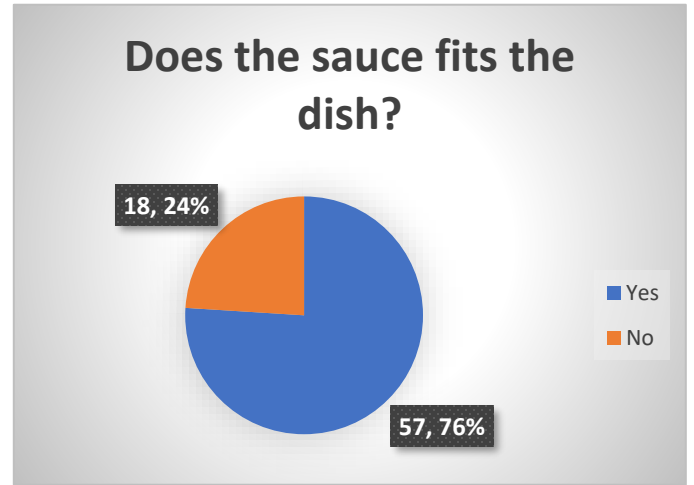
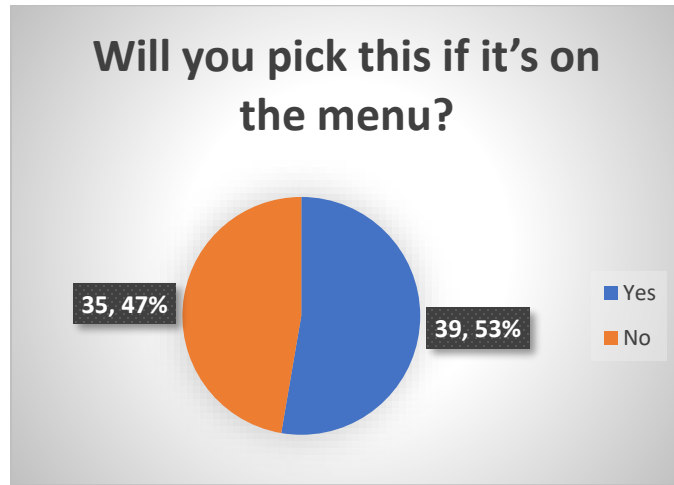


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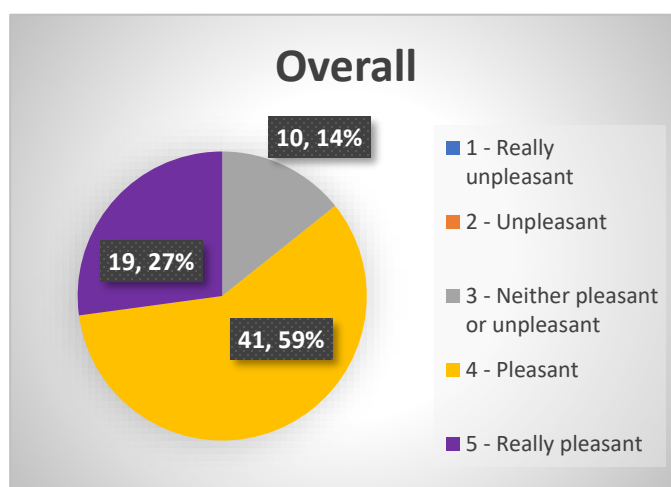
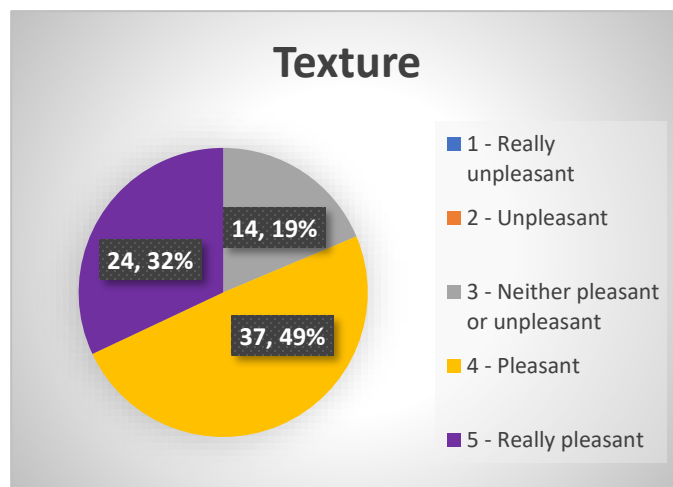
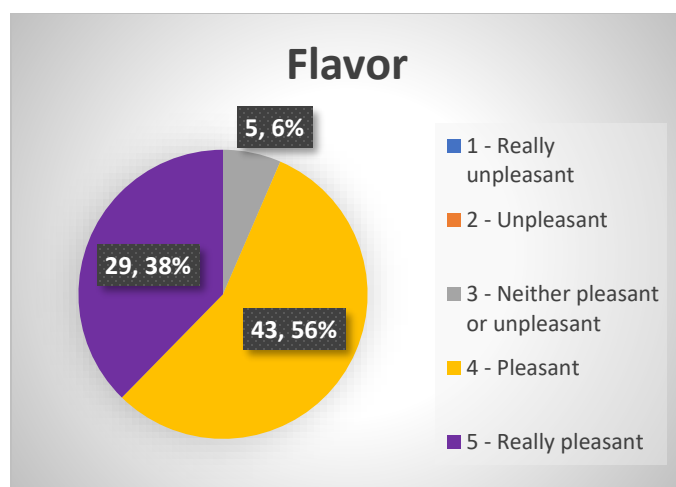
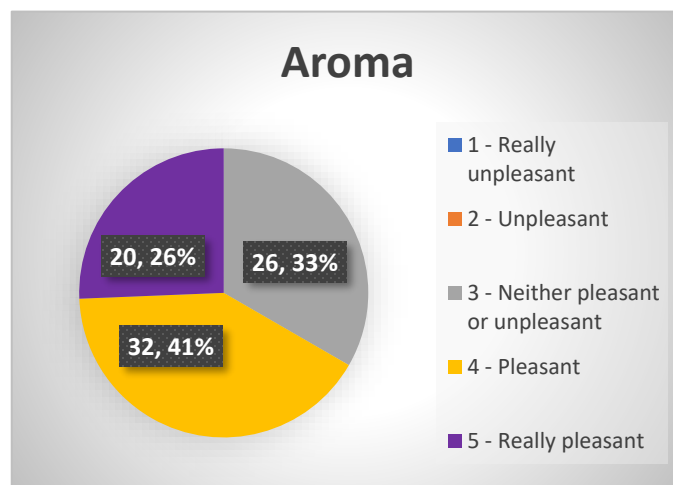
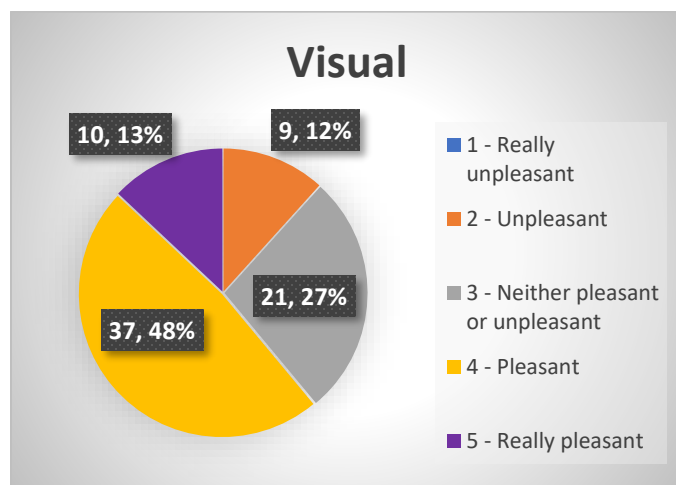


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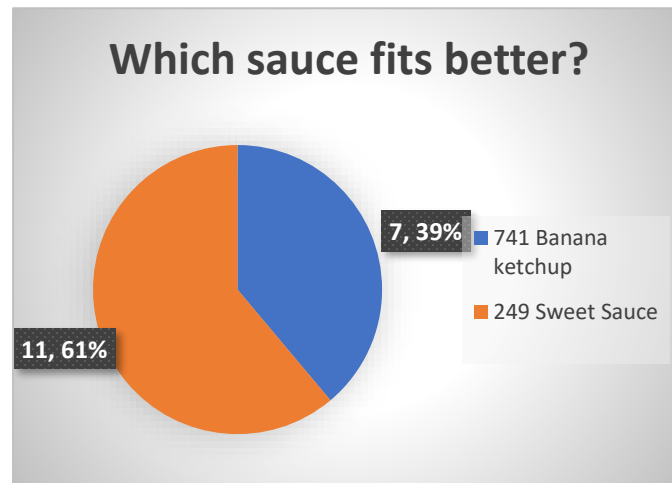
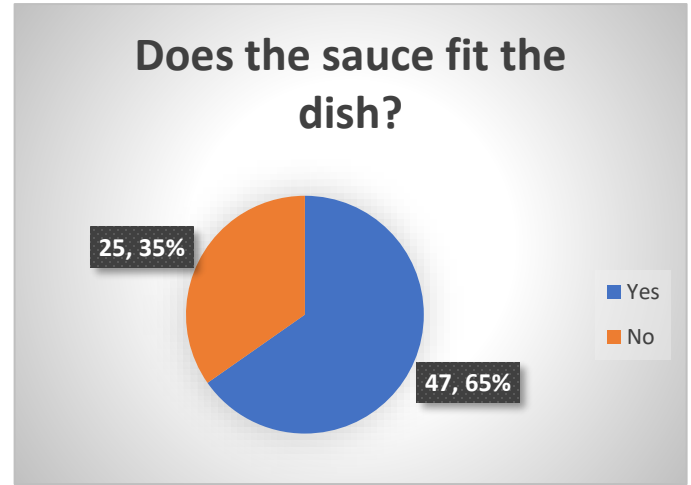
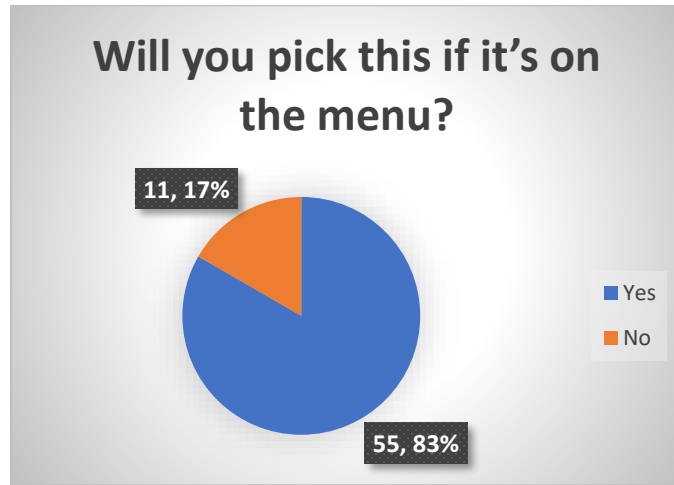


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OKOY



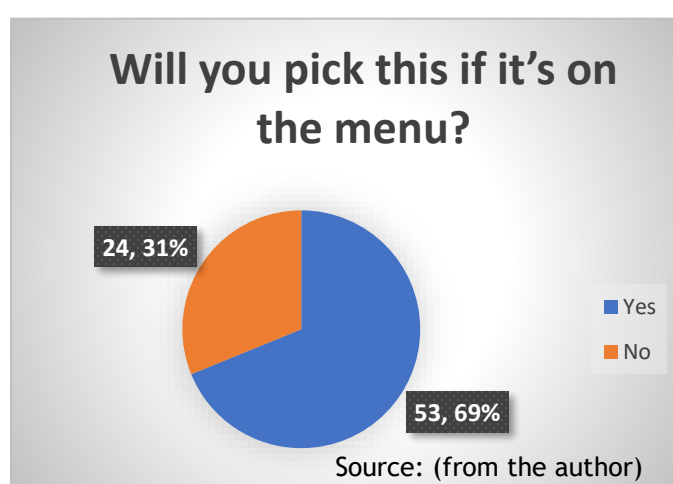
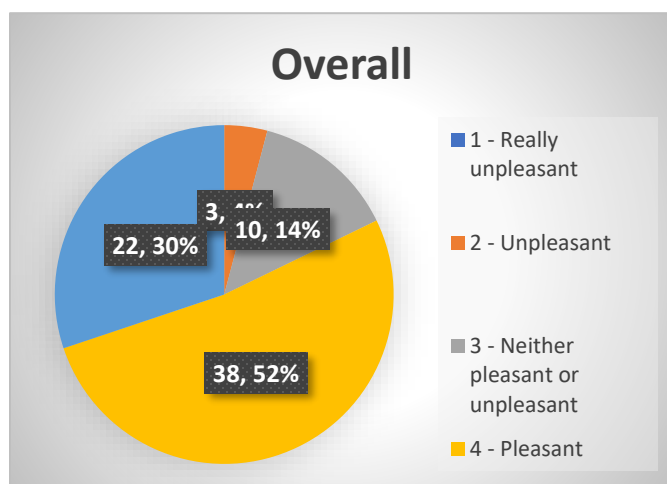
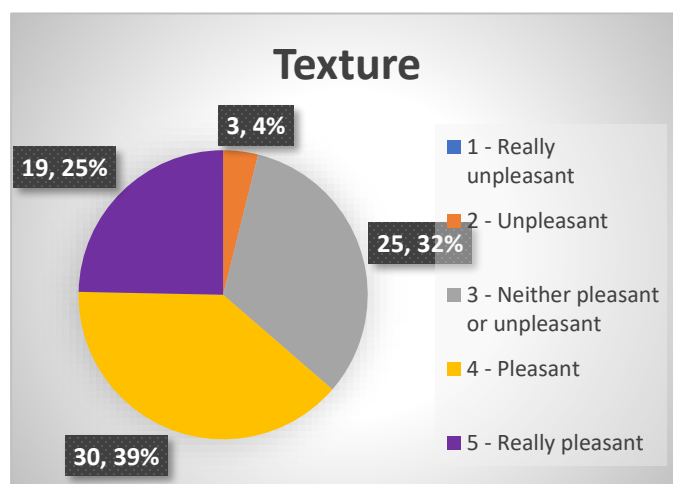
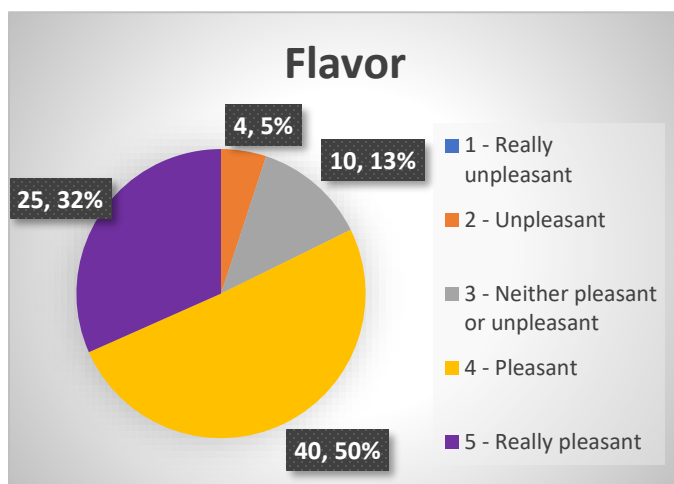
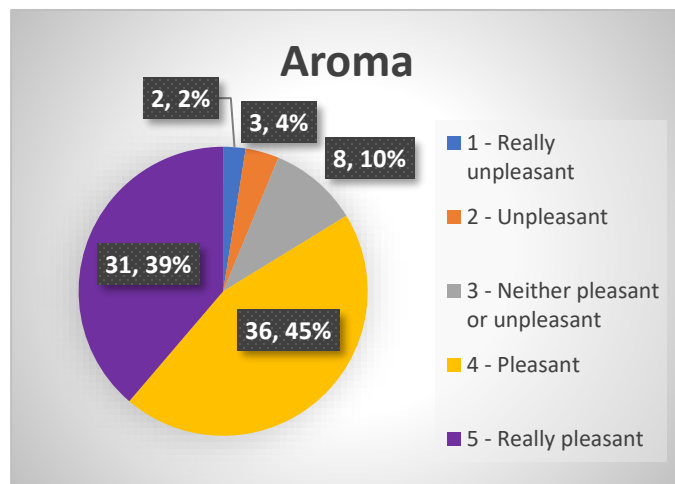
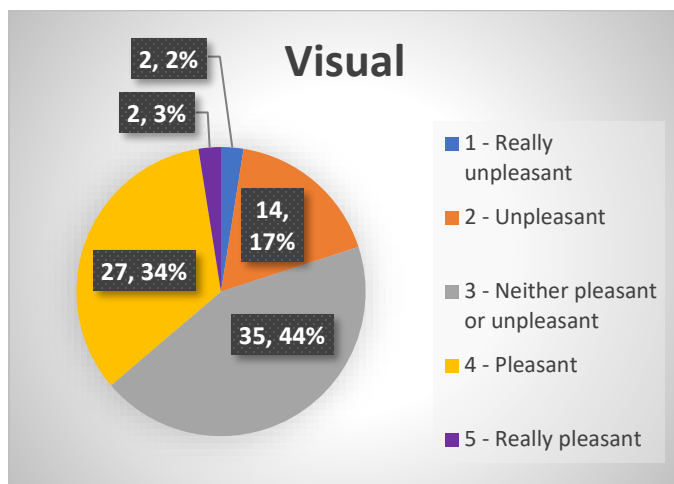
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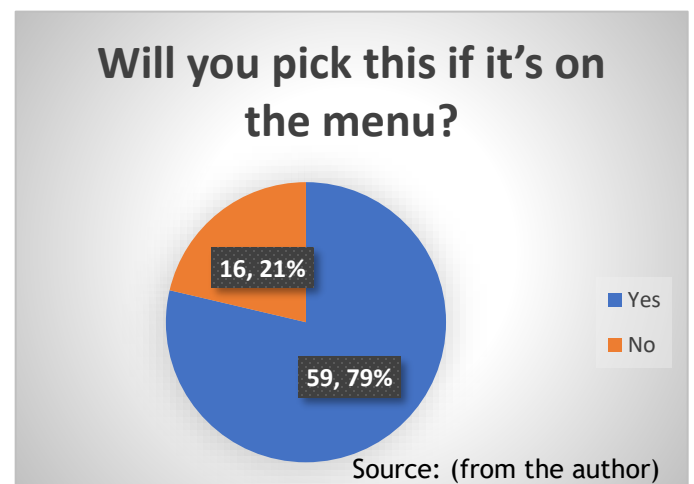
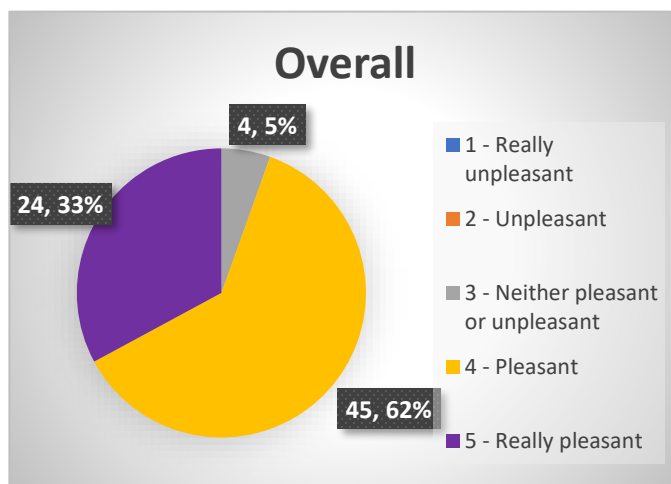
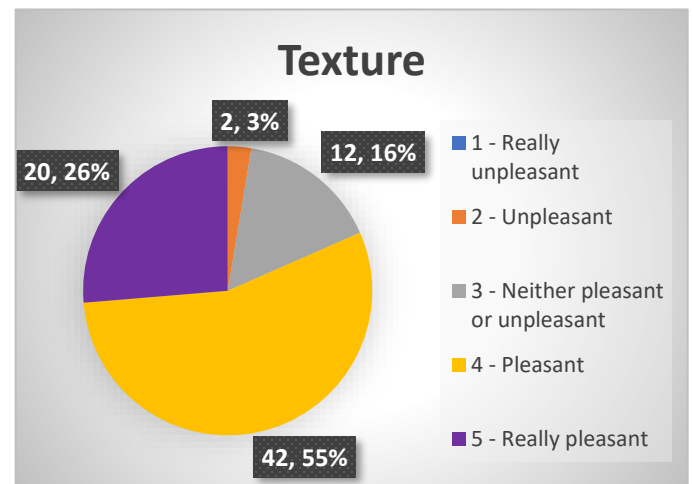
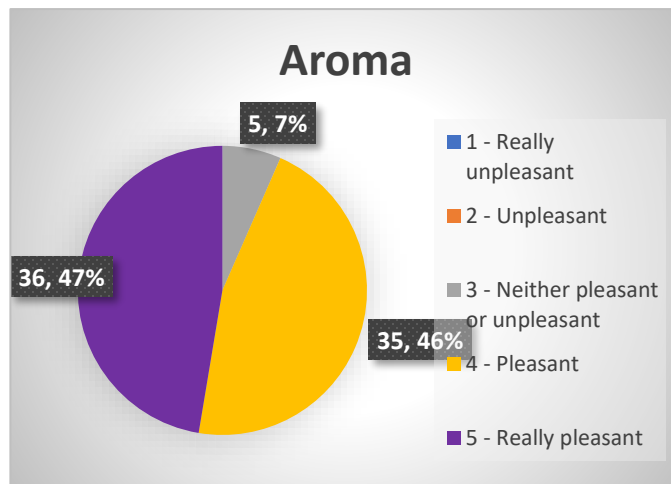
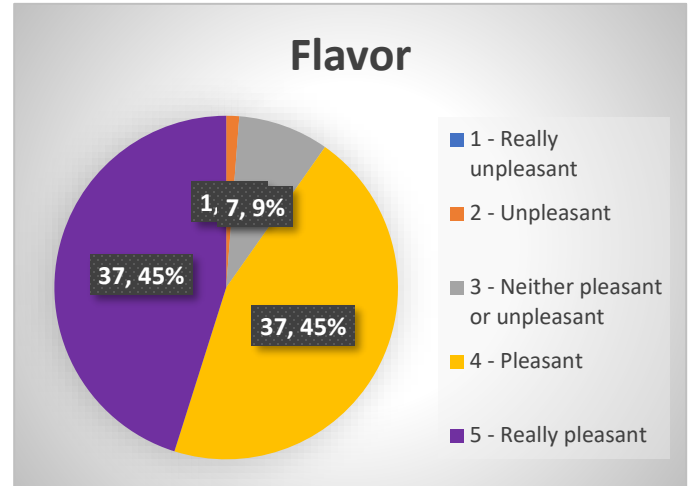
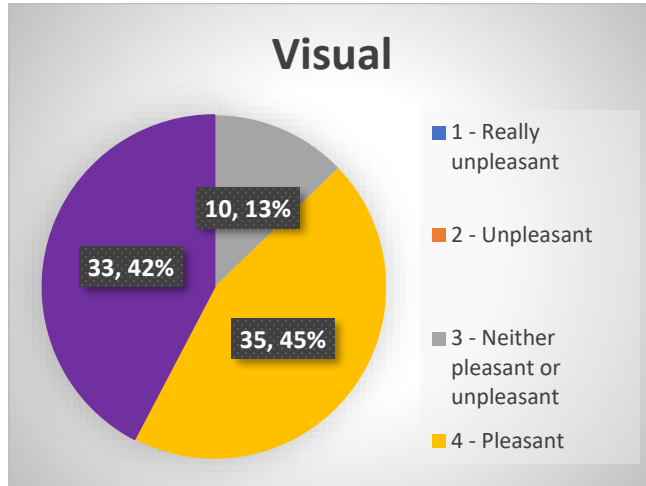
Main Dish

BINALOT NA ADOBO



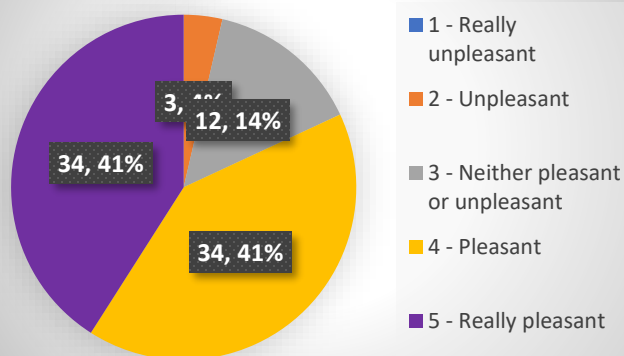
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UBE BAR

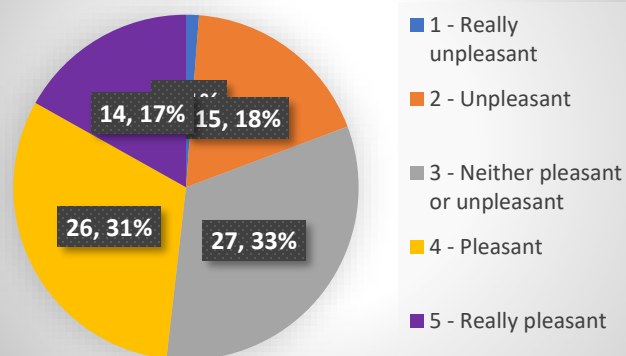


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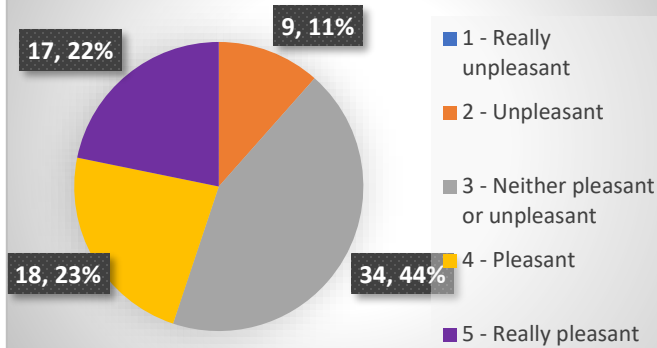
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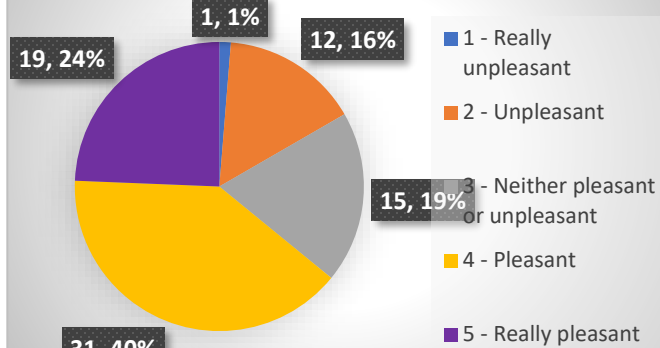
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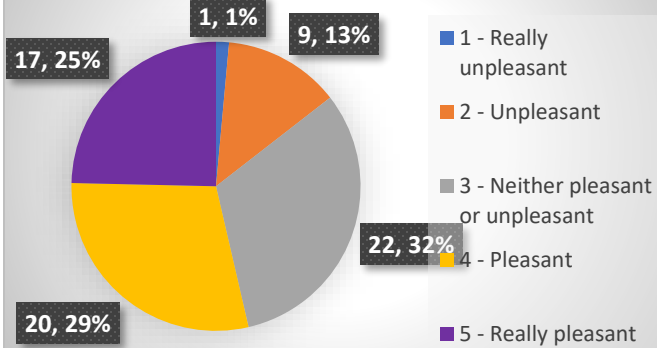
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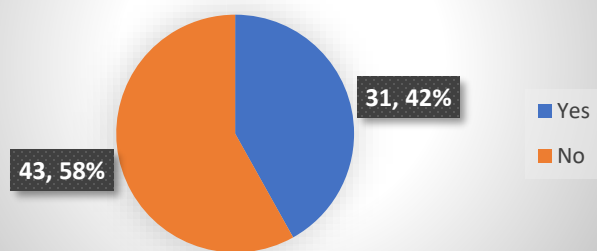
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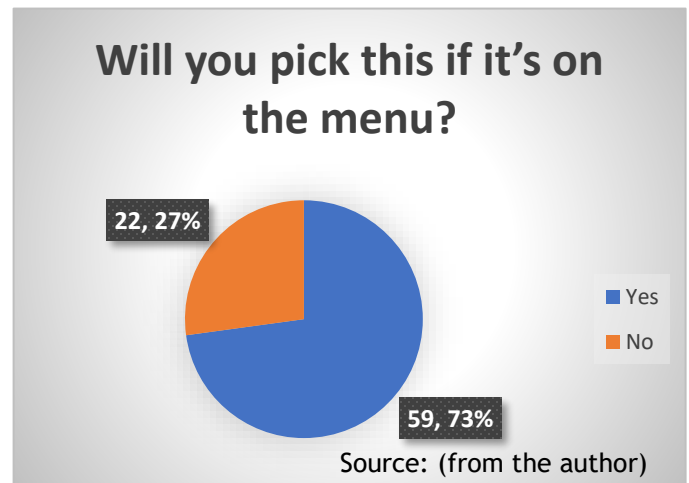
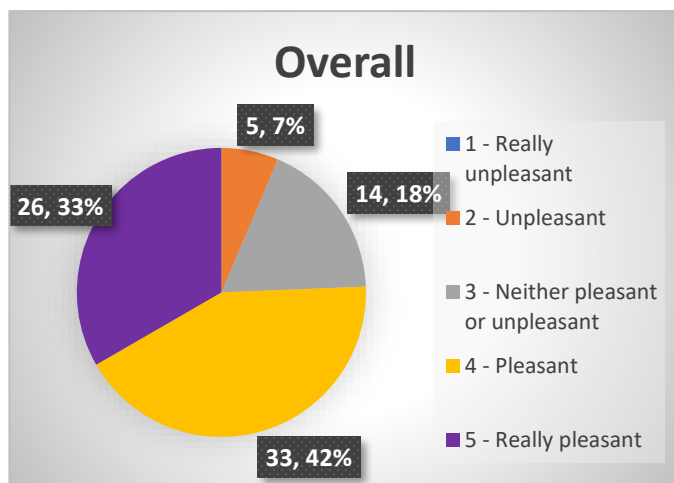
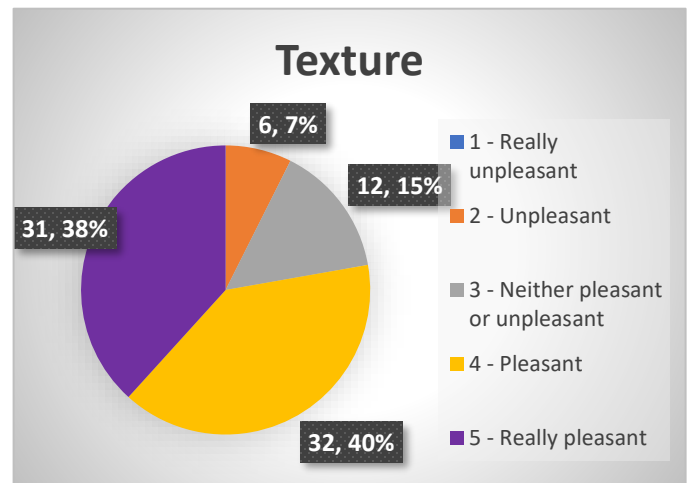
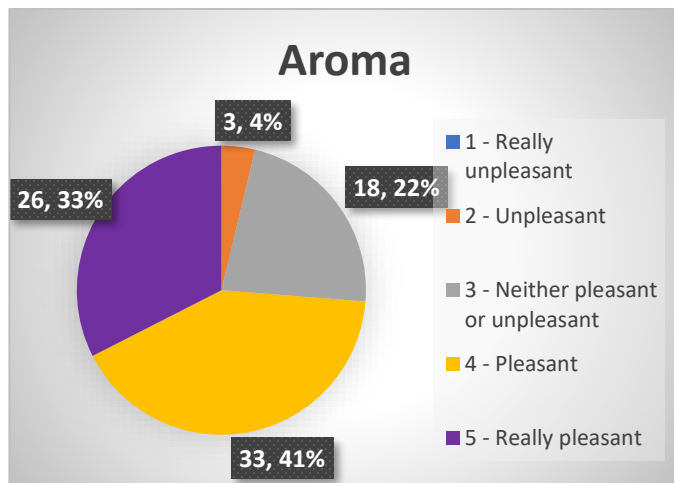
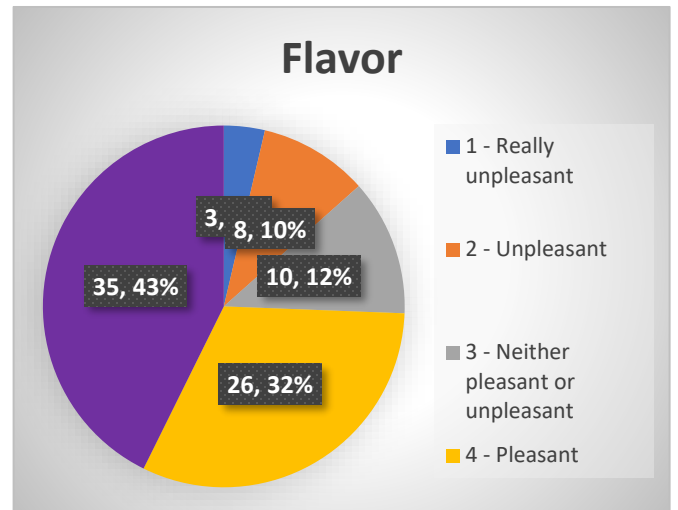
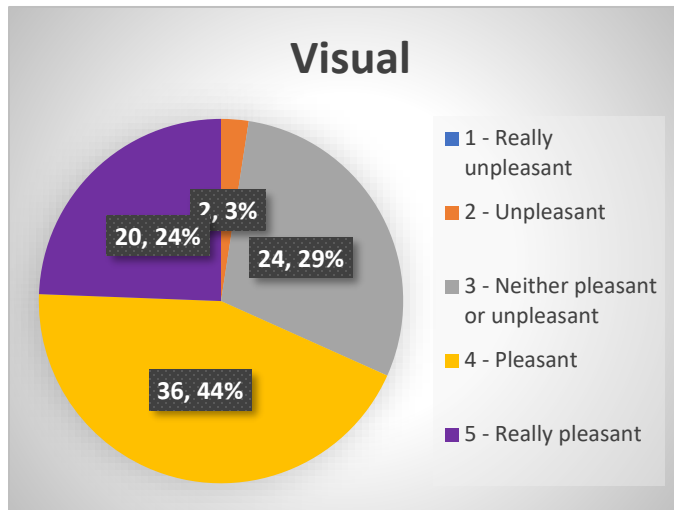


Will you pick this if it's on the menu?



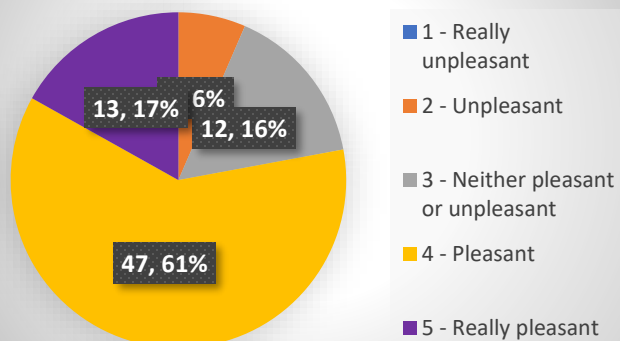
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TURON

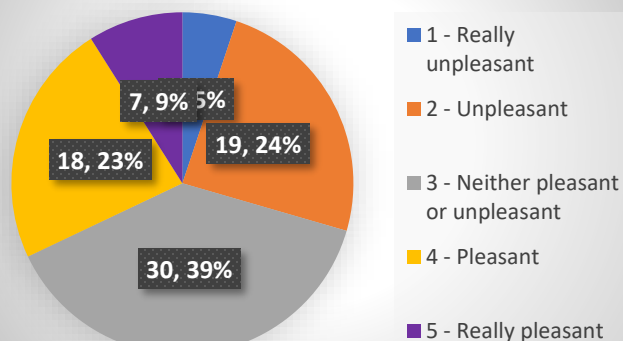


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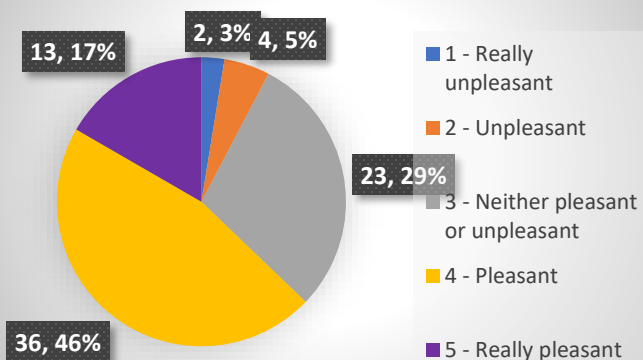
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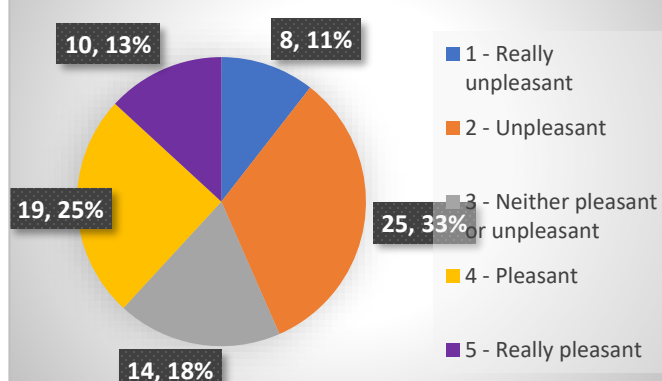
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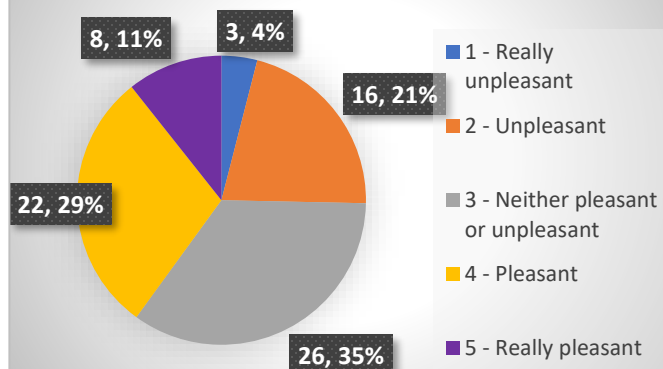
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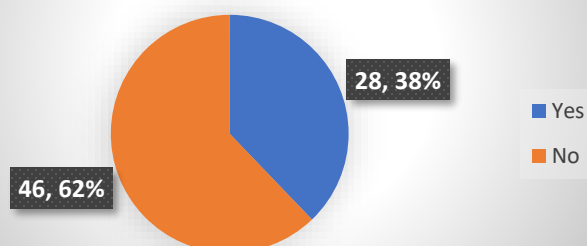
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Overall



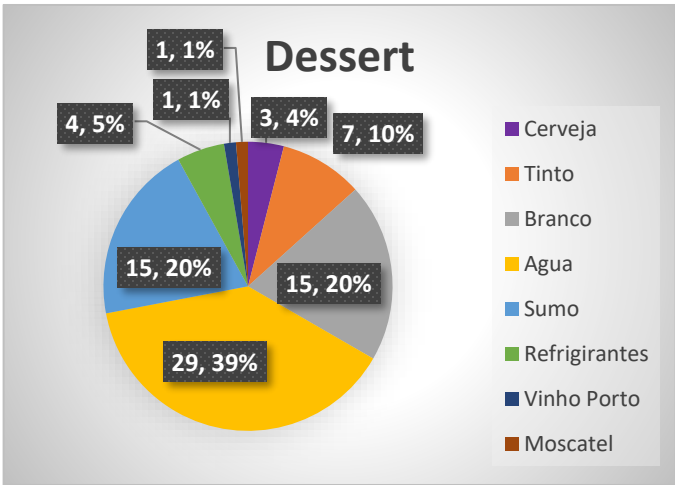
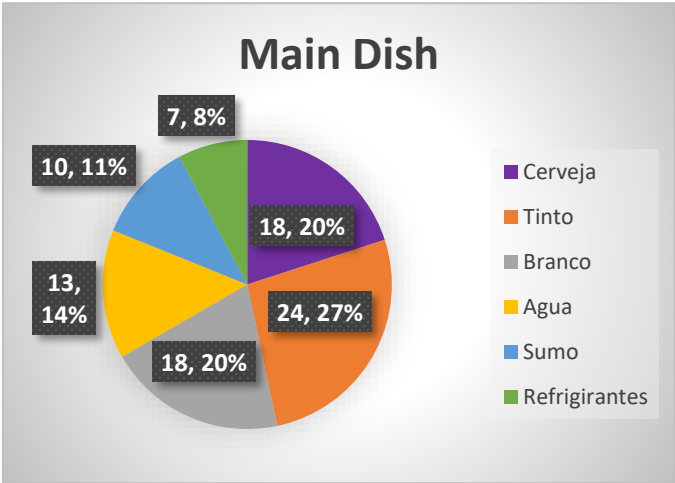
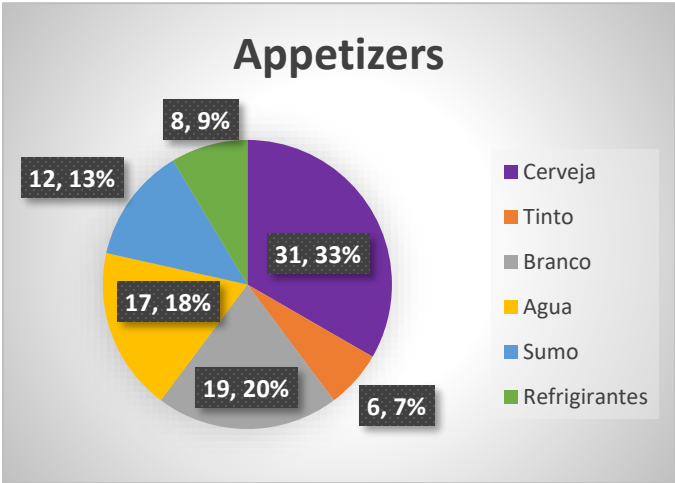
Will you pick this if it's on the menu?



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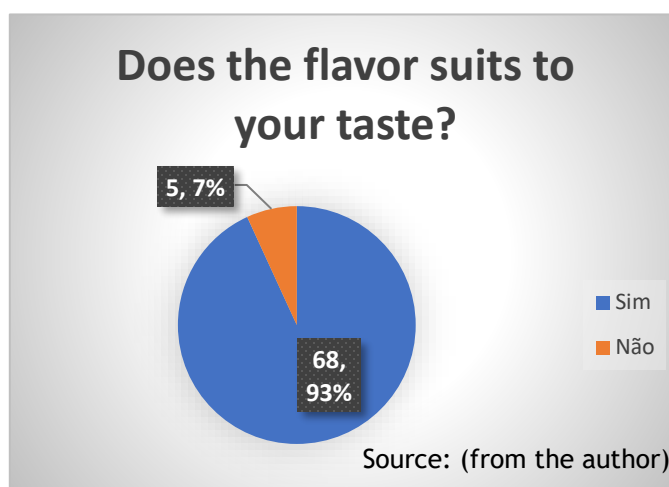
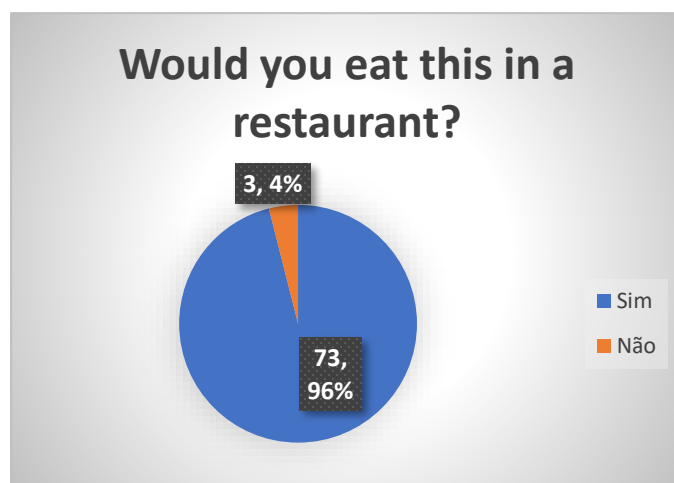
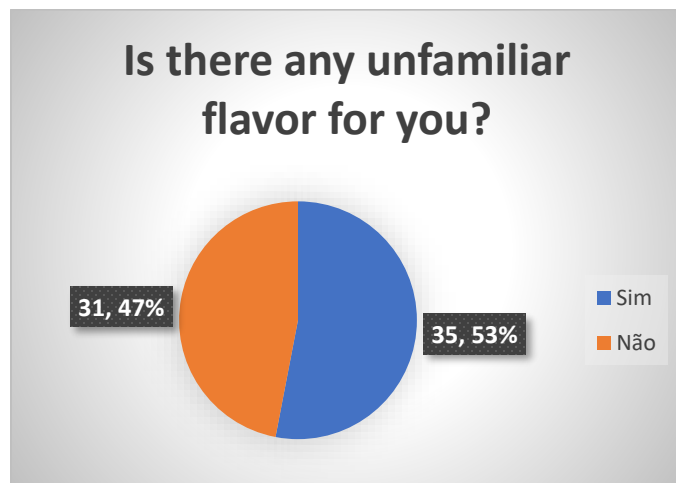
Others

DRINKS



Source: (from the author)

OTHER QUESTIONS



Survey Questionnaire

Kusina Filipina



Hello! I'm Deena Suganob, a student of Master's in Science of Gastronomy in Universidade do Porto (FCNAUP/Instituto Politecnico do Porto).

This questionnaire aims to understand if the Portuguese and other citizens from different countries will acknowledge trying Filipino cuisine.

At the end of the questionnaire, you will have the possibility to indicate your name and contact for later scheduling of the gastronomic tasting. If you choose not to do so, the answers collected will be anonymous. In any case, the data collected will be treated confidentially and used only for academic purposes. The identity of respondents will never be revealed in published academic work.

For any question related to data protection you can contact the DPO of the University of Porto through the e-mail dpo@reit.up.pt. By proceeding you agree to participate voluntarily and informed in this study.

Thank you so much!

Olá! Sou a Deena Suganob, estudante de Mestrado em Ciências da Gastronomia na Universidade do Porto e Instituto Politécnico do Porto.

Este questionário tem como objetivo compreender se os portugueses e outros cidadãos de diferentes países estarão interessados em provar a cozinha filipina.

No final do questionário, terá a possibilidade de indicar o seu nome e contacto para posterior agendamento da prova gastronómica. Se optar por não o fazer, as repostas recolhidas serão anónimas.

De qualquer forma, os dados recolhidos serão tratados com confidencialidade e utilizados apenas para fins académicos. A identidade dos inquiridos nunca será revelada nos trabalhos académicos publicados.

Para qualquer questão relacionada com a proteção de dados pode contactar a DPO da Universidade do Porto através do e-mail dpo@reit.up.pt. Ao prosseguir aceita participar de forma voluntária e informada neste estudo.

Muito Obrigada!

Have you heard about Filipino (Philippines) cuisine? Já ouviu falar da cozinha Filipina (Filipinas)?



☐ Yes/Sim

☐ No/Não

How? Como? *

- ☐ Native Filipino/Filipino nativo
- ☐ Family/Família
- ☐ Friends/Amigos
- ☐ Colleagues/Colegas
- ☐ Television/Televisão
- ☐ Internet (Youtube, Facebook, Twitter etc.)
- ☐ Books/Livros
- ☐ Other...

What Filipino foods have you tried? Que comidas filipinas provou? *

- ☐ Adobo
- ☐ Lechon
- ☐ Sinigang
- ☐ Pancit (Bihon, Canton etc.)
- ☐ Crispy Pata
- ☐ Lumpiang Shanghai
- ☐ Pinakbet
- ☐ Longganisa
- ☐ Binagoongan
- ☐ Kare-Kare
- ☐ Sisig
- ☐ Other...

Where did you tried it? Onde experimentou? *

- ☐ With Family/Com Família
- ☐ With Friends/Com Amigos
- ☐ Restaurants/Restaurantes
- ☐ Celebrations and Gatherings (Wedding, Birthday, Christmas parties etc.)/Celebrações e Reuniões (Casa...
- ☐ Foreign country/País Estrangeiro
- ☐ Other...

What do you think or expect Filipino cuisine would be? O que pensa ou espera que seja a cozinha filipina? *

- ☐ Sweet/Doce
- ☐ Salty/Salgado
- ☐ Spicy/Picante
- ☐ Sour/Acido
- ☐ Bitter/Amargo
- ☐ Fresh/Fresca
- ☐ Savory/Saborosa
- ☐ Bland/Branda
- ☐ Other...

Would you be interested in trying Filipino cuisine? Estaria interessado em provar a cozinha filipina? *

☐ Yes/Sim

☐ No/Não

Would you be interested in eating at a Filipino restaurant in the future? Estaria interessado em comer num restaurante filipino no futuro? *

☐ Yes/Sim

☐ No/Não

Are you willing to participate in trying Filipino Cuisine? Está disposto a participar na experimentação da Cozinha Filipina? *

☐ Yes/Sim

☐ No/Não

Contact Information/Informações de contacto



Please fill up this form to be contacted later.
Por favor preencha este formulário para ser contactado mais tarde.

Name/Nome *

Short-answer text

Email *

Short-answer text

Demographics/Demográficos



Description (optional)

Age/Idade *

- ☐ -18
- ☐ 18-24
- ☐ 25-30
- ☐ 31-36
- ☐ 37-42
- ☐ 43-48
- ☐ 49-54
- ☐ 55-61
- ☐ 61+

Sex/Sexo

- ☐ Female
- ☐ Male
- ☐ Prefer not to say
- ☐ Other...

Occupation/Profissão *

Short-answer text

Area of Residency/Localidade *

- ☐ Porto
- ☐ Vila do Conde
- ☐ Matosinhos
- ☐ Maia
- ☐ Vila Nova de Gaia
- ☐ Other...

Nationality/Nacionalidade

- ☐ Portuguese
 - ☐ Filipino
 - ☐ Brazilian
 - ☐ Chinese
 - ☐ Spanish
 - ☐ French
 - ☐ German
 - ☐ Other...
-

Teste de Prova comida Filipina

Data do Evento: 1 Junho 2022, Quarta-Feira

Horario do Evento: 12:00-15:00

Capacidade cada sessão: 20 pessoas (30 minutos maximo)

Limite de pessoas: 80

Nome/Name *

Long-answer text

Profissão ou Curso/Profession or Course *

Long-answer text



Hora da prova/Time of testing (Please just pick one option/Só escolher uma opção por favor)



Checkboxes



☐ 12:00-12:30



☐ 12:45-13:15



☐ 13:30-14:00



☐ 14:15-14:45



Allergies/Alergias *

Long-answer text

Taste test Questionnaire

QUESTIONÁRIO DE TESTE DE PROVA

* Os objetivos desta prova de produto são os seguintes:

- Conhecer a opinião portuguesa e estrangeira, de diferentes idades, sobre o que é a cozinha/alimentação filipina.
- Se for necessário modificar algum sabor desconhecido da cozinha/alimentação filipina para se adequar ao mercado português.
- Compreender como a cozinha étnica filipina poderia entrar num mercado gastronómico estrangeiro, sabendo que é uma das cozinhas menos conhecidas, através da opinião dos participantes.

1. A partir de uma escala de 1-5 (1 é o mais baixo e 5 é o mais alto), como classificaria os pratos:

Entrada #1 531

	1 – Muito desagradável	2 – Desagradável	3 – Nem agradável nem desagradável	4 – Agradável	5 – Muito agradável
Aspeto					
Aroma					
Sabor					
Textura					
Pontuação geral					

O molho **741** complementa com o prato (pode provar outro molho)? ☐ Sim ☐ Não

Em caso desfavorável, qual prefere? _____

Escolheria este prato se estivesse no menu? ☐ Sim ☐ Não

Quanto pagaria por este prato num ambiente de comida de rua? (*Alimentos que são cozinhados e vendidos em locais públicos, geralmente ao ar livre, para serem consumidos imediatamente*).

Quantidade: 9 peças igual ao exemplo _____

Entrada #2 246

	1 – Muito desagradável	2 – Desagradável	3 – Nem agradável nem desagradável	4 – Agradável	5 – Muito agradável
Aspeto					
Aroma					
Sabor					

Textura					
Pontuação geral					

O molho **249** complementa com o prato (pode provar outro molho)? ☐ Sim ☐ Não

Em caso desfavorável, qual prefere? _____

Escolheria este prato se estivesse no menu? ☐ Sim ☐ Não

Quanto pagaria por este prato num ambiente de comida de rua? (*Alimentos que são cozinhados e vendidos em locais públicos, geralmente ao ar livre, para serem consumidos imediatamente*).

Quantidade: 6 peças igual ao exemplo _____

Entrada #3 485

	1 – Muito desagradável	2 – Desagradável	3 – Nem agradável nem desagradável	4 – Agradável	5 – Muito agradável
Aspetto					
Aroma					
Sabor					
Textura					
Pontuação geral					

O molho **951** complementa com o prato (pode provar outro molho)? ☐ Sim ☐ Não

Em caso desfavorável, qual prefere? _____

Escolheria este prato se estivesse no menu? ☐ Sim ☐ Não

Quanto pagaria por este prato num ambiente de comida de rua? (*Alimentos que são cozinhados e vendidos em locais públicos, geralmente ao ar livre, para serem consumidos imediatamente*).

Quantidade: 1 peça com o diâmetro aproximado 10cm _____

Prato Principal: 672

	1 – Muito desagradável	2 – Desagradável	3 – Nem agradável nem desagradável	4 – Agradável	5 – Muito agradável
Aspetto					
Aroma					
Sabor					
Textura					
Pontuação geral					

Escolheria este prato se estivesse no menu? ☐ Sim ☐ Não

Quanto pagaria por este prato num cenário de Casual Rápido? (*Oferece a facilidade e comodidade da comida rápida, mas com um ambiente mais convidativo para sentar. O menu consiste em ingredientes de melhor qualidade que podem ser encontrados na maioria dos estabelecimentos de fast-food*).

Quantidade: 1 caneca do arroz com comida e acompanhamentos (tomate e ovos)

Sobremesa #1 347

	1 – Muito desagradável	2 – Desagradável	3 – Nem agradável nem desagradável	4 – Agradável	5 – Muito agradável
Aspetto					
Aroma					
Sabor					
Textura					
Pontuação geral					

Escolheria este prato se estivesse no menu? ☐ Sim ☐ Não

Quanto pagaria por este prato num ambiente de jantar formal? (*Refere-se a uma experiência de restaurante de maior qualidade e formalidade em comparação com a experiência de um restaurante casual. O ambiente de um restaurante fino é normalmente mais elegante, e a comida é servida de uma forma mais formal.*)

Quantidade: 6 peças com 8cm _____

Sobremesa #2 284

	1 – Muito desagradável	2 – Desagradável	3 – Nem agradável nem desagradável	4 – Agradável	5 – Muito agradável
Aspetto					
Aroma					
Sabor					
Textura					
Pontuação geral					

Escolheria este prato se estivesse no menu? ☐ Sim ☐ Não

Quanto pagaria por este prato num ambiente de jantar formal? (*Refere-se a uma experiência de restaurante de maior qualidade e formalidade em comparação com a experiência de um restaurante casual. O ambiente de um restaurante fino é normalmente mais elegante, e a comida é servida de uma forma mais formal.*)

Quantidade: 2 peças com o mesmo tamanho _____

Sobremesa #3 642

	1 – Muito desagradável	2 – Desagradável	3 – Nem agradável nem desagradável	4 – Agradável	5 – Muito agradável
Aspetto					
Aroma					
Sabor					
Textura					
Pontuação geral					

Escolheria este prato se estivesse no menu? ☐ Sim ☐ Não

Quanto pagaria por este prato num ambiente de jantar formal? *(Refere-se a uma experiência de restaurante de maior qualidade e formalidade em comparação com a experiência de um restaurante casual. O ambiente de um restaurante fino é normalmente mais elegante, e a comida é servida de uma forma mais formal.)*

Quantidade: 3 peças com 12cm _____

Sobremesa #4 845

	1 – Muito desagradável	2 – Desagradável	3 – Nem agradável nem desagradável	4 – Agradável	5 – Muito agradável
Aspetto					
Aroma					
Sabor					
Textura					
Pontuação geral					

Escolheria este prato se estivesse no menu? ☐ Sim ☐ Não

Quanto pagaria por este prato num ambiente de jantar formal? *(Refere-se a uma experiência de restaurante de maior qualidade e formalidade em comparação com a experiência de um restaurante casual. O ambiente de um restaurante fino é normalmente mais elegante, e a comida é servida de uma forma mais formal.)*

Quantidade: 8 peças com mesmo tamanho _____

1. Que bebida acha que poderia emparelhar com cada prato?

Entrada: ☐ Cerveja ☐ Vinho tinto ☐ Vinho Branco ☐ Água ☐ Sumo ☐ Refrigerantes

Prato Principal: ☐ Cerveja ☐ Vinho tinto ☐ Vinho Branco ☐ Água ☐ Sumo ☐ Refrigerantes

Sobremesa: ☐ Cerveja ☐ Vinho tinto ☐ Vinho Branco ☐ Água ☐ Sumo ☐ Refrigerantes

2. Existe um sabor desconhecido para si? ☐ Sim ☐ Não

Em caso afirmativo, pode explicar brevemente que tipo de sabor não é familiar?

3. Comería estes tipos de alimentos num restaurante? ☐ Sim ☐ Não

Se responder sim ou não, pode explicar porquê?

4. Acha que os sabores se adequam ao seu gosto? ☐ Sim ☐ Não

Se não, pode explicar o que falta ou precisa de ser alterado?

5. Sugestões e comentários:

Obrigada por participar neste teste de prova,

Deena Suganob

Mestrado em Ciências Gastronómicas

Nutritional Value

Lumpiang Shanghai

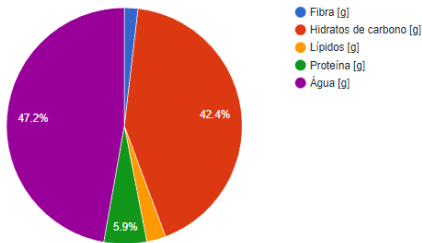


	Valor por 100g	Unidade
▼ Valor Energético		
Energia	143	kcal
Energia	602	kJ
▼ Macroconstituintes		
▶ Lipidos	4.7	g
▶ Hidratos de carbono	18.8	g
Sal	2.2	g
Fibra	2.5	g
Proteína	5.1	g
Álcool	0	g
Água	89.5	g
Ácidos orgânicos	0.2	g
Coolesterol	38	mg
▼ Vitaminas		
Vitamina A total (equivalentes de retinol)	263	µg
Caroteno	1465	µg
Vitamina D	0.2	µg
a-tocoferol	0.63	mg
Tiamina	0.13	mg
Riboflavina	0.11	mg
Niacina	1.34	mg
Equivalentes de niacina	2.47	mg
Triptofano/60	1.08	mg
Vitamina B6	0.23	mg
Vitamina B12	0.13	µg
Vitamina C	24	mg
Folatos	26.5	µg
▼ Minerals		
Cinza	2.97	g
Sódio (Na)	890	mg
Potássio (K)	260	mg
Cálcio (Ca)	46	mg
Fósforo (P)	98	mg
Magnésio (Mg)	25	mg
Ferro (Fe)	1.3	mg
Zinco (Zn)	0.7	mg

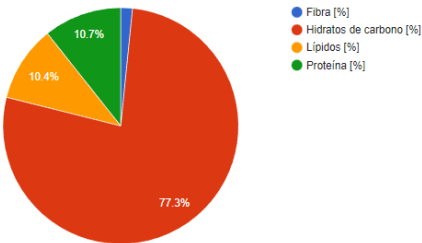
Source: (from the author)

Kwek Kwek

Composição



Energia

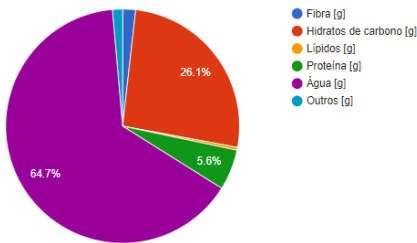


▼ Valor Energético		
Energia	236	kcal
Energia	1000	kJ
▼ Macroconstituintes		
▶ Lipídios	2.8	g
▶ Hidratos de carbono	45.5	g
Sal	2.9	g
Fibra	2	g
Proteína	6.3	g
Álcool	0	g
Água	50.6	g
Ácidos orgânicos	0	g
Colesterol	131	mg
▼ Vitaminas		
Vitamina A total (equivalentes de retinol)	54	µg
Caroteno	6	µg
Vitamina D	0.4	µg
a-tocoferol	0.54	mg
Tiamina	0.08	mg
Riboflavina	0.15	mg
Niacina	0.52	mg
Equivalentes de niacina	2.02	mg
Triptofano/60	1.5	mg
Vitamina B6	0.1	mg
Vitamina B12	0.31	µg
Vitamina C	0.5	mg
Folatos	17.9	µg
▼ Minerais		
Cinza	3.30	g
Sódio (Na)	1170	mg
Potássio (K)	110	mg
Cálcio (Ca)	35	mg
Fósforo (P)	110	mg
Magnésio (Mg)	31	mg
Ferro (Fe)	1.8	mg
Zinco (Zn)	0.8	mg

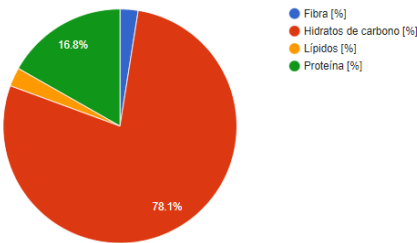
Source: (from the author)

Okoy

Composição



Energia

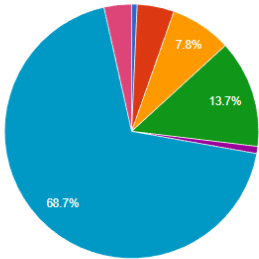


	Valor por 100g	Unidade
▼ Valor Energético		
Energia	134	kcal
Energia	570	kJ
▼ Macroconstituintes		
▶ Lipídios	0.4	g
▶ Hidratos de carbono	26.1	g
Sal	0.1	g
Fibra	1.8	g
Proteína	5.6	g
Álcool	0	g
Água	64.7	g
Ácidos orgânicos	0	g
Colesterol	25	mg
▼ Vitaminas		
Vitamina A total (equivalentes de retinol)	125	µg
Caroteno	753	µg
Vitamina D	0	µg
α-tocoferol	0.27	mg
Tiamina	0.09	mg
Riboflavina	0.02	mg
Niacina	0.78	mg
Equivalentes de niacina	1.97	mg
Triptofano/60	1.18	mg
Vitamina B6	0.14	mg
Vitamina B12	0.34	µg
Vitamina C	9.4	mg
Folatos	14.3	µg
▼ Minerais		
Cinza	0.778	g
Sódio (Na)	48	mg
Potássio (K)	220	mg
Cálcio (Ca)	40	mg
Fósforo (P)	82	mg
Magnésio (Mg)	20	mg
Ferro (Fe)	1	mg
Zinco (Zn)	0.5	mg

Source: (from the author)

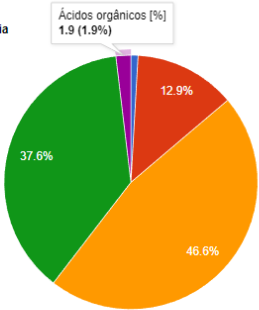
Adobo

Composição



- Fibra [g]
- Hidratos de carbono [g]
- Lipídios [g]
- Proteína [g]
- Ácidos orgânicos [g]
- Água [g]
- Outros [g]

Energia



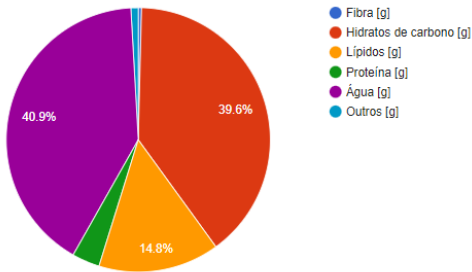
- Fibra [%]
- Hidratos de carbono [%]
- Lipídios [%]
- Proteína [%]
- Ácidos orgânicos [%]

▼ Valor Energético		
Energia	148	kcal
Energia	620	kJ
▼ Macroconstituintes		
▶ Lipídios	7.8	g
▶ Hidratos de carbono	4.7	g
Sal	2.9	g
Fibra	0.7	g
Proteína	13.7	g
Álcool	0	g
Água	68.7	g
Ácidos orgânicos	0.9	g
▼ Vitaminas		
Vitamina A total (equivalentes de retinol)	0	µg
Caroteno	0	µg
Vitamina D	0.4	µg
α-tocoferol	0.06	mg
Tiamina	0.49	mg
Riboflavina	0.18	mg
Niacina	4.87	mg
Equivalentes de niacina	7.61	mg
Triptofano/50	2.98	mg
Vitamina B6	0.35	mg
Vitamina B12	0.63	µg
Vitamina C	0.7	mg
Folatos	2.1	µg
▼ Minerais		
Cinza	3.85	g
Sódio (Na)	1180	mg
Potássio (K)	310	mg
Cálcio (Ca)	15	mg
Fósforo (P)	150	mg
Magnésio (Mg)	25	mg
Ferro (Fe)	1	mg
Zinco (Zn)	1.6	mg

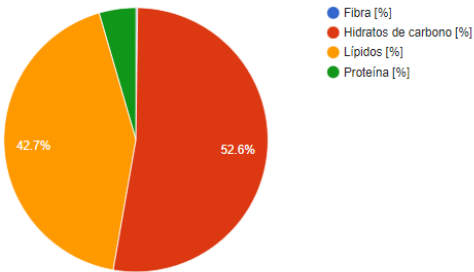
Source: (from the author)

Ube Bar

Composição



Energia

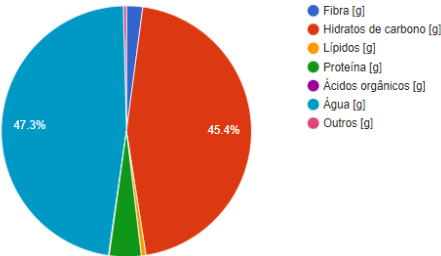


▼ Valor Energético		
Energia	306	kcal
Energia	1280	kJ
▼ Macroconstituintes		
▶ Lipídios	14.8	g
▶ Hidratos de carbono	39.6	g
Sal	0.4	g
Fibra	0.4	g
Proteína	3.4	g
Álcool	0	g
Água	40.9	g
Ácidos orgânicos	0	g
Colesterol	44	mg
▼ Vitaminas		
Vitamina A total (equivalentes de retinol)	129	µg
Caroteno	27	µg
Vitamina D	0.1	µg
α-tocoferol	0.4	mg
Tiamina	0.03	mg
Riboflavina	0.12	mg
Niacina	0.57	mg
Equivalentes de niacina	1.34	mg
Triptofano/60	0.76	mg
Vitamina B6	0.04	mg
Vitamina B12	0.13	µg
Vitamina C	0	mg
Folatos	4.9	µg
▼ Minerais		
Cinza	0.904	g
Sódio (Na)	150	mg
Potássio (K)	140	mg
Cálcio (Ca)	100	mg
Fósforo (P)	90	mg
Magnésio (Mg)	14	mg
Ferro (Fe)	0.3	mg
Zinco (Zn)	0.5	mg

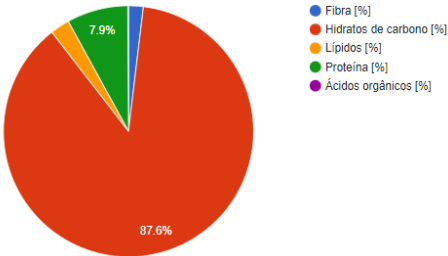
Source: (from the author)

Turon

Composição



Energia

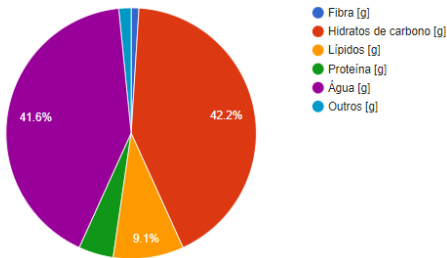


▼ Valor Energético		
Energia	208	kcal
Energia	882	kJ
▼ Macroconstituintes		
▶ Lípidos	0.6	g
▶ Hidratos de carbono	45.4	g
Sal	0	g
Fibra	2.1	g
Proteína	4.1	g
Álcool	0	g
Água	47.3	g
Ácidos orgânicos	0.1	g
Coolesterol	0	mg
▼ Vitaminas		
Vitamina A total (equivalentes de retinol)	30	µg
Caroteno	182	µg
Vitamina D	0	µg
α-tocoferol	0.28	mg
Tiamina	0.06	mg
Riboflavina	0.03	mg
Niacina	0.67	mg
Equivalentes de niacina	1.51	mg
Triptofano/50	0.84	mg
Vitamina B6	0.12	mg
Vitamina B12	0	µg
Vitamina C	3.3	mg
Folatos	16	µg
▼ Minerais		
Cinza	0.407	g
Sódio (Na)	4.6	mg
Potássio (K)	120	mg
Cálcio (Ca)	17	mg
Fósforo (P)	74	mg
Magnésio (Mg)	22	mg
Ferro (Fe)	0.7	mg
Zinco (Zn)	0.5	mg

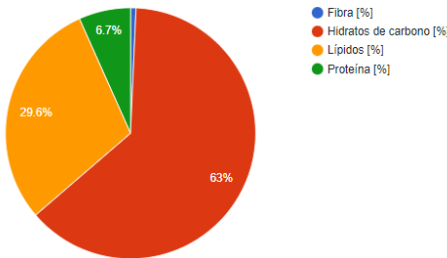
Source: (from the author)

Bibingka

Composição



Energia

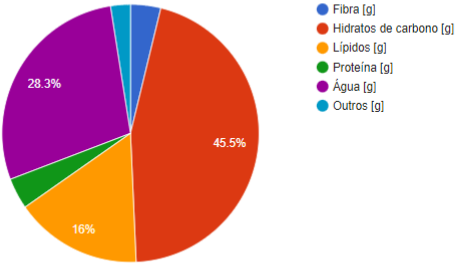


▼ Valor Energético		
Energia	271	kcal
Energia	1140	kJ
▼ Macroconstituintes		
▶ Lipidos	9.1	g
▶ Hidratos de carbono	42.2	g
Sal	1	g
Fibra	1	g
Proteína	4.5	g
Álcool	0	g
Água	41.6	g
Ácidos orgânicos	0	g
Colesterol	38	mg
▼ Vitaminas		
Vitamina A total (equivalentes de retinol)	30	µg
Caroteno	2	µg
Vitamina D	0.2	µg
α-tocoferol	0.33	mg
Tiamina	0.04	mg
Riboflavina	0.05	mg
Niacina	0.56	mg
Equivalentes de niacina	1.52	mg
Triptofano/60	0.95	mg
Vitamina B6	0.08	mg
Vitamina B12	0.1	µg
Vitamina C	0.3	mg
Folatos	10.6	µg
▼ Minerals		
Cinza	1.60	g
Sódio (Na)	400	mg
Potássio (K)	140	mg
Cálcio (Ca)	26	mg
Fósforo (P)	170	mg
Magnésio (Mg)	31	mg
Ferro (Fe)	1.7	mg
Zinco (Zn)	0.6	mg

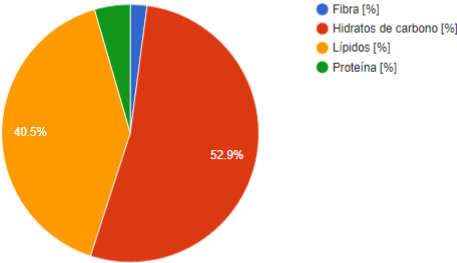
Source: (from the author)

Palitaw

Composição



Energia



▼ Valor Energético		
Energia	352	kcal
Energia	1470	kJ
▼ Macroconstituintes		
▶ Lipidos	16	g
▶ Hidratos de carbono	45.5	g
Sal	0.1	g
Fibra	3.8	g
Proteína	3.9	g
Álcool	0	g
Água	28.3	g
Ácidos orgânicos	0	g
Colesterol	0	mg
▼ Vitaminas		
Vitamina A total (equivalentes de retinol)	0	µg
Caroteno	1	µg
Vitamina D	0	µg
a-tocoferol	0.23	mg
Tiamina	0.14	mg
Riboflavina	0.03	mg
Niacina	0.87	mg
Equivalentes de niacina	1.8	mg
Triptofano/60	0.83	mg
Vitamina B6	0.06	mg
Vitamina B12	0	µg
Vitamina C	0	mg
Folatos	14.3	µg
▼ Minerais		
Cinza	0.975	g
Sódio (Na)	13	mg
Potássio (K)	130	mg
Cálcio (Ca)	100	mg
Fósforo (P)	120	mg
Magnésio (Mg)	54	mg
Ferro (Fe)	2.3	mg
Zinco (Zn)	0.8	mg

Source: (from the author)

