

Politecnico di Torino

Master's Degree Thesis of
Customer-Related Digitization of the Horeca Industry



**POLITECNICO
DI TORINO**

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*A.Y. 2019/2020
M.Sc. Engineering and Management,
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Abstract

Today, especially advancing technologies and globalization have increased the demands of people on the travel and tourism related topics, and activities in terms of eating, drinking and accommodating have spread out of houses. The increased interest in these services brought along problems arising from various topics following their grown popularity and higher use. In the solution of these problems and meeting the expectations of customers, "digitization" is a highly preferred method and it is frequently encountered in all areas related to the Horeca industry. Understanding the point of view of both customers and start-ups/enterprises on these digital applications, their ways of using them and their experiences by researches, studies, questionnaires and interviews are of great importance in terms of creating a source for future implementations.

Key Words: Digitization, Horeca, Hotels, Restaurants, Catering, Travel, Tourism, Food Services, Accommodation, Entrepreneurship, Innovation, Technology, Internet, Mobile Applications, Trends, Expectations, Customers, Start-ups, I3P, Numenu, Research, Interview.

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1. Introduction

This thesis aims to find out, analyse and highlight the most appropriate solutions for the expectations and needs of customers in the Horeca industry in a digitization point of view. It starts with the introduction of entrepreneurship environment in the world, tells briefly about start-ups and provides some information about investments on different sectors to understand the current situation and realize the opportunities for implementations related to entrepreneurship. It continues with highlighting the travel and tourism sector, its size and related industries, and ends with the introduction of digitization, customer expectations and Horeca industry.

In the third part, the study focuses deeply on the Horeca industry. At the beginning, it describes the industry in detail including its characteristics, industry elements concerning hotels, restaurants and bars and catering services with profoundly defining and qualifying each of them. Second part continues with the information of Horeca industry resources such as raw materials and products, technology, equipment and machines, decorative items, lands and buildings and human resources. It is followed by the research on different markets and industry-related statistics to give numbers and various data based on the findings to bring out a more specified view about the industry potential and customer demands. These statistics are divided into two sub-topics which give information about “travel and tourism”, and “hotels, restaurants and catering” separately. Second part is ended with the definition and analysing the current trends of Horeca industry, which are given as smartphone usage, mobile and digital payments, user experience design, responsible travelling, digital marketing and social media activities, and streaming.

The fourth part focuses on understanding the expectations of existing customers which were determined as in the following: discovery and ease of reaching to quality, personalized local experience, reliability and engagement, flexibility and easy-to-understand services, sustainability and reduction of waste and experience sharing. This part also delivers a detailed definition, information from various researches and the reasons why these expectations have arisen in the industry.

In the fifth part, digitization represents the focus. What is digitization, where, for what purposes and in what ways is used, its evolution from past to present, its advantages and impact on countries are detailed.

In the sixth part, the use of digitization in Horeca industry is described. The effect of digitization, which is used exclusively in Horeca industry activities, to meet customer expectations has been investigated. This part also highlights the existing ideas and innovations. It is based on giving details about digitization implementations and how they are used in travel and tourism industry, hotels and food services. This part purposes to achieve to show the previous researches about effective solutions for customer expectations and needs by making use of the data and information mentioned in the previous sections. To go into detail, analysis of Horeca industry with a focus on its sub-

industries which are travel and tourism, hotels and food services is done in this part to show the use of digital services in different related areas.

In the seventh part of the thesis study, examinations were made to understand the place of digitization in real life. First of all, a questionnaire was made on a selected customer group to question their experiences in the restaurant during their travels in order to understand the customer behaviours and compare them with the findings in the examinations made in the previous parts. In the second part of this section, the former I3P member start-up Numenu, which provides digital food services, was examined, as well as I3P services were added and an interview was held with the entrepreneur of this start-up. The aim of this interview is to look at digitization applications used in the Horeca industry from an entrepreneurial perspective and to understand the contribution of I3P services to the development of a seed stage start-up.

The thesis study ends with the conclusion part in which the final implications of all the previously mentioned data, information and researches are explained, and the study is summarized.

2. Introduction to Entrepreneurship

Entrepreneurship is a process of beginning to a new business. Thousands of years ago, with the start of trading activities of humanity, entrepreneurship has been taking place in different ways. It, as an idea, firstly occurred while exchanging the objects for other needs (Hur, 2020). But after the civilization, foundation of money and money related items; it has reshaped and reached to the form as we know right now, parallel to the developments in businesses.

The origin of the term “entrepreneurship” comes from a French word “entreprendre” which means “undertake” (Allah & Nakhaie, 2011). An entrepreneur, who carries out the entrepreneurship process and able to convert investments and technologies into products and services (Ahmad & Seymour, n.d.), undertakes risks to open a business venture, to continue its existence in market and to make profits. Those entrepreneurial ventures seek for the growth of their businesses by hiring more employees, expanding sales to different markets and/or different countries and develop their services/products in an innovative viewpoint. Related to this, we can say that the term “entrepreneur” can be associated to the term “start-up” which describes a company or a project aim to create and develop a scalable and validated business model, as both concepts are similar to each other. Only difference is that entrepreneurship includes not only start-ups, but also innovative activities in already established companies, different than just creating a new company (Foss, 2019). For this reason, it contains a broader content.

The creation of a start-up and development of its business are not easy processes to accomplish. 90% of 130.000 enterprises created everyday are fail and only one out of 10 can survive without being liquidated (Konsek-Ciechońska, 2019). Even though the numbers seem scary and risky, there are various examples of companies which started from zero as fresh start-ups and became 1 Billion Dollar worth unicorn companies such as Bytedance, Uber, JUUL, Airbnb and so on. This success of start-ups and the increasing number of ventures creates a huge market for both companies and investors worldwide. In 2018, 80.6 Billion Euros have invested on 7800 European companies and it was recorded as the highest amount of money invested and highest number of companies that received investments ever in Europe ("Investments | Invest Europe", 2019). With the latest investments, the highest economically worth sector in Europe is the services sector with 73.4% of GDP, following by the manufacturing sector by 24.9% and agriculture with 1.7% right now ("Structure of the euro area economy", 2011). Services sector includes different activities such as health, banking, tourism and hotels, cafes and restaurants, recreation, media, retail, IT, insurance, shipping and transportation, real estate, education, social works and energy supplies. According to Bespoke S&P 500 Sector Weightings Report, November 2019 issue, the highest weight is taken by the IT sector in the US Economy with 21.48% and it is followed by healthcare and financials ("sector weightings | Bespoke Investment Group", 2020). If Europe is taken as a focus, it can be seen that transportation, professional and

technical services and travel are the major service areas of EU which are exported worldwide (INTERNATIONAL SERVICES TRADE & INVESTMENT, 2012).

Since Europe is hosting the three of world's top 5 most visited countries for international tourist arrivals, tourism and travel related services play one of the key roles for economy and growth. In 2018, Europe received 713 million international arrivals and the sector accounts for more than €780 Billion economy with 14.4 million employment ("70+ Tourism in Europe Statistics (2020): Industry Trends", 2020). For this reason, a lot of companies which are aware of the worth of being a member of travel and tourism related sectors are created every day in order to solve different needs and problems of customers with new innovative ideas and to gain benefit from the possible opportunities.

The acceleration of the formation and introduction of new companies in the fields related to travel, tourism and hospitality, and the fact that the old companies make provisions and develop applications against new entries and competition may be among the reasons for the rapid progress in the tourism industry. At the same time, it has become extremely important for enterprises to keep up with the changing world order, customer demands, and especially to keep pace with the quickly improving "digitalization" process. Some of the new companies and start-ups are suffering from the inability of being successfully operated and actually losing money or even haven't been validated by the market yet are resulting from their incompetence to take the correct steps and needed strategies due to this change and its consequences. The needs and expectations of customers, who are the companies' most important target and main resource of their money inflow, should be the major element for enterprises to put effective effort on creating appropriate plans and give a fillip to take proper actions, especially for the "Horeca" industry, which is directly related to hospitality, food and beverage services and has high level of interaction with consumers. For start-ups and large companies operating in the industry, analysing the Horeca industry correctly, examining its elements and influencing factors, understanding the current state and size of the market properly, finding out what might be the customer expectations and current trends operating in the world that affect the behaviour of the customers is of great importance in ensuring end-customer satisfaction and meeting their requests.

3. Horeca Industry

3.1. Definition and Characteristics

Horeca stands for the integrated sector of “Hotels, Restaurants and Catering” services and it contains a wide range of enterprises in different businesses such as restaurants, cafes, bars, hotels, caterers and takeaway food places. Food and beverage services create the largest subsector in Horeca, compared to the other services, with providing the 75% of employment (Eurofound, 2018). Although the increasing number of large global companies with high number of employees, the sector is still mainly dominated by SMEs. Statistically speaking, 85% of enterprises in accommodation sector and 90% of enterprises related to food and beverage services has less than 10 employees (Eurofound, 2018). Even though it is created by micro size companies; it accounts for one of the largest sectors by having small but high number of enterprises. The easiness of reaching the resources, effortlessness of opening an enterprise rather than other corporations in different sectors, less need of highly educated employees, high demands and targeting almost all customers groups in different ages, economical levels and needs make Horeca sector highly preferred by entrepreneurs; especially in touristic areas where the demand reaches to higher levels.

Focusing on the hotels and accommodation side, it is easy to see a lot of variations in the sector worldwide regarding finance, economics, operations and law related topics. Due to distinctive regulations applied in countries’ law systems, there are many differences for ownership acts, scope of enterprises and operations in this sector (Jones, 1999). Therefore, it creates unique implementations with respect to the strategies and customer services in this industry for different countries. Financial situation affects taxation and returns from the sector operations; while the structure of a country economy influences the size, elements and limitations of various types of enterprises in the hospitality sector. Apart from all these, supply factors such as productivity and costing and demand factors such as pricing, wealth, exchange rates and quality, culture, security kind of characteristics of a location are counted as some of the most important aspects for the sector, since they have significant impacts on the length of customers’ stay and on the size, location and the kind of accommodation. They also affect tourist types, being local or international, and their activities while receiving the hospitality services.

For the accommodation related sector, competitiveness plays a major role, especially for the countries which are highly depend on tourism and travel related activities for their economic growth. For this reason, those countries are continuously searching for effective ways to gain high market share worldwide and even in some of them, enterprises get economical and operational help from their governments to create high value-added services. For the future of this sector, it is predicted that the regional and country-wise differences will be lowered in the following years, especially within the

European Economic Area, and there will be less local but more internationally similar features in the structure of enterprises in relation with the economic and political characteristics of key players in the sector (Jones, 1999).

Food and beverage related activities of Horeca sector create a huge subsector with high number of employees and enterprises in different sizes and different types that is omnipresent and possible to come across everywhere in everyday life. Types range from Michelin Star restaurants, fine dining and family enterprises to fast food chains, street food trucks, and even smaller food stands in market halls. Right now, the food and beverage sector plays a more important role compared to the extensiveness of related activities in the past, since food tourism has gained a place as one of the most active and creative segment in tourism industry (World Tourism Organization, 2012). It is currently a new popular way for tourists to discover the local culture of a country or a region via flavours and experience traditional activities inside restaurants while enjoying the food and beverages.

Food and beverage subsector is not only about tasting a high quality food, choosing an affordable dish or a clean environment, it goes beyond them. There are several characteristics that have become more important in the eye of a customer to determine the best and preferred services in any type of restaurants. First of all, customers seek to get a perfect overall restaurant experience with delicious food, tasty drinks, kind and helpful staff and service excellence from the entrance till the end. They give importance to the ambiance and vibe they receive from the environment of a restaurant while they are enjoying the meal. Another thing is that customers desire to try something special they have never experienced before, and it creates a competitive advantage for a restaurant which can provide uniqueness to its customers. If all the factors are thoroughly implemented in a restaurant, that business can get advantage from customer retention and engagement, and more likely to be successful in the market.

Catering is a service given to customers who organize events or meetings and desire to get an external service for food related activities. These activities include the preparation of menu and dishes, the shipment of food and after-service cleaning. The range of services may be wider depending on the agreement between customer and the catering enterprise, and can contain also the supply of eating utensils, glasses, linens, and other related essentials ("What Does Full Service Catering Mean | Eco Caterers", n.d.). Customers who host big size events with high number of attendees are more likely to get help from an event consulting company for planning and coordination of their event. Catering can be either included in the event management service or externally provided by a catering enterprise, depending on the customer's choice.

It is possible to see these subsectors are integrated with each other, since hotels give food related services and catering activities, more than only providing accommodations. These food related services can be either a small mini bar in a hotel room, a vending

machine in a hostel or an expensive 5-star restaurant running by a famous chef (Bügel et al., 2016).

3.2. Industry Elements

3.2.1. Hotels

Hotels are the places where people stay while they are away from their homes. Although there are different facilities included in hotels' services such as restaurants, bars and cafes, discos, relaxation and entertainment facilities, even sometimes casinos and so on; the main function of hotels is to accommodate guests. But the supplementary services provided by hotels are what make them distinctive from the other businesses as hostels or Bed and Breakfasts. There are also other kind of enterprises which accommodates their customers, but their main function is beyond that; like hospitals for treatment or boarding schools for education (Medlik & Ingram, 2007).

Like food, water and clothing; having a shelter is one of the primary needs of humanity. That is the reason why hotels can be seen everywhere, either in a big touristic city or in the middle of a highway, to provide a shelter while people are far from home for having touristic trips, business meetings, entertainment, recreation or any other reasons. Related to whole services customers can gain from hotels, the sector brings a significant money flow for countries and societies; especially for the ones that have high proportion of GDP created from tourism related functions, also country capitals and big major cities hosting international business activities. Visitors tend to spend more in the cities they go as a tourist than their hometowns. Additionally, for the locations receiving high number of foreign tourists, hotels are significant resources for foreign exchange earnings and create a significantly positive effect on countries' economic situation (Medlik & Ingram, 2007).

Another beneficial impact of hotels is lowering the unemployment. Big resorts create labour and thousands of opportunities such as housekeeping, waitering/waitressing, entertainment and recreation employment, business related jobs for their management divisions, for medical support and treatments, customer services and so on in different facilities they own. Furthermore, hotels are a source of employment for all levels. Since the opportunities are not only targeting highly educated employees, but also people having lower or no educational background. Smaller hotels are more likely to create self-employment opportunities.

With the development of technology and new ways of transportation between different cities and countries, travelling became easier and it paves the way for travellers to discover new further locations. Following that, tourism industry was strengthened, and it created significant opportunities for entrepreneurs and businesspeople to invest on hotels and related functions.

Demand has a huge impact on the location of hotels, since customers are the source of requests and needs in a market and therefore, they have an indirect authority to determine the services provided by enterprises. The variation of hotels' location, demand, and different economic factors create diversity for the structure and characteristics of existing enterprises. There are different types of hotels separated based on some certain criteria (Medlik & Ingram, 2007):

1. *Location*: It is the criteria to describe whether the hotels located in a city or in a town, next to seacoast or a mountain resort, in inland or in the countryside.
2. *Position*: Following the location, position tells if a hotel is in the heart of a city or suburbs, along the beach or next to highway.
3. *Transport*: This is a criterion related to location, since it separates the types of hotels as airport, railway hotels, motor lodges and so on.
4. *Reason to visit*: The characteristics of hotels differ according to the purpose of its visitors. There are business and convention hotels, holiday resorts or tourist hotels which welcome mostly tourists than local people.
5. *Duration of stay*: Transit hotels or short stay hotels are located in the transit zones, mostly in airports, while people can stay at the meantime of waiting for their next flight. On the other hand, residential hotels are aimed to host guests for longer stays.
6. *Service scope*: According to different type of services provided by a hotel, it may not only be selected for the need of accommodation, but also be selected by the residents of the same location to use its facilities such as massage and spa centres, restaurants, bars, sport complex and vice versa without staying there. It also effects the time spend by the guests in the hotel, since people prefer to spend time outside in the city if there are not high range of services given by the hotel.
7. *Size*: Although there is not a universally determined size for hotels to be counted as large, medium or small, we can say that hotels containing more than hundreds of beds and bedrooms can be referred to as "large hotels", whereas "small hotels" have relatively small rooms and low bed capacity. Medium sized hotels are positioned in between both in terms of capacity.
8. *Ownership*: Managing authority and the type of ownership is another criterion which creates diversity between hotels. Individually owned hotels are mostly run by family businesses or a single person. On the other hand, hotel chains and groups generally belong to a company. Chain hotels can also be granted as a franchise to other authorities by agreement.

There is another way which is called "star rating system" to classify hotels according to their major characteristics, service quality and amenities they have. But since there is not a general rating system being used all over the world, the same hotel can be seen with different number of stars, given unofficially in different websites. Another fact is

that one hotel with same number of stars may not have the same level of quality as the one located in a different country ("Hotel Star Rating Systems Meaning - Star Ratings Explained", 2018). as having "hot water" can be highly luxury in some countries. Therefore, these dissimilarities create confusion for guests to decide which hotel they would like to choose to reach the same quality while their stay. The star rating system grades hotels between one to five stars, as one is the lowest and five is the highest.

One-star hotels generally provide only a bed to sleep and a small table, not much. They have mostly shared-bathrooms and rooms have no TV, phone and a cleaning staff. Two-star hotels are just a better version of one-star ones. They are more likely to have a phone and an old television in the rooms and bathrooms may be private here, but not so high quality. Three-star hotels are the most suitable ones for guests who would like to have comfortable but not expensive experience. Rooms are bigger with more amenities and hotel has a lobby with a staff to help you during your stay. At four-star hotels, visitors can feel the quality and difference starting from the moment they walk in. These hotels have rooms with almost everything guests need, also a parking lot, a spa, pool and sport facilities, a restaurant, bar and so on. The highest quality is achieved in five-star hotels. Rooms are decorated with high-quality products, have big beds, luxury TV units and huge bathrooms generally including a tub. The hotel complex has more likely to have water parks and water sports, children care facilities, tennis courts, even shops and cinemas, vice versa ("Hotel Star Rating Systems Meaning - Star Ratings Explained", 2018). Guests of five-star hotels can almost get everything they need in terms of entertainment, that is the reason why they are more likely to stay longer in the hotel, spending time joining the activities.

3.2.2. Restaurants and Bars

With changing lifestyles over decades, people started to think that eating outside is a fun activity and they prefer to eat at restaurants and drink with friends in cafes or bars for entertainment and these activities have transformed into some of the significant parts of their daily life. This reason creates an extremely positive impact on new enterprises to enter the market according to highly increased sales and money spending, but it also engendered a fiercely competitive environment for companies. Restaurants have high range of types categorized depending on different factors: Formality, Price and Food (Types of Restaurants, 2018):

1. "Formality" describes the environment, the décor and amenities, the way of dressing and even the way customers should act while they are having meal. It determines how casual the restaurant is and has a huge impact on the restaurant services. This factor creates two different types of restaurants: whether fine-dining restaurants or casual ones.
2. "Pricing" is another way to differentiate restaurants from each other depending on the average price customers pay after they receive services. This factor ranges from

level 1 to 4 and is generally shown with dollar signs (from \$ to \$\$\$\$). \$ means that restaurant is inexpensive, while \$\$\$\$ stands for a really high-priced one.

3. The third factor is about “Food” which creates a diversity from one restaurant to another. It has subfactors that are the kind of food they serve, the quality of food and the presentation of the meal. Type of food generally creates the most significant impact on the distinction between restaurants from the eye of customers while they are choosing what they want to eat. Menus can be either based on different country cuisines such as Indian, Chinese, Turkish etc. or uniquely formed by the chef. Level of quality is identified from the ingredients being used to prepare the dishes. Different strategies followed by restaurants such as made-to-order or made-to-stock are the other factors that affect the food quality. Made-to-stock dishes are stocked beforehand in case of having an order to avoid providing services late and they mostly are not freshly served. We can see this kind of strategy in fast-food restaurants, as they generally buy, and store prepared frozen ingredients to be faster in terms of servicing. On the other hand, restaurants which provide a real dining experience are more likely to use made-to-order strategy and they prepare the meals after they get the orders. That’s why they take longer time to serve the dishes comparing to fast-food chains. There is another type of restaurants that solely have biologic and organic dishes. They generally supply the ingredients from traditional market halls or agricultural sites from countryside to prepare the dishes with organic and fresh ingredients.

Different combinations of these factors lead us to separate restaurants in 11 general categories (Types of Restaurants, 2018):

1. Fine Dining: They are the high-end enterprises with luxury decorations, formal dress code and expensive dishes filled with exotic ingredients.
2. Casual Dining: They are table service restaurants with more moderate and affordable prices and generally have unique decorations with casual atmosphere.
3. Contemporary Casual Dining: This kind of restaurants are the upgraded version of the casual ones and provide more trendy and specific menus following various ingredient options, also cool décor and presentations.
4. Family Style Restaurants: This type serves plates to share and mostly preferred by families and group of friends. Prices vary depending on the restaurant being casual or more luxury.
5. Fast Casual: Fast casual restaurants are the newly popular ones for customers who would like to have fast and cheaper foods but healthier than typical fast food dishes.
6. Fast Food: They are the common ones as McDonald’s or Burger King that serve quick and standardized food. This restaurant kind is mostly the cheapest comparing to other ones mentioned here. Drive-through is the other available

option for customers of these fast food places rather than receiving the typical counter service.

7. Café: Cafes focus more on serving hot beverages than meals. They generally provide small bites and pastries for the customers, but there are still some of them that also serve hot plates and high range of appetizers.
8. Buffet: Buffets serve its clients an “All You Can Eat” experience where they can serve themselves as much food as they want at a fixed price.
9. Food Trucks and Stands: These are the small take away restaurants where can be located everywhere, even in the middle of cities, concerts and outside of stadiums. They generally serve a single or low range of food in small amounts.
10. Pop-up Restaurants: Pop-up restaurants are opened for temporary times and can be located in various places such as gardens, shopping malls or roof tops. They give opportunity to chefs and restaurant owners to try new recipes and trends without investing on regular dining restaurants.
11. Delivery-only Restaurants: They are the delivery-only restaurants which are just available virtually with minimized costs for the owners. Delivery-only restaurants are highly likely to work with food delivery platforms as Glovo or UberEats.

Bars have different business model and different product and customer focus comparing to cafes and restaurants, since their product portfolio is depending more on various type of beverages rather than providing complex dishes. Bars mostly serve easy and fast snacks that go well next to drinks such as fries, nachos, chips and different kinds of finger food. For the majority of managers, it is significantly important to have skilful bartenders who know how to prepare various types of drinks and cocktails, and it is better for them to use the preparation process as a show to entertain customers. There are some important points of managing the business of bars managers should be concerned about (Diageo Bar Academy | Business of Bars, n.d.):

1. Product portfolio: It is significant for managers to know which type of drinks they should include in their portfolio to make their customers happy and which ones to stock more and less to maximize profits. To achieve success, they should stock the ones they sell the most, otherwise they may face with high costs because of their wrong decisions. Another thing is that they should follow the trends and vary the portfolio accordingly.
2. Quality of drinks: Since it is highly important for customers to experience their expectations from a drink, high quality and correct proportion of ingredients create high satisfaction levels and respectively, profitable business.
3. Fast and efficient services: Services and preparing cocktails in a bar contain several steps and it is significant for bartenders to be fast and efficient while providing the services and still keeping the quality high.
4. Menus: Correctly categorized menus and clearly described ingredients play an important role to help customers understand what they want to order and help

them decide fast. Additionally, this fast decision-making process creates quick circulation at the bar and prevent the place to face with high waiting times.

5. Online Activities: Marketing is a critical way to raise the number of customers and popularity of a business. Managers should make sure that their business is visible on Google Maps, exist on social media channels with pictures and important information and they should actively engage with customers to have them actually show up in their bar.

3.2.3. Catering Enterprises

Catering enterprises have a unique business model different than other types in Horeca sector, since they provide an external food service to customers or other businesses. That's why their business model can be either B2B or B2C, depending on who they are serving for. B2B clients generally consist of hospitals, aircrafts, cruise ships and corporations while they are hosting events. B2C customers mostly are the people who are organizing celebrations for various reasons.

Catering services can be separated into 6 different categories directly related to size and location of an event, number of employees needed, and type of food required (6 Different Types of Catering Services - The Bottoms Up Blog, 2019). Wedding catering is one of the most common kind that is served to large number of guests. Since it is genuinely important for wedding owners to present a high-quality reception for the loved ones on the most important day to celebrate their love and commitment to each other, catering and food selection is a truly important aspect when it comes to organization. Couples go to caterers to taste their food and do the menu arrangements for the ceremony beforehand and they are more likely to pick caterers with higher experience for the services in their wedding.

There is a high variety of services in the catering for businesses and corporate functions. First of all, function level matters and has an impact on the type of gathering; since high level functions intend to host fancier events comparing to lower levels. Another effect comes from the size of a corporate event. The event can be either company-wise or only department or smaller function-wise. Parallel to that, size has an impact on amount and range of food and beverages of the needed catering service.

Social events are the other activities where catering is needed. It can be either a private one such as birthdays, baby showers, retirement parties or a public one such as a music festival, an important sport event, a concert and so on. These types host different number of attendees and catering service is diversified. "Concession catering" is the name of service to be held in the big-size public social events. As it is genuinely hard to meet all different dietary and allergenically needs of that many people, served food in this kind of events mostly consists of fast food-based options. In private social events, the "theme" plays a crucial role on choosing the food type. Here, it is easier to consider

personal dietary needs than the big public events and event hosts give importance to choose the food according to attendees' special wishes and needs. Events can be held in outdoors as well, such as picnics and events organized in gardens, and in this case, "food truck catering" type is highly preferred.

Lastly, for the event hosts who would like to have a more advanced menu and services, there are several restaurants, especially in hotels, providing a "restaurant catering" services. Here the organization is wider, and hosts can also get help from the caterers for their planning activities.

3.3. Resources

3.3.1. Raw Materials and Products

In Horeca sector, raw materials and products consist of food and beverage supplies. There are various ways for their supply and shipment according to keep the products fresh while their journey from the source to the Horeca enterprise. Food based products are originated from plants or animals and their production is done by farming, fishing, breeding or agricultural activities (Malagié, Jensen, Graham and Smith, n.d.).

Horeca industry is directly affected from the situation of food industry and its seasonal activities. Some ingredients are hard to find in different seasons, especially high range of fruits and vegetables. For this reason, in most enterprises, menus vary seasonally, or managers tend to supply frozen ingredients outside of their season. But this may affect the quality of dishes and create taste differentiations as the frozen products generally aren't as tasty as when they are freshly produced.

Another strategy for managers is to export fruits and vegetables from other regions or countries which have different weather conditions that positively affecting the production of ingredients. This is mostly a strategy for big restaurant chains to choose, since the cost of supply and shipments from far locations may be too high for local enterprises to afford.

With the help of new food technologies, the seasonal and weather conditions related effects on producing raw materials in food industry are highly lowered and it paves the way for enterprises to reach the same quality in outside seasons. The activities can be held in greenhouses or by genetic modifications of fruits and vegetables, but it may also cause problems since high number of customers don't prefer to consume non-organic and genetically modified products due to the possible health issues the products may create.

Agricultural and breeding activities create new employment opportunities for people, especially in the countries where these activities account for high proportion in the GDPs. Although there is an increase in the production, worldwide imports and exports of food and beverage products comparing to the past, the employment is going down

with the implementation of machinery and new technologies to the industry. But on the other hand, higher automated processes develop the efficiency and lower the waste products of enterprises.

Focusing on beverages, we can separate them into two groups: alcoholic and non-alcoholic beverages. Alcoholic beverages include drinks such as beer, wine, gin, vodka, tequila, liquor and so on. There is over 6 million licensed sale points for alcoholic beverages around the world (Credit Suisse First Boston, 2005). But all those sales don't only happen through pubs, bars and restaurants, since there are huge amount of people enjoying drinking at home and purchase them from supermarkets or other sale shops. On the other hand, non-alcoholic beverages consist of soft drinks, water, mineral water, teas, coffees and juices.

Beverages create a huge and mature market with several hundred billion dollars wholesale value, even only in the US. The intense competition among suppliers force them to follow different strategies and trends to be the selected by businesses. First of all, they plan, and world widely locate their distribution points to provide efficient delivery with low costs. Some suppliers specialize more on specific products like liquors containing exotic fruits to reach and serve to niche markets and position themselves in less competitive markets. Suppliers also tend to follow new trends and innovations and be the first-to-market to gain interest of customers (Winning supply chain strategies for the wine, spirits and beverages industry, 2006).

Thanks to technological developments, there are various software exist in the world and managers have the opportunity to manage and track their food and beverage supplies. This different type of software also helps them overcome challenges of the supply chain process such as demand forecasting accuracy, managing the inventory and planning replenishment in timely manner (Roadblocks in the Food and Beverage Industry | SpendEdge Identifies Top Five Supply Chain Management Challenges Facing Food and Beverage Companies, 2019).

3.3.2. Technology, Equipment and Machines

There is a high variety of machinery and equipment Horeca sector enterprises use to meet their own needs while providing services. Since the sector includes food and beverage related supplies, the majority of equipment consist of the ones which are used in kitchens. Firstly, refrigerators and freezers are highly needed to protect the ingredients from melting or going off and to keep them fresh during the time of their storage. Another essential equipment is owned for their cooking requirements. Grills, cookers, ovens, toasters, and several other related machines are used by enterprises to provide both small snacks and complex dishes. Businesses also need to have cooking pots, pans, different types of knives, spoons, forks, griddles, cutting boards, bowls, peelers, and different sized and shaped dishes at the process of preparing the food, cooking and serving. Surely, they have cleaning equipment as well, like dish washers,

sponges and brushes, gloves, and so on to keep their kitchen and utensils clean and hygienical. Tea and coffee machines and equipment to prepare drinks and cocktails are also highly useful for the enterprises. Other than this equipment to use in kitchens, businesses may need more specific products related to the type of food and beverages they serve.

In addition to the products above, there are more other types used in hotels, rooms and dining halls independent from the cooking-based activities. Hotels have industrial washing machines and dryers that can wash high weights in once and high number of products such as bed covers, blankets and towels to provide their clients a clean and fresh environment in their rooms. Other than those, TVs, vacuum cleaners, mops, scarifying machines, dustpans and ironing equipment are generally owned by hotels.

Horeca enterprises who provide internet services need to have network service technologies and devices to spread their Wi-fi activities. They also use various software to manage their businesses.

3.3.3. Decorative Items

Not only the types of services and their quality, but also decoration and places' atmosphere are highly significant factors for the customers of Horeca industry to choose from one enterprise to another. That's the reason why managers give importance to interior design, they spend lots of money to work with suitable companies for unique design ideas and implementations, also to buy furniture and decorative items. Successfully designed enterprises are decorated with taking into account of the harmony between these decorative items and ideas: furniture, dining and accommodation amenities, lights, flowers, paintings, candles, used colour palettes, the layout of the space and the quality of items.

There are some important points managers should keep in their mind. First of all, the type of a restaurant has a huge impact on the decorative items that must be chosen. To be suitable with the trends, ethnic restaurant owners should use less cliché and more unique and specific decors. On the other hand, restaurants which focus more on cozy and comfy experience should avoid high-end design products and prefer the ones where customers can feel the comfortable atmosphere as they are at their home (How to Decorate Your Restaurant: A Brief Guide on Restaurant Design | Camino Financial, 2019).

Secondly, managers should be aware of the fact that customers have been lately choosing more minimalist and less pompous environments for their experience in any Horeca enterprise. It is said that people who have a lot of things around feel more tired mentally and overstimulation makes them less peaceful (Jones, 2018). For this reason, managers should make their decisions in a way that focuses on less but more useful items while decorating the interior. This trend actually creates a win-win situation for

customers to enjoy their time in a large and not suffocating atmosphere and for managers to save money by spending for a smaller number of decorative items.

In hotel business, number and quality of decorative items are differ according to types of hotels and their star-rating points. One/two-star hotels generally don't have a lobby and their rooms include only a bed and a table. Sometimes they also have a television and a painting on the wall. Their bathrooms are mostly shared with lack of decorative items and extra amenities. On the other hand, increasing number of stars creates increasing variety and quality of decoration and interior design. Hotels start to have a lobby filled with sofas, coffee tables and different kinds of decorative products to build a unique and high-quality atmosphere for customers to feel special starting from the entrance. The rooms in high star hotels have a luxury design and harmony in terms of layout, furniture, curtains and matching colours of items. There may be unique artwork existing in rooms and high-end personal hygiene products are served to customers.

3.3.4. Land and Buildings

Another resource of the enterprises in the Horeca industry is the lands and buildings they own. As an asset, we can see that restaurants, bars and cafes occupy not as much space as hotels in terms of land and they generally service in one building or one floor of a building. However, there are still some existing chains that occupies multiple areas and are located in different places in different sized buildings. These big scale chains can own a lot of buildings that they run their services in, but they also have a possibility to be given as a franchise to someone else around the world who would like to be responsible for the business under their name.

Some lower-scale enterprises in food and beverage sector don't own a land or a building as they run their business inside a food truck or a stand in a market hall. They need a variety of permissions to run a business such as vehicle and business license, fire certificates, health, seller and food handler permit and so on that are different than the indoor restaurants' need (Myrick, n.d.).

On the other hand, hotels mostly occupy a whole big building or sometimes more than one building and a huge land to provide clients different services such as a waterpark, pool, beach, night club, disco, different types of restaurants and entertainment centers. For the reason that high variety of services need to occupy big size of land and several number of buildings, bids and sale prices for the construction projects of hotel buildings and their management can reach to billions of dollars. To give hotels' management and services as a franchise at a different location and in a different building is a highly common activity that world leading hotel chains prefer in order to expand world-widely. The yearly leader company for franchising in the first half of 2019 is the Marriott International with more than 2500 projects, containing more than 420000 rooms (The global hotel construction pipeline ascends to new record highs, 2019).

3.3.5. Human Resources

The other significant resource for businesses in Horeca industry is the human workforce. Enterprises of Horeca need various kinds of employment in different levels, especially in hotels, from the administration to services, cleaning, kitchen, entertainment and so on. That is the reason why there are so many possible opportunities for any type of person regardless of their educational background or past experience. It is also known that employment created in this sector is also a source for young workers, women or immigrants.

Travel and tourism sector is among the top job creators in the world. This sector is expected to create 120 million additional jobs and total employment will reach to 328 million with having the 10% contribution of all jobs in the world by 2022 (Baum, 2013).

In accommodation related enterprises, there is a high contribution of woman workers comparing to all economic activities. Changes regarding globalization and development in the hospitality industry have been playing a major role to create a gender equal environment in workplaces and help women to find more opportunities and be active in businesses. In hospitality industry, the part of women employment reaches up to 70%, but their shares are much lower in managerial positions or roles in general boards (Ismail, 2018).

Another important point of human resources is seasonality, since there is a high impact of seasonal influences on this sector. As touristic visits are known to reach the yearly peak in summer times related to weather conditions and personal preferences, higher employment is needed to provide services for raised number of customers. As a result, human workforce increase of the sector in summer season arrives to 10% in the EU (Demunter, 2008). Another information is that the number of temporarily employed women is higher than men, with the percentages of 19 and 16. The average temporary employment is 18% for overall workers (Baum, 2013).

Number of positions are relatively lower than hotels in restaurants due to their general SME type size and structure. The most typical types of jobs in restaurants are chef, business manager, restaurant server who is the customer service representative, bartender, waiter/waitress, host who takes the reservations and responsible for greeting and seating customers, cleaning staff, accountant and maintenance personnel (Mealey, 2019). Within the USA only, 14.7 million people is employed by restaurants which accounts for 10% of the employment in total US workforce. In Europe, foodservices and hospitality are highly significant industries with an extreme growth in terms of job opportunities they create. Between 2000 and 2010, the total overall job increase had reached to 7.1% in the EU, where hospitality accounts for 29% increase in jobs between the same years (The Restaurant Industry — A Global Perspective, 2018).

3.4. Market and Statistics

3.4.1. Travel and Tourism Statistics

Horeca industry activities are directly related to travel and tourism sector, since a significant majority of customers in hotels and restaurants constitute from local or non-local customers who are away from their homes for their business and leisure activities. Therefore, any development or growth in travel and tourism sector have a positive impact on horeca industry.

Travelling has boomed and surpassed the forecasts in 2018, with reaching to 1.4 billion international tourist arrivals that accounts for 5% increase comparing to the year before. Following that, the earnings created from touristic activities has also raised 4% and reached to \$1.7 trillion. Continent-wise, the highest increase on incoming tourists has experienced Asia and the Pacific and Africa with 7%. They are followed by Middle East and Europe with 5% and Americas with 2%. Accordingly, the highest increase in terms of earnings has generated in Asia and the Pacific with again 7%; then Europe 5%, Middle East 4%, Africa 2% and Americas 0% respectively (Alonso et al., 2019). These statistics show the economic importance of travel and tourism related accomplishments for countries to generate financial and employment opportunities. International tourist arrivals is also a source for countries to collect foreign currencies in central banks. Especially for emerging countries, it accounts for an important aspect of their economic growth. That is the reason why they give significant importance on their inbound tourism growth-enhancing activities and make a lot of investments on hotels, restaurants and leisure activities to attract international customers.

The top ten mostly visited countries by international tourists can be seen in the graph above. These countries have welcomed the 4/10 of total international tourists worldwide.

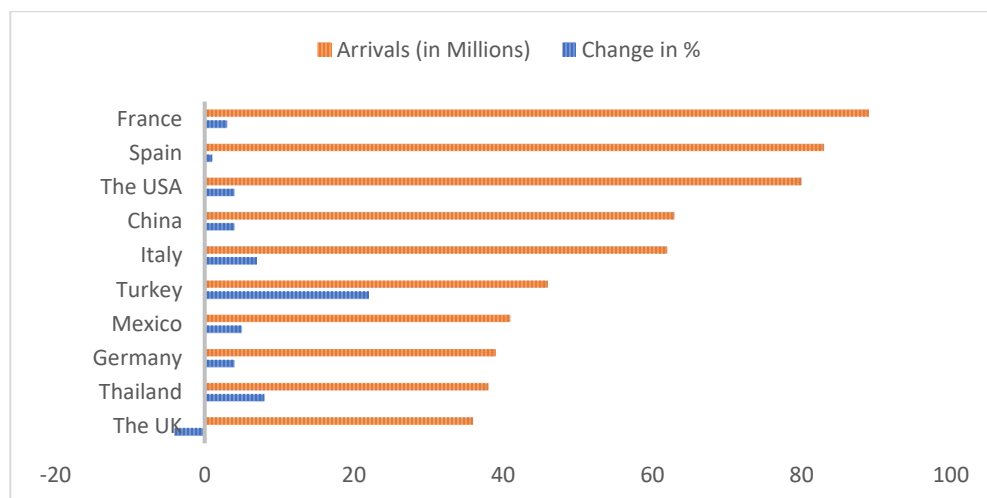


Figure 1: Top ten mostly visited countries in 2018 (Alonso et al., 2019).

Travel and tourism sector experienced a high GDP growth in the year 2018, the second highest after manufacturing sector, with %3.9 increase and reached to 10,4% in terms of total contribution and 3.2% in terms of direct contribution in global GDP at the end of 2018. To speak about employment opportunities and created workforce, travel and tourism sector played a significantly important role for people with different ages, races and educational backgrounds. 1 out of 5 jobs that has created in the last decade has been within the travel and tourism sector. It has created 319 Million jobs so far and provides the 9.9% of total employment worldwide (World Travel and Tourism Council, 2018).

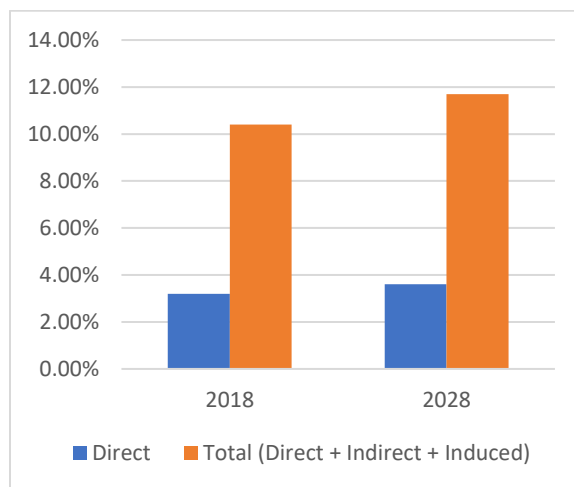


Figure 2: *Total % Contribution of Travel and Tourism to GDP (World Travel and Tourism Council, 2018).*

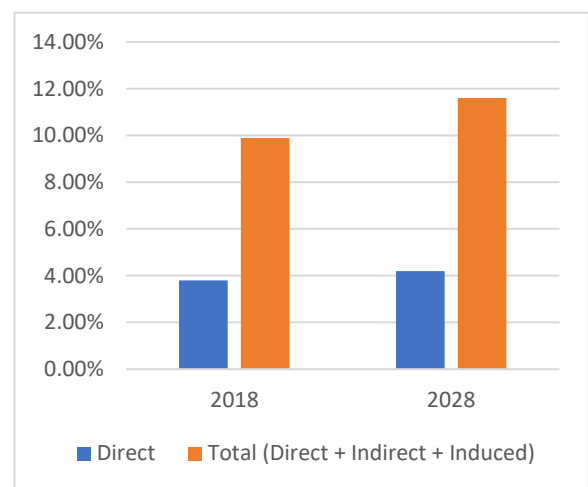


Figure 3: *Total % Contribution of travel and Tourism to Employment (World Travel and Tourism Council, 2018).*

Hotels account for the highest earning segment of travel and tourism sector containing more than 365 Million Dollars in terms of market volume. Package holidays are the second leading and followed by rented accommodations and cruises respectively (Travel & Tourism - worldwide | Statista Market Forecast, n.d.)

Speaking of ages, millennials who are the group of people that was born in the years between 1981 and 1996 create the majority in the travel and tourism sector. They travel 35 days in a year on average, being followed by Gen Z with 29 days a year. While on holidays, millennials are more likely to spend more than any other people in different age groups. 33% of millennial age group members are likely to pay out more than 5000 \$ for their expenditures on vacation (Kosciulek, Stickles and Varricchio, 2019).

Focusing on the trend of solo travelling, we see that it is more preferred by older people than millennials, with the average age of 47, and they have \$150000 annual income in average. This trend attracts women much more than men, with 68% difference in between based on the number of male and female travellers that have gone for a

vacation alone so far. Half of the women solo travellers choose Europe for their vacation as a safe travel destination to go alone.

Although solo travel is a highly growing trend so far, people have doubts when it comes to food and beverage related activities. It is ok for only 45% of solo travellers to eat alone in a restaurant. Researches tell that it is even lower in bars, only 36% don't feel ashamed of being in a bar by themselves (Solo Travel Statistics 2020, 2020).

According to the statistics that have been made in 2017, residents of European Union member countries had 1.7 billion vacations including an overnight time spending. Half of these overnight stays do not exceed more than three nights. The majority of these vacations, with 73,3%, consists of the overnight stays they had inside their own country; only 26,7% of them were spent in other countries. Another information concerning EU residents is that the number of business-purposed trips done in 2017 only occupies 11.5% of the whole (means around one in nine trips), while personal purposes stand for highly preferred reasons to leave a hometown. From the personal purposes, holiday and leisure related activities account for the highest proportion and it almost covers the half of all the reasons why people with European citizenship have travelled in 2017. Visiting friends and family is the second most common purpose people leave their hometown for (Tourism statistics - characteristics of tourism trips, 2019). Focusing on US, we can see different reasons to travel with different proportions. Here, highest percentage is made by the US citizens with leisure-related purposes that count for 80% of all travels and visiting family is the main reason of the leisure travel, followed by shopping and visiting friends (U.S. TRAVEL ANSWER SHEET, 2020).

Tourists have different type of expenditures while they are outside of their cities. Not only the personal preferences, but also the country or the city they are visiting play a significant role on amount and the type of expenses tourists spend on. To give an example, the highest percentage of spending by tourists in Naples is accommodation and food services with 30%, while the worldwide average is only 30%. The reason is the popularity of Naples' cuisine and increasing number of arrivals for food tourism. We can also see this effect in Milan with shopping related activities, as apparel and accessories account for the 30% of spending of tourists which is 14% higher than the worldwide average and even exceed their expenditure on main needs of food and having a shelter that covers 27% only (Neffke, Ravinutala and Zuccolo, n.d.).

Talking about worldwide, we see that accommodation and food services (in other words, services of hospitality) is the type of merchant which consumes the highest proportion of tourists' budget on travel. It is followed by apparel and accessories, money spent in general merchandise stores and grocery and food stores and many others that is shown on the figure below.

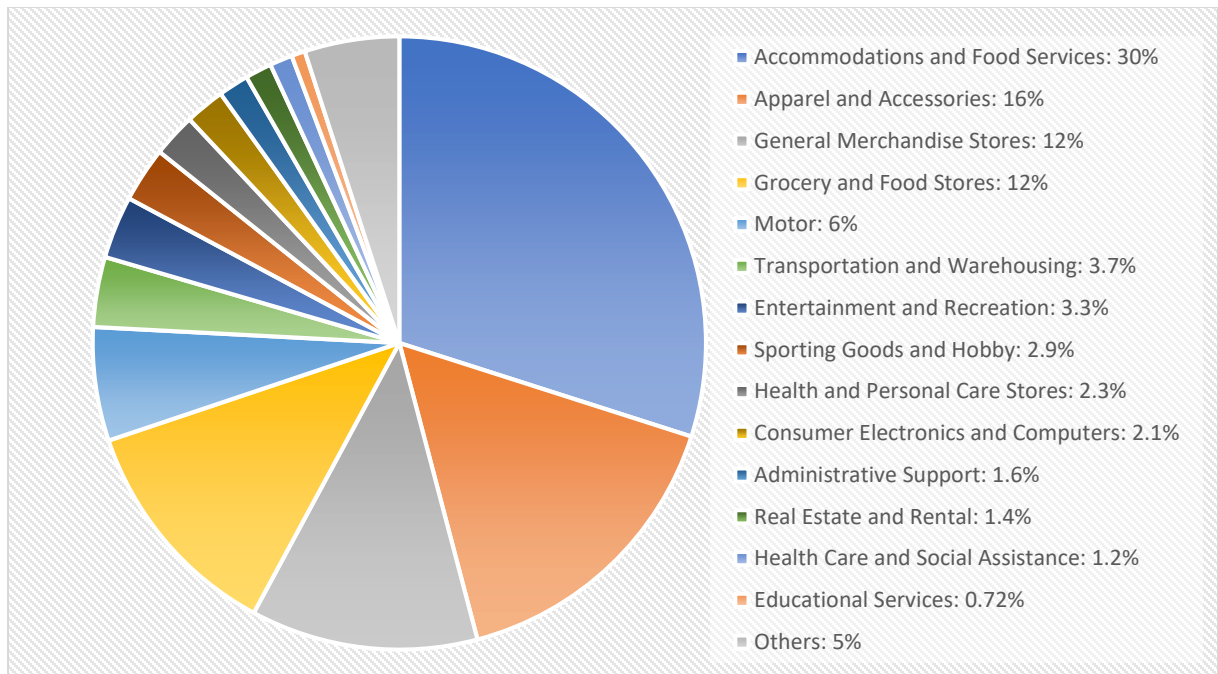


Figure 4: *Percentages of merchant types tourists spend on worldwide (Neffke, Ravinutala and Zuccolo, n.d.)*

According to the research of U.S. Travel Association, 762 billion dollars was collected in 2018 from leisure-purposed travel activities and it shows an increase of 6.1% comparing to 2017; while business related travellers' spending increased only 2.4% from 2017 to 2018 and reached to 327 billion dollars, which is less than the half of leisure travellers' spending. Focusing on tourist expenditure in the US, the most money-consuming category in 2018 was food services and accommodation, the same category as worldwide average, since it is highly likely to be spent to meet the main needs of humanity, avoiding hunger and having a shelter. If we make a comparison between lodging and food services for the tourists in the US, food services including dining and drinking enterprises and groceries exceeds accommodation by 4% and accounts for 25% of all spending with 268 billion dollars. Accommodating services including both small and big type of lodging enterprises, hotel chains and camping sites cover the 21% part which is equal to 232 billion dollars of expenditure while traveling (U.S. TRAVEL AND TOURISM OVERVIEW (2019), 2020).

3.4.2. Hotels, Restaurants and Catering Statistics

Although there are new and cheaper trends to find a place to stay while traveling, hotels still exist with high capacities in terms of rooms and number of guests they can accommodate for. Number of annual inbound tourist visits have a significant impact on countries' investments on hotels and accommodations. Related to that, Italy has more than a million bedrooms in hotels and similar accommodations which is the highest capacity in Europe to provide guests while their stay in the year 2017. Interestingly,

Germany comes afterwards with 963.339 rooms, although there are other countries in Europe which welcome higher numbers of touristic visits than Germany per year. The following countries after Germany are Spain, UK, France and Turkey, which is not surprising to see in the top places of this list based on their highly demanding tourist attractions (Hotels: number of bedrooms by country 2017 | Statista, n.d.).

Although the main thing comes to mind regarding hospitality while travelling is hotels, there are actually different type of accommodations that are preferred by tourists and it is also related to the location of the trip, if it is done domestically by visiting different cities of own country or done internationally. Generally speaking, about all accommodation selections concerning both types of trips and their frequencies in 2017, hotels and similar accommodations were the most preferred types with 31.9% and slightly surpassed the overnight stays in friends' or relatives' places for free, only by 0.9% (File:Nights spent by EU-28 residents by main means of accommodation, 2017.png - Statistics Explained, 2019) The closeness is the result of the high usage of hotels and similar accommodations in the vacations abroad, whereas the domestic vacations don't require that much stay in hotels as international visits, because of the highly common purpose of visiting friends and relatives. Another reason is the tendency of people to stay at a property of another if they have somebody they know in the travelled city to avoid the expenses of stay.

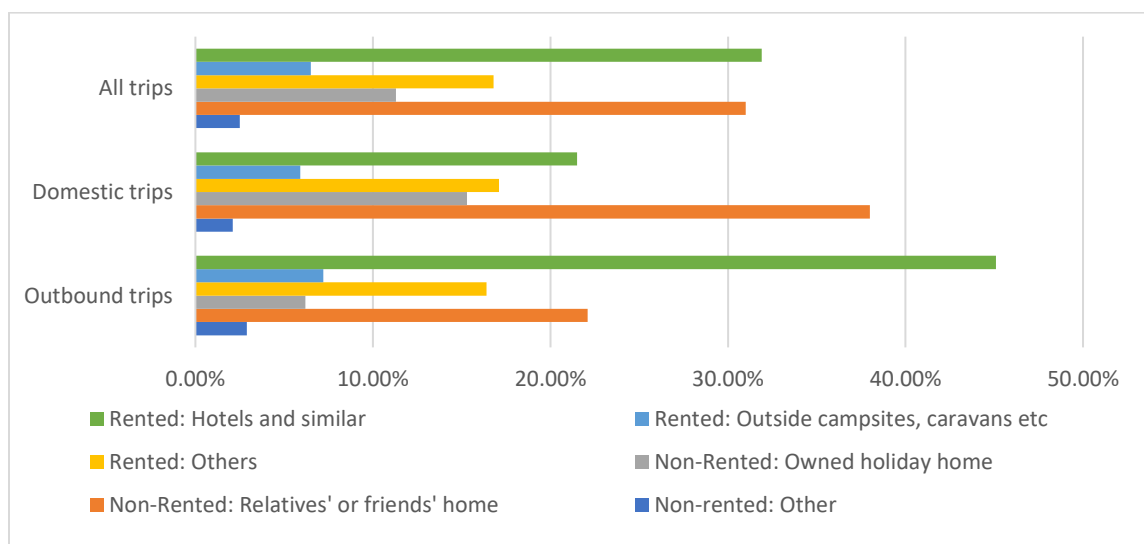


Figure 5: Usage of different type of accommodations by EU residents (File: Nights spent by EU-28 residents by main means of accommodation, 2017.png - Statistics Explained, 2019)

As we see from figure 5 that hotels and similar accommodations are significantly preferred in the trips abroad, the demand creates a huge market and so many opportunities for entrepreneurs and businesspeople to start a venture or invest on them and create high incomes. For this reason, we can see so many hotels and similar

type of accommodations all over the world, but especially in the more touristic areas, which has gained huge returns and expand their businesses also in different cities. The biggest enterprises are the ones that became as hotel chains with extreme capacities for guests to spend their time while they are having a vacation. According to the statistics of June 2019, we can see that the hotel chain which has the greatest number of properties is the Wyndham Hotel Group with 9157 properties worldwide. It is followed by Choice Hotels International with 7045, Marriott International with 7003 and Hilton Worldwide with 5872 assets (Lock, 2019).

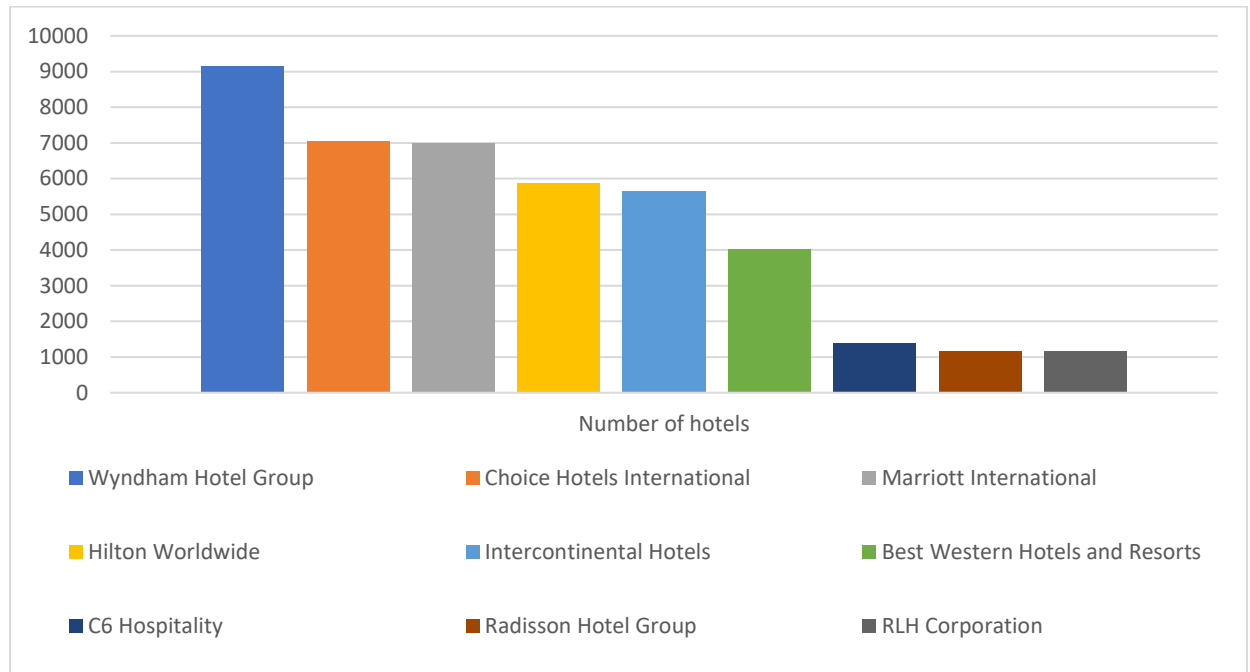


Figure 6: *Leading hotels by number of properties by June 2019 (Lock, 2019).*

Focusing on the nights spent in tourist accommodations of EU-28 countries, we clearly see that more than 66% of stays in Europe were provided by these five countries: 14.8% came from the stays in Spain, 14.1% from France, 13.6% from Italy, 13.3% from Germany and 11.3% from UK. This is the reason of extreme number of touristic visits to the mentioned countries, some even welcomes top number of tourists worldwide, and not surprisingly, the result came after is the high investments to those countries from entrepreneurs in hospitality sector. Another information that we can give is the spent nights in these EU-28 countries by the non-residents. 1.5 million out of total 3.145 million nights spent in touristic accommodations are the stays of non-residents, which accounts for a little lower than half of all the stays in 2018. We can see from the pie chart given below that almost the 3 out of 4 stays were done by tourists from other EU member states. The comment can be added is that the initiatives which are given into the Schengen member country residents to ease entrances and visits to the countries in the Schengen area, locational closeness and both various and cheap ways of

transportation can be the reasons of the high number of night stays by other EU member states. The second highest is the number of stays by people of other EU countries with 8% and third covered by the residents of countries in Asia with 7% (Tourism statistics - annual results for the accommodation sector, 2019).

	Nights spent in tourist accommodation (in thousands)	% share in all EU-28 tourist accommodations
EU-28 Total	3145648	100
Spain	466941	14.8
France	442760	14.1
Italy	428845	13.6
Germany	419556	13.3
The UK	354449	11.3
Austria	125229	4.0
Greece	123087	3.9
Netherlands	116082	3.7
Croatia	89568	2.8
Poland	88860	2.8
Portugal	74408	2.4
Sweden	60857	1.9
Czechia	55514	1.8
Belgium	41320	1.3
Ireland	33382	1.1
Denmark	33280	1.1
Hungary	32830	1.0
Romania	28449	0.9
Bulgaria	26845	0.9
Finland	22235	0.7
Cyprus	17164	0.5
Slovenia	15673	0.5
Slovakia	15188	0.5
Malta	10114	0.3
Lithuania	8092	0.3
Estonia	6630	0.2
Latvia	5369	0.2
Luxembourg	2920	0.1

Figure 7: Number of nights spent in EU-28 touristic accommodations in 2018 (Tourism statistics - annual results for the accommodation sector, 2019)

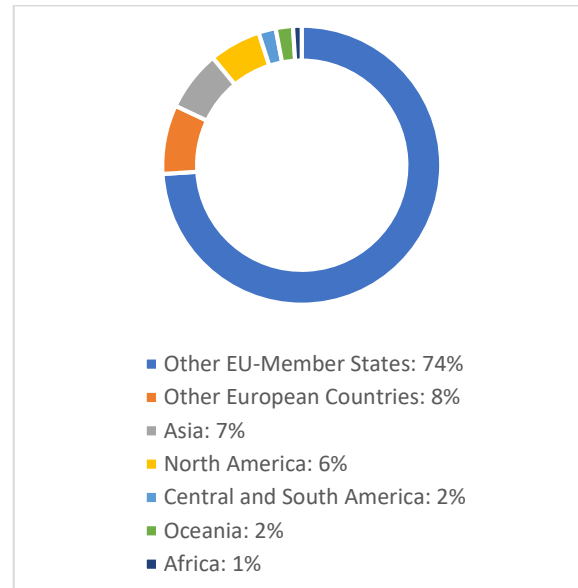


Figure 8: Nights spent in EU-28 touristic accommodations by non-residents in 2018 (Tourism statistics - annual results for the accommodation sector, 2019)

Value of the market of worldwide hotels has been following an increasing trend with raising number of enterprises and has exceeded 147 billion dollars in 2018. Until 2026, the value is expected to reach 211 billion dollars relatively to future developments, popularity of travelling and discovering hidden places, also new easier ways and

lowered expenses of transportation between cities and countries (Global Hotels Market Expected To Reach USD 211.54 Billion By 2025: Zion Market Research, 2019).

Although hotels create an enormous subsector for Horeca with high number of companies that provide positive returns for the owners, we see that the created value and employment of food and beverage related enterprises surpass the ones in hotels sector, according to 2016 research of Eurostat. It is mentioned in the given statistics that more than 4 out of 5 enterprises of accommodation and food services sector are owned by food and beverages subsector in EU-28 countries, which can be the reason of the possibility for restaurants, cafes and bars to open and manage a small or medium-sized enterprise, their need of lower human capital and other tangible/intangible resources to operate. The gained value was not only related to transactions regarding touristic visits, but enterprises also target the local customers of different ages and with various income levels and visitors with business purposes. The created value has affected by different factors such as existed enterprises and employees working for them, demand and purchases, total costs, turnover and so on (Accommodation and food service statistics - NACE Rev. 2, 2020).

Business of restaurants is a hard one, since up to nine out of ten restaurants have a failure to reach profits at their first year of operating and according to researches, average lifetime of restaurants is estimated as five years (Andrews, 2018). For managers, the challenges that make them suffer the most are the operating costs being high, hiring employees and their traineeships (Gilbert, 2020). Focusing on number of restaurants and mobile food service activity provider enterprises in EU member countries, France occupies the highest share with 167612 enterprises existed in 2018, with 2.1% increase comparing to the previous year. The country which is ranked as second is Italy with 149307 enterprises service in restaurants and mobile food services sector, which is not surprising since Italy is one of the most visited countries in the world and owns a highly popular cuisine. Third place is occupied by Germany, the country which has followed an increasing trend concerning food related activities throughout the period between 2013 and 2018. With a jump of more than 4% during the period between 2013 to 2018, the UK represents the fourth place as the number of enterprises has raised to 83367 in the mentioned year. It is surprising that being a second most visited country in the world and having the highest number of night stays in tourist accommodations of EU-28 countries, Spain is only ranked as fifth under the topic of food related activities and it is the only country in top 5 that has reduced number of enterprises comparing to previous year of 2018 by 0.3% (Number of Enterprises of Restaurants and Mobile Food Service Activities, n.d.).

Looking at the factsheet of 2019 prepared by National Restaurants Association (NRA) concerning the activities and situation of restaurants in US, it is seen that sales of restaurants had almost doubled between each decade. It has reached from 43 billion

dollars in 1943 to 590 billion dollars in 2010 and their projection for 2019 was for restaurants' sales to surpass 850 billion dollars and occupy 4% of the GDP of US. 90% of restaurants in US employed less than 50 people and they are counted as "small enterprises" and 63% of them operate in a single location. Only the bigger chains and franchises have higher number of workers and don't fall under the category of small enterprises. Another prediction done by NRA is about the creation of 1.6 million new jobs until 2029 and the number will reach around 17 million in total (National Statistics, 2020).

Focusing on Europe, it is being noticed that the value of foodservice market is lower comparing to US market. Especially in Eastern Europe, the market accounts for smaller value and less operations about restaurants and food services are held by the located countries. The value reached to 427 Billion Euros in Western and 45.6 Billion Euros in Eastern Europe (Luty, 2018). But of course, these lower numbers are also related to the lower GDP Eastern European countries have in comparison with the ones in Western Europe and the US.

The statistics of customers show that 90% of them enjoy being in a restaurant and 70% prefers to go to restaurants as an entertainment activity rather than staying at home and cooking. Moreover, almost half of the people eat out in restaurants at least twice a week. American people pay the 12.6% of their incomes on food and 48% of that is occupied by spending in restaurants. Right now, increasing number of people prefer to spend money on experience than just purchasing an item and it reaches to 52% of the population in the given research. Growth rates of restaurants change depend on their given service types. Table service giving restaurants had an estimated growth of 3.3% in 2019, where limited-service restaurants had higher estimation of growth that is almost 5% for the given year (Gilbert, 2020).

Technology use is a significantly important factor for companies to raise the efficiency of their services and management of their restaurants. Added to that, 73% of customers think that technology increases the quality of their dining experience, and the most important technology use for them is to have the opportunity to do online reservations and being able to reach Wi-fi services while dining. For this reason, restaurants have started to integrate technological implementations into their services. 41% of restaurants in US are now using tablets or are going to use them while providing services, especially with the aim of giving digital services instead of traditional paper menus. Another way of technology use in restaurants is about the delivery of food from the enterprise to the final customers. 44% of customers located in US added that they have used a website or a restaurant app to order a meal (Gilbert, 2020). Reflectively, digital food ordering and delivery services given by different companies have created a highly competitive sector in the past years.

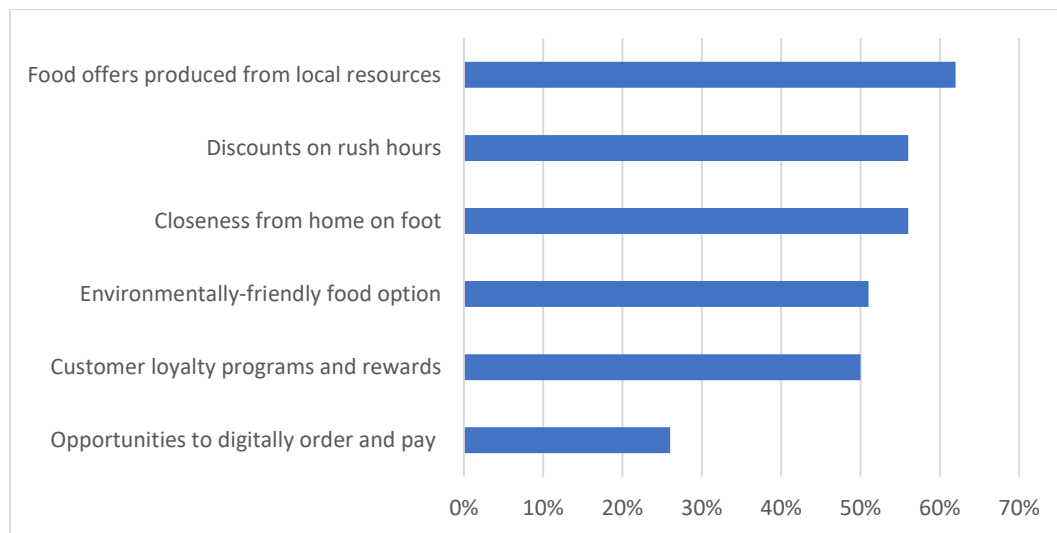


Figure 9: *The most important factors for customers to choose a restaurant (Gilbert, 2020).*

The same as in tourism sector, food services sector is also experiencing new trends and different ways of behaviours by millennials. Following their high interaction with technology, digital services and social networks, companies try to increase their online existence and integrate technological implementations into their enterprises to get advantage from the increase of demand coming from millennials. As an example, more than half of millennials think that self-ordering kiosks create a more effective way of ordering and are a source for higher quality customer experience (Gilbert, 2020). They are much more likely to use digital sources and information given on internet before going to restaurants. They especially tend to read reviews while deciding to go to a restaurant and check the social media accounts to have an idea of the given services by each one of them to make a comparison. They are open to more experiences, which is why they mostly pay for the whole restaurant experience and decide accordingly. 53% of millennials take new experience as the main factor that affects their decision to pick an enterprise to go. They are into trying new and interesting cuisines of other countries and learn about different variety of food. 79% of them really enjoy trying new food belongs to another country (Gilbert, 2020).

Catering industry is another industry that got effected by the changes in technology and thanks to the ease in communication channels between the customer and service provider. The industry in US generated 537 billion dollars of sales in 2017, and it is expected to grow in the upcoming years. The number of enterprises in US is about 10 thousand with a majority of small structured ones that employs just a several number of people. Total number of employees exist in US exceeds 100 thousand in total. On the other hand, China is the leader country in Asia concerning catering services. Catering services nowadays is highly given in the events of wedding, engagements, birthdays, graduations, funerals and so on. The need of servicing food is following an increasing

trend in industry related activities and conferences (The Booming Catering Industry: Details and Statistics - bmtscorp, 2019).

3.5. Trends

3.5.1. Smartphone usage

Advancements in information and innovations in communication services have influenced public activity significantly, yet have likewise caused discernible contrasts in the way social orders to approach data, as such, data about occasions occurring in the national and global field. The fast spread of the Internet, which is the most significant instrument of communication within the recent years, has shaken the situation of traditional media usage of society. These innovative implementations made it feasible for new kinds of media to rise. Thanks to internet, communications and computing systems have integrated into each other and has started being used together. Moreover, voice, images, texts and other kind of contents of media can be serviced with the need of only one channel, through internet.

Mobile phones are the most practical and the most preferred mobile devices. The evaluation to smart phones took place when the features of portable pocket computers has been added to mobile phones. Right now, smart phones have higher range of features than a regular mobile phone. High processor execution is required for the services given in smart phones to be accessible. Right now, mobile operating systems of those smart mobile devices are like the ones utilized in PCs.

Advanced internet usage and technological innovations of mobile phone industry have paced the way for smartphones to take a significant part in daily life. Innovations about mobile technologies, data transfer and 2G, 3G and 4G services have made it possible to reach information in high speed, improve the capacity of smartphones and more implementations have been added into these technological devices. Therefore, huge variety of activities are now being able to be done from a single device with the use of internet.

The fact that smartphones have become an important part of daily life also brings negative effect on people's lives. Especially smartphone addiction, officially known as Nomophobia, has gotten a significant subject of researches and studies as a kind of habit that is occurred relying on the frequency of smartphone use. Researches concentrated on the issue that the addiction can be the reason of several different physical and mental issues and they are trying to understand the real impacts of this addiction on the psychological improvement of young generations.

To show some numbers and statistics, it is sensible to do a research on how much the smartphone usage has increased from time to time. In a report it is given that a single person averagely checks his/her smartphone 63 times a day, which increased 16 times more between 2018 and 2019. Moreover, 82% of owners check their smartphones

within the hour before going to sleep and 69% in the first 5 minutes after waking up. Both are also increased 7 and 5 percent respectively between the given years. The total average daily time spend has reached to 2 hours and 51 minutes, which represents almost 12.5% of a day. Brazil is the country smartphones are used the most with 5 hours a day. It is followed by China and then US with 4 hours a day. Even though 58% of people try to lower their use and give up from the habit, only 41% could be successful (Turner, 2020).

Although people in any age can be a smartphone user, the most adaptive generation to the use of these smart devices are the ones who are the member of Y and Z generations. Y generations are the people who were born between the years 1977 and 1994. On the other hand, Z generation describes the community of 1995 and after-born. The world while the gen-Z members were growing up, was surrounded by highly complicated media and computerized instruments. For this reason, people that were born after 1995 have grasped and interiorized the internet more than others in gen-Y and they have become more specialized in using these new technologies. Even though gen-X members are getting more and more active about smart phone usage, these two generations, Y and Z, stand out much more than them in the use of smart devices (Choudhary, 2014).

3.5.2. Mobile and Digital Payments

Today, thanks to the integrated economies and advances in information and communication technologies, consumers have had changed demands and needs. Especially broad information networks, international trade relations and continuously developed distribution channels give people the opportunity to order from other regions, countries and/or continents, and the needs can be met in an effective and efficient way. The widespread use of internet and technologies have also created new business lines. One of them is e-commerce. It is seen that compared to traditional trade, e-commerce's business processes are carried out faster, cheaper and more efficiently. This situation has been a factor that caused the reshaping of several different sectors. With the widespread use of e-commerce worldwide, banks have started to take steps in line with this trend and provide different payment options to their customers. The internet banking system offers its customers who have mobile phones, tablets and computers the advantage of performing and monitoring all their bank transactions via the internet with using their own devices anywhere and anytime.

The creation of electronic payment and credit cards were initiated in the US, as a result of the formation of American Express in Buffalo, NY in the year of 1850. After that, charged coins had firstly begun to be used, then the payment process was formed into other instruments: Money orders, checks and cards. Credit cards were previously structured with magnetic stripe, but to provide more protection, it is then updated to a way that allows using chips instead (MacDonald and Tompkins, 2017). Right now, the

technology has created a possibility to pay in a way that is only touching the card to a specific screen, without the need of placing the card inside the machine and without putting the pin up to a specific amount that depends on the regulation by country.

The payment system also includes innovations and activities that are held in new different ways. Each day, new ideas are tried to be formed to reach continuous innovativeness in payment systems and create quicker, more effective and protective environment seeking both customer and systematic benefits. All alternative ways which are currently used are: Credit and debit cards, wallets, mobile wallets and Peer-to-Peer payments, online banking e-payments, direct debits, invoice and pay later solutions, cash payments and cryptocurrencies (The Paypers, 2020).

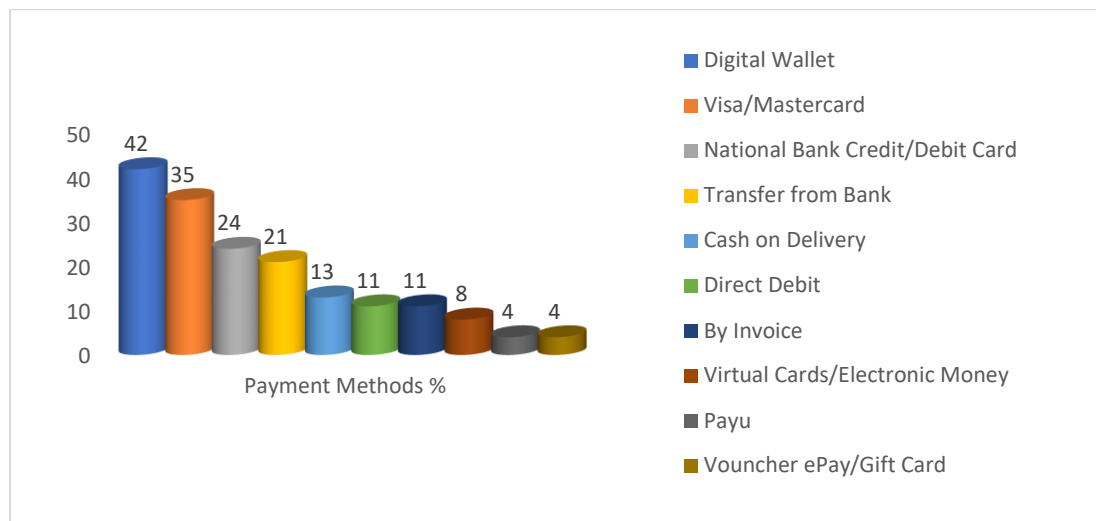


Figure 10: *Payment methods and their percentage of use in Europe (The Paypers, 2020)*

It has noticed that in emerging economies, cards are more likely to be used in digital wallets, while in developed markets, cards have the highest rate of usage for e-commerce activities. To give an example, it is seen that in the Americas and Europe, payment cards lead following the percentages of 53% and 49%. It is expected that the number of cards owned will experience a 5.4 billion increase and reach to 11.7 billion until the year of 2023. Only 3.3 billion is forecasted to be constituted by credit cards.

According to researches, it is seen for the last month of fourth quarter of 2018 that the mobile payment channels is used the most in the Asia-Pacific countries accounting for 47% of all payments held mobile. It is followed by Latin American countries with 38% and Europe comes after possessing 31% of total. North America and Middle East & Africa continents' member countries represent the same percentage and have the lowest usage of mobile payments compare to other countries located in different continent (Clement, 2019).

For the future, it is expected that new methods of payments will remove the burden from card networks' shoulders and create more opportunities to providers of such services like digital wallets. As highly strong corporations now are creating their own ways of payment as what was done by Apple, Amazon and many others, it is predicted that companies will be even more focused on the side of payments and at the end, will endanger the existing card networks in terms of losing power and suffering in the market (TEO, 2020).



Figure 11: *Mobile wallets' number of users in 2017 (Clement, 2019)*

3.5.3. User Experience Design

Every item that is part of people's daily life such as variety of products we consume, web pages we visit and mobile applications we frequently use is now continuously developed, not only to bring them what they need from them, but also in a way to make their life easier and provide them a more effective experience. These developments progress in parallel with the changing habits of the users. Nowadays, not only applications that emphasize visual quality, but also those that give a better experience to the end consumer are often preferred.

In this context, content design and quality are of great importance in achieving a good user experience. Determining the expectations, channels and behaviours of users, especially from the developed applications, plays a key role in ensuring that the content is properly structured, beneficial and the user experience is improved in projects.

The most important point to be considered for the successful design of the user experience is how the users interact with the product, rather than the interface design of the application. In order to achieve this and to perform the most effective way of reaching a correct and successful user experience, the data coming from the users should be evaluated correctly and different scenarios that may occur should be identified. Addition to that, UX designers should concentrate on possible results of these scenarios at the same time. User experience can be boiled down to the answers of three main questions "Why", "What" and "How". Why defines the purpose of "experience" in a clear way by determining the needs and emotions that direct the user to the activity,

and determines the functions that should be used while creating the experience (the what) and provides the most effective presentation of these functions to the customer (the how). In this context, it is very important that these three questions are fully integrated with each other. Among them, only "why" is based entirely on the client's behaviour, emotions and needs. In this way, products that create an interesting experience can be accessed and perceived by customers (Hassenzahl, 2011). At the end, it can be concluded that, user experience design is more than how the user interaction design works, by including also the research of users, persona creations and testing of different factors of such related to performance and usability of the product (TEO, 2020).

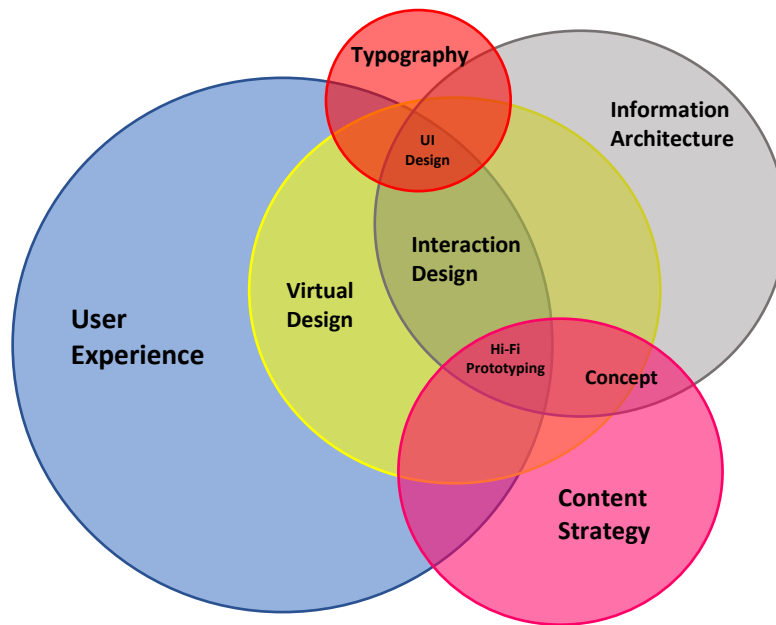


Figure 12: *Size and scope of User Experience comparing to other design-based applications* (Taylor, 2018)

3.5.4. Responsible Traveling

Environmental and climatic problems, especially encountered with the 2010s, have caused the concept of sustainability to be discussed frequently and gain a lot of importance. Sustainability can be defined as the ability to maintain any system in continuity without excessive consumption, degradation and overloading of its resources. It aims to prevent the future needs of future generations to be consumed and tries to be sure for the next generations to reach all needed resources while the needs of today are met. It is important to utilize the resources correctly, and preventive and protective intentions should be maximized, at the same time with fully sustaining the awareness positive environmental impact.

Developed ways of traveling and the supply of higher possibilities help travellers to access different and further locations easier and faster, but at the same time create

increased number of damages to natural environment. Especially jet fuels which are fully used in aviation sector raise carbon emissions and have an accelerating effect on climate change, in addition to the increment of individuals' carbon footprint (Flaherty and Lim, 2018). In terms of tourism, ensuring the sustainability of not only environmental but also cultural values plays a primary role. In this context, awareness of local, regional and national items that form tourism, transferring them to future generations by protecting and improving them are the most important factors in ensuring the sustainability of tourism. The objectives of sustainability in tourism industry are not only limited to these factors, but also focus on ensuring the integration of social, economic and environmental factors, thereby developing the competitive environment of industry members (Kernel, 2004). Customers who are equipped with this awareness and seek for new ways of protecting the environment while travelling prefer destinations that support sustainable tourism in their vacations. Tourists who give importance on responsible tourism also seek for ways to protect the natural life of the visited country and behave accordingly not to harm the wildlife. Additionally, they support preventive acts to stop the abuse and harassment that are done on animals to produce clothing and related products (Flaherty and Lim, 2018). Following these reasons and differentiated choice of travellers, it is not surprising to see the birth of a new trend called sustainable travelling, which continues to increase day by day in the tourism sector.

Individuals, organizations and governments are working to put forward sustainable tourism and its implementations and they make great efforts in this regard. Strategy assurance has become an undeniably significant item in these endeavours. As can be seen now, sustainable travel practices show a trend that spreads to different parts of the world and reaches large audiences. According to Verdict in a partnership with GlobalData Travel and Tourism, the top destinations that give the most effort and importance on sustainable and responsible tourism are given in the following: Costa Rica, the country which focuses on being fully eco-friendly and produces 93% of its electricity from renewable resources; Slovenia, which was selected as the most sustainable country in the world in 2016; Palau with targeting the idea of increasing the awareness about its natural habitat; and Bhutan seeking the tourism model of “high value with low impact” (Smithers, 2017).

3.5.5. Digital Marketing and Social Media Activities

Innovations and changes in technology have enabled the integration of internet usage into today's life and internet has become an important part of people's daily activities. The ability of consumers to access products and services easily and effectively over the internet and the high increase of their preferences to these channels have led producers to engage in activities to raise their availability on the internet. Especially in this way, many companies increased their power in the market and had the opportunity to gain advantage in competition. With the emergence of e-commerce companies, product

sales started over the internet. At the same time, companies in other sectors have sought effective ways to conduct company activities through the Internet. This ignited the emergence of digital marketing and firms' highly increased activities on social media. With the increase in the use of smart phones and the ease of internet accessibility at any time of the day, digital marketing activities are carried out through social media and similar channels, and they have enabled businesses to reach consumers in any place, time and situation.

Consumers who have a high level of interaction with the digital world have evolved their behaviour and attitude towards products compared to those in the past. This new "digital" consumer group can access to products of different brands and high variety of information in detail through social media channels. According to the 2017 global digital report of WeAreSocial, there are 4.91 billion unique mobile users and 3.77 billion internet users exist in 2017. In other words, 66% of the world population use mobile devices and 50% actively use the internet. In addition to that, it is seen that 2,789 billion people, which is equal to 37 percent of the total population, actively use social media and 34 percent reaches to social media from mobile devices. These numbers represent an annual increase of 10% for internet users and 21% for active social media users comparing to 2016. If the regional penetration of internet is analysed, the highest proportion is reached in north America with 88 percent. It is followed by Western Europe and Oceania with the proportions of 84 and 68. The lowest in 2017 is recorded in Africa with the penetration rate of only 29% of whole population in the continent (Kemp, 2017).

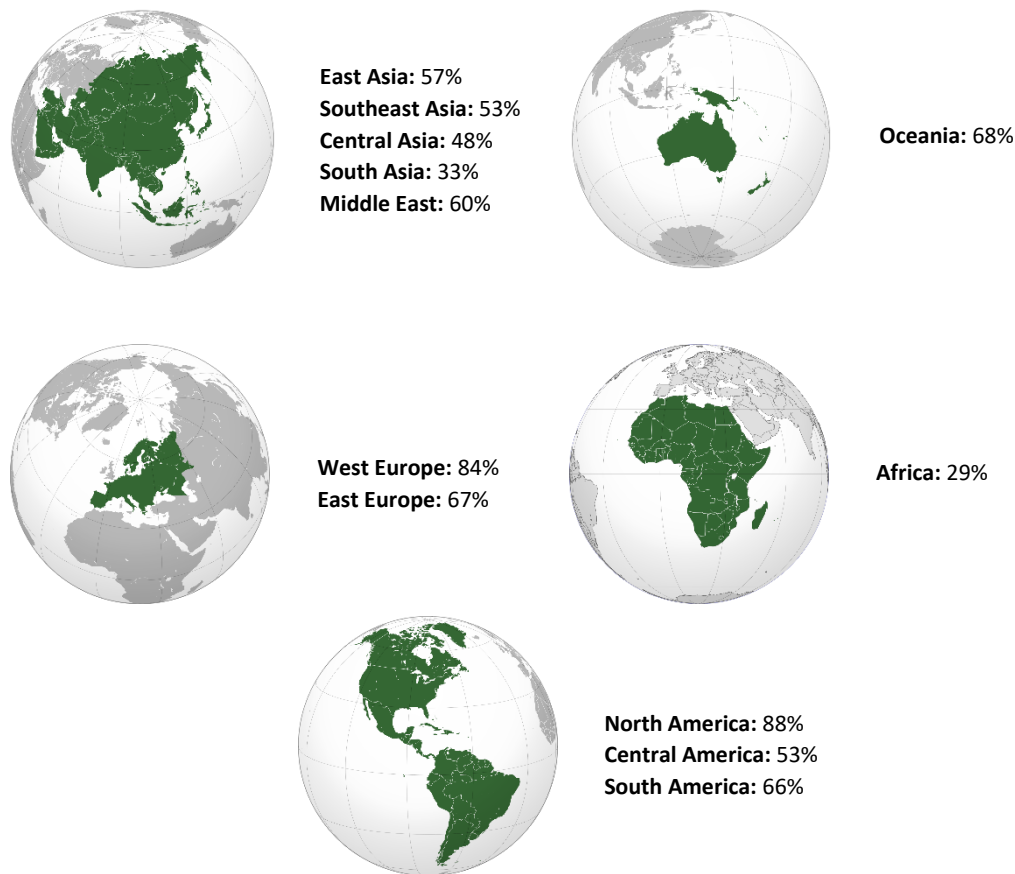


Figure 13: *Regional proportions of internet usage (Kemp, 2017).*

Unlike traditional marketing methods, digital marketing benefits from the convenience provided by different digital platforms and the technology's rapid delivery power to the consumer. This integration created with digitalisation and technology has caused the marketing strategies to be changed completely comparing to traditional approaches. To accomplish a successful strategy as a whole, companies should take various acts such as effective customer journey, content marketing and strategy, campaign planning, information profiling and landing page design trying to reach different key targets while putting their effort on digital marketing activities. Following these acts with a correct focus, enterprises can find a way to interact with customers and provide them a better experience via using some channels like emails and social media accounts while reaching out to new customers or keeping the current ones loyal and effectively on-board (Chaffey, 2010)

New methods that emerged and evolved thanks to digital platforms and channels that facilitate access to consumers have benefited many companies. In particular, campaigns and product promotions that help enterprises to reach to a larger audience and require lower costs; pre-sales, while-sales and after-sales services; communication channels that

provide more effective contact with customers and receive their opinions/complaints quickly are some of the advantages digital platforms assist companies during their marketing activities. The right digital marketing integration allows companies to identify successful and unsuccessful campaigns, change and develop failures, concentrate on those who are successful and take advantage of them. In the long term, companies will be able to choose the methods that are the healthiest for them and easily perform the correct customer-product segmentation. Besides these benefits, compared to traditional marketing, digital marketing helps companies directly target the customer groups that are highly likely to use their products and services, and gives possibility to measure the success of achieving those targets. As a result, not surprisingly, the importance of digital marketing for companies is increasing day by day (Royle, and Laing, 2014), although there are also disadvantages of digital marketing that occur from being too much related to technology and digital channels, and hardness of targeting the old-fashioned consumers.

One of the channels that contribute to digital marketing is social media platforms. Social networks are essentially aimed to create networking. Their first appearance was intended to enable people to communicate easily, to let people share the developments of their lives and help others to follow remotely. The development and spread of these platforms, as well as the vast majority of the population began to use these networks, provided a great advantage for companies in marketing their products and services, and managing brand images (Mills, 2012). Companies that manage social media well have been able to increase their awareness of their brands and they are preferred more comparing to their competitors which provide similar services.

Social media is created from various type of platforms, but there are eight of them which account for the most popular sites for users exist in the digital world: Twitter kind of micro-size blogs, regular blogs, social networks such as Facebook and LinkedIn where people share about their lives and can follow each other, media-based content sharing portals similar to Youtube, forums, review-aimed platforms such as Trip Advisor, social voting and bookmarking sites, and virtual worlds (Zarrella, 2010).

According to statistics from January 2020, the most widely used social network in the world is Facebook with 2.5 billion active users. This is followed by Youtube with 2 billion and Whatsapp with 1.6 billion users. Facebook's communication application "Messenger", thanks to its 1.3 billion users, is ranked as the fourth. WeChat, the most actively used messaging application in the People's Republic of China, also has approximately 1.2 billion active users worldwide. Photo sharing application Instagram, and video sharing platform Tiktok, even though it has just started to spread, cover the following spots in this list (Clement, 2020).

The more active users a social media network has, the more companies can reach customers with the marketing activities and campaigns they create. Facebook, in

particular, provides great opportunities to companies in this regard and develops methods to support the use of the platform for marketing activities. Thanks to its filtering and specification features given to marketing officers, companies can deliver the type of ads they want to the customer groups they wish to reach, taking into account of their location, search history or personal interests.

Based on the results of statistics gained on 2019, it is noticed that marketers have increasingly preferred to focus on social media advertising channels and have spent around 90 million dollars for their ads shared on social media accounts in that year. Revenue which is coming from social media accounts is highly likely to be created from the mobile users. "Per person ad spend on mobile" has been following an upward trend from 2017 to 2020 and raised from 11.51 \$ to 16.85 \$ between those years. It is expected to reach up to 18.40 \$ until 2023. On the other hand, "ad spend per desktop internet user" has been following a stable trend and is always in the \$ 6 band, without any major changes over the years (Zote, 2020).

3.5.6. Streaming

Streaming is a system that allows users to visualize different types of media files online and prevents them to take up space in the hard disk or computer memory. These files can be audio, video or any other kind of multimedia documents. Streaming gives users the chance to access the file without having to download it, but under the necessity of connecting to the internet, as well as hardware, software, network and server infrastructure suitability. Thanks to the development of the Internet and 24/7 accessibility, people have started to pay monthly subscription fees to streaming sites, where they can access all the files at the same time, instead of paying for each item they download. However, video streaming causes most of the data flow on the internet, but it consumes high units of data. For this reason, video streaming platforms are preferred to be used in places where Wi-fi can be reached, rather than using mobile data, especially in homes.

Netflix is one of the most popular video streaming sites in the world and has been gaining an increasing popularity among the others by providing various entertainment shows, tv series, movies and high-quality services. The company has stated that the number of their subscribed users have been reached to 118 million approximately, and the users currently spend an average of 140 million hours a day on the platform. This means each of the members spends about 71 minutes on the platform averagely (Pesce, 2018). Being aware of this high demand, Netflix invests a high amount of money for engaging partnerships with celebrities and publishing interesting new contents to acquire new customers, retain the existing ones and gain an advantage against competitors such as Amazon Prime and Apple TV.

4. Expectations of Customers in Horeca Industry

As in every industry, the product and service features provided in the Horeca industry are shaped according to customer demands and needs. Changing conditions in the world, advances in technology, social, cultural and political movements have given people new perspectives day by day and evolved the expectations of customers from the services they receive. At the end, the definition of “good quality product” has changed drastically compared to the past.

The Horeca industry, by nature, is in great interaction with travel and tourism, and every movement in these sectors directly affects the Horeca industry. Customers, thanks to the ease of accessing to information after the development and spread of internet, can now understand product and service quality better with a small scale of research, especially through social media networks and websites including customer reviews and rating systems, and shape their decisions according to their findings which help them choose the option that fits perfectly their real wishes and needs. For this reason, existence in digital world creates a huge information and data flow from a company to public and is a majorly important way for the enterprises in Horeca industry to acquire new customers and market themselves.

Other major impacts on the Horeca industry, especially within the framework of hotels and local tourist restaurants, can be explained as the widening of the transportation networks around the world and the creation and launch of new and fast routes. In addition to technology, the growing curiosity towards new cultures, globalization and inter-country collaborations have exploded the number of visits to different countries. This interest also increased the number of enterprises within the Horeca industry and ignited the intense competition. Since one of the most important elements of survival in the competition is the ability to acquire and retain customers, customer-oriented approaches were especially preferred by companies. The most important factor for creating and developing customer-oriented strategies is the ability to analyse the existing problems, needs and expectations of a customer correctly. Expectations of customers concerning the Horeca industry can be categorized as shown in the following:

4.1. Discovery and ease of reaching to quality

As stated in the previous sections of the thesis study, the increasing tourism and entertainment activities over the years, and the raised amount of money people have started spending for these activities caused entrepreneurs to concentrate their investments on this industry in order to benefit from the given advantages. This led to a rapid increase in the number of enterprises in Horeca industry such as various types of accommodation services, restaurants, cafes, bars and catering services. With the contribution of innovative thinking, many different companies which offer more interesting and personalized experiences to customers have recently emerged. Especially restaurants have started providing various kinds of food and ingredients that

fits customers' special diets and choices such as vegan, vegetarian, low-fat, gluten-free and organic (Cushman & Wakefield, 2017). Consumers now have many different alternatives, especially concerning tourism, eating and drinking. While this may seem like a good further step to meet the customers' expectations perfectly, having too many options has also begun to create confusion for them and customers are looking for ways to reach the most appropriate service. The high number of options also made customers more selective and led to an increased competition among companies.

Not only due to rising number of enterprises in the industry, but also due to globalization, the most appropriate option becomes harder for customers to find. Especially for international travellers, it certainly is much more important to reach to a restaurant which provides the real experience they are looking for, since they have only limited time to discover. For this reason, they seek more for different options to choose from and resources they can use to get information about best-quality nearby enterprises, as quality has direct impact on customers' satisfaction levels. In addition to that, gastronomic travel which results from psychological, social or personal reasons such as escaping the chaos of daily life, to rest or explore (World Tourism Organization, 2012) has made travellers much more selective in terms of eating and drinking.

Today, the habit of traveling is not limited to adults or families with children. Increased passion for travel of millennials, which do not yet have any income or are limited to a small amount, has also increased the need for enterprises that offer cheap accommodation and food and beverage services. This generation, which focuses especially on cultural and entertainment holidays rather than staying and spending time in a large hotel complex, has ignited the emergence of new types of accommodation. Again, as a result, the number of options for customers to stay have increased and people have started trying to find the best way to reach the accommodation that fits their budget, includes the amenities and services they need.

The development of technology and the acceleration of people's access to information through digital platforms and social media channels led to the establishment of companies that provide services on the internet. In particular, the need of Horeca industry customers to discover the most suitable locations for them has increased the activities of enterprises on social media and the Internet, making it easier for them to introduce and present themselves to the customers' choice through digital marketing channels. In addition, with the emergence of different websites that provide visualization of all companies serving in the Horeca industry, provide communication with them, and include user reviews and ratings, it has become easier for customers to discover new places and access the best quality services. At the end, it can be included that the definition of the process of travelling has exceeded the actual days of a trip, it also contains the earlier stages before going on a vacation, like research and discovery

steps, through social media networks and digital/traditional channels and it now describes the experience as a whole (World Tourism Organization, 2012).

4.2. Personalized local experience

While the discovery of top-quality enterprises has a great importance to customers, only quality falls short of meeting customers' expectations. Now customers are looking for more special and personalized experiences. At the same time, especially considering the food and beverage industry and gastronomic travel, it has become very important for people to try local products of the places they visit and to have a truly unique experience following the tradition of the region which is visited. For this reason, depend on several studies, tourists prefer to visit the locations with a popularity of tasting quality products and having a local experience. People became much concerned about where the food originally came from and they prefer to listen the story behind that to personally experience and connect with it as a whole. Additionally, gastronomy helps them to dive into the real heritage, culture, ethical and sustainable values of a location they are visiting, through trying and learning about the characteristics of food and drinks (World Tourism Organization, 2012).

When it comes to accommodation, the most important elements that make you feel local are the interior decoration of rooms and common spaces, and additional services offered alongside the stay. These additional services are often provided to create a truly personalized local experience and satisfaction and exist especially in large hotel complexes. Examples of these services can be the large variety of “local” dishes served in hotel restaurants, Turkish baths in Turkish hotels, saunas in Scandinavia and massage services offered in far east.

4.3. Reliability and engagement

Although the quality of a product and service is of great importance for customers, this is not enough to choose a brand. Customers want to make sure that the service they are willing to receive will reach them in the promised quality, and if not, they need to know that they can easily consult the service provider and their problems will result quickly in the direction they want. This clarifies customers' expectation of reliability from a company. Companies that are disposed to provide fully reliability not only deliver the service they promised, but also enable their customers being actively included and collaborated with the company from the emergence of their service until the receipt. This is actually an important step for companies to create customer engagement. In this way, customers can have a voice in the process of product and service creation and become the co-creators (Ostrom et al., 2010). The co-creation concerning company operations appears with the participation of customers in different ways, such as sharing ideas and suggestions, working and producing together, purchasing, advertising the brand to relatives and friends, and giving feedbacks (Iqbal, 2011).

To be more specific about Horeca industry, it can be added that customers majorly expect to attach and engage closely with an enterprise. Also for service organizations, like the ones serving to Horeca industry, they have determined creating customer loyalty and maintaining it as the most important target of marketing activities (Rather and Sharma, 2016), and have been looking for ways to achieve this for a long time. When customers engage a lot with a single brand and be satisfied from their services, they start creating closer relations, repeatedly repurchase their products and become loyal customers. High engagement helps enterprises to acquire customer loyalty, and not only help them keep the same customers, but gain even more. And as a result, they can have the opportunity to be successful in the competition. In return, for customers' sake, better customer experience is delivered, and they can reach satisficing and committing services specifically prepared for them. Moreover, being loyal may provide them advantages like rewards, campaigns and discount coupons supplied by some enterprises in the industry.

In food and beverage sector enterprises, it is important to keep the quality of offers at the same level while putting strategies seeking for higher customer engagement. These strategies can be realized in a way that personalize the brand's service offerings and educate its employees to give satisfying suggestions similar to the previous selections and taste of their customers (Cushman and Wakefield, 2017). If they can provide services the way they promised to do so and help their customers about their doubts and problems in any circumstances, they will be able to build the reliable environment their customers are expecting of without any hesitation.

4.4. Flexibility and easy-to-understand services

Another factor that greatly affects the preferences of customers is that the services offered being open, understandable and flexible. In this way, they can grasp the suitability of the options and choose the service that will provide them the greatest satisfaction. However, this includes not only the service itself, but also other factors provided within. To give an example from Horeca and make the given information clear, the menus offered in restaurants can be mentioned. Menus are items that have 260-year of history and provide information flow and communication from businesses to their customers in the restaurants industry. These items can also be used as a marketing tool of a restaurant (Wang, 2012). The information conveyed through the menus can be names of dishes, photos, ingredients and where they are supplied from, the way of cooking, allergens and prices. However, of course, not every enterprise is successful in creating such a detailed and understandable menu. However, compared to the past, customers' higher desire to know what they eat and the story behind them, and especially the importance of the naturalness, health and suitability of dishes for special diets such as vegan, vegetarian and gluten-free, vast majority of restaurants have now added these features in the menus they create. Also, updating and correcting this information and prices provided on the menu whenever there is a change is an

important factor preventing customers from encountering an unpleasant surprise at the cash desk. Another problem in restaurants, cafes or bars related to menus is related to images of dishes presented in the menu. The customers can make their choices based on the photos, but stock photo usage in a menu or the kind of uses that are not reflective of the truth cause customers to be unhappy when the plate arrives in front of them and even create further problems with the managers. And at the end, the effect of this situation on customer loss or bad reviews can not be denied.

Another information that can be mentioned about menus is the effect of their preparation and design on perceived customer experience. For the customers who expect for a specialized service and customized acts, designing menus according to their wishes so that they can easily reach what they are looking for and understand the options provided for them is another factor that ensures success in the operations and presentations of restaurants and similar enterprises. For this reason, managers started to use the advantages gained thanks to digitalization and created a successful customer experience, as well as increased their power in personalizing service offers (Wang, 2012).

Horeca enterprises need to be able to provide flexibility in terms of language, majorly in the countries and regions which receive high number of international tourists annually. Especially with the globalization and the spread of English as the "second language" worldwide, hiring English-speaking employees and frequent use of the language increasingly take part in service industry. But this doesn't mean that only English is enough to use under the existence of countries such as China, that has citizens who travel a lot more than others but are inadequate in terms of other languages. For this reason, the provision of services provided by hotels and restaurants in also other most used languages becomes a must and accounts for the fact to be chosen much more than competitors in the same market.

According to a research done in the US for restaurant clients with different native languages and have English as the second-known language, some facts have come up regarding their experience. First of all, the language insufficiencies affect the customers emotionally and cognitively, and change their reactions they give to the services they encounter. Due to these bad effects, customers feel highly stressful, think the problems are caused by them and become unable to share their discomfort with the lack of service or the lack of information with enterprise employees. These people are more likely to understand the pricing information wrongly and choose the product they are not going to be satisfied with (Kim and Mattila, n.d.). Because of this situation, deficiencies in meeting the expectations of customers are created, and it also prevents enterprises to see their weaknesses and take corrective actions. At the end, lack of language skills and low-resilience services, which have a detrimental effect both for the

client and for the restaurant itself, demonstrate the need for businesses to take action to overcome these problems.

4.5. Sustainability and reduction of waste

Our world is facing environmental problems that have made itself felt especially in the last century. For this reason, social, political and economic steps have been taken, countries are trying to bring long-term solutions to these problems by working together and trying to instil the importance of thinking environmentally to their citizens. People who are aware of this risk have also started to engage in activities to reduce carbon emissions and wastes and have started to take part frequently in protests and activities. For this reason, especially the concept of "sustainability" has become a major reality for every sector and companies have been tried to present their products and services with an aim of clean environment and a clean future, in line with the wishes of their customers. This situation has certainly been reflected in the demands and expectations of Horeca sector customers. Because the companies in this sector directly generate many elements that create environmental impact. These elements are: Energy consumption, production of solid waste such as food and packing items, generation of air and water emission, food-borne pathogens, usage of refrigerants and cooling systems that produces chlorofluorocarbons (Davies and Konisky, 2012).

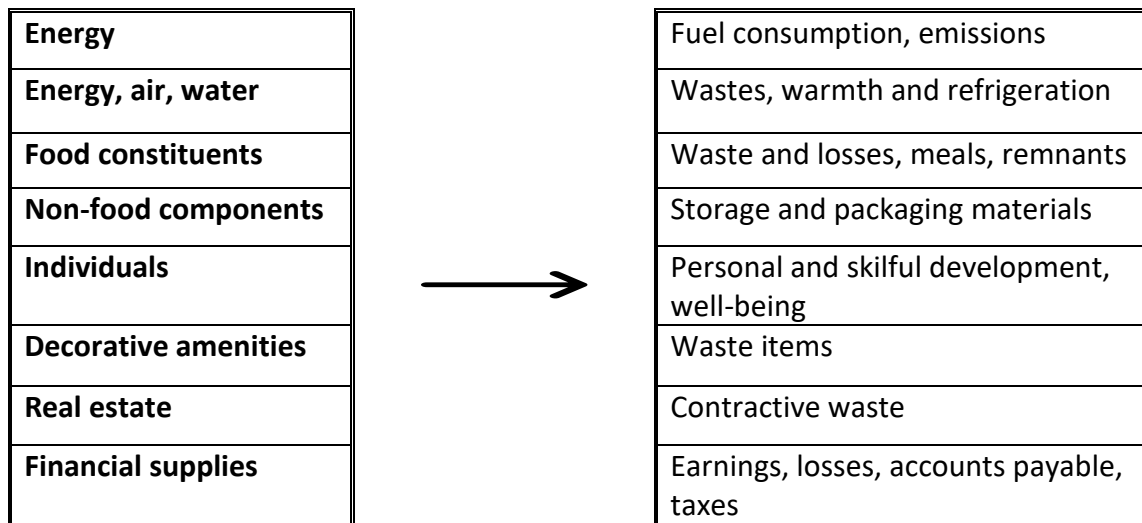


Figure 14: *Food services input to output transformation (Bügel et al., 2016).*

However, sustainability and focus on environmentally friendly products remain insufficient, especially in the restaurants industry. The reason for this is that SMEs constitute the majority of the restaurant industry and they are inadequate in terms of access and use of other kinds of safe and renewable resources (Ahmed, Montagno and Firenze, 1998), since they have limited budgets and capabilities to run a business fully concerning the environmental issues. However, besides wishing for high-quality and fresh products, customers place major importance on sustainability and want to see a

wide product range including local ingredients from Horeca industry enterprises (Cushman and Wakefield, 2017). In addition to that, encouraging businesses that create low food waste and give importance on recycling, at the same time with protesting firms that do not pay any attention in this regard or banning them through social movements are very common today, and these help to strengthen firms in the market or cause them to sink to the bottom as they cannot meet customers' expectations or the facts they care about. For this reason, it can be said that customers have increasing interest on environmental issues and how to face them and give importance on sustainability and finding ways to re-use waste products (Withiam, 2013).

Sustainability is not only about consumed products being sustainable, it tells about all the experience being sustainable, concerning sustainability of tourism and included activities. For this reason, it shows that customer expectations related to sustainability within the Horeca industry should be viewed from a broader framework, not only being product-oriented but also being fully customer experience-oriented. It is very important for customers to protect the visited location and its culture with all aspects and transfer it to the next generations in the same way. That means each sub-industry in Horeca must take appropriate precautions and tailor its services accordingly.

4.6. Experience sharing

The introduction of social networks into our lives and the rapidly increasing usage rates have changed the way people spend their leisure time and ways of providing communication. People have started to live based on their identity on the "social networks" they have created for themselves and social media addiction has started to appear as a new psychological disorder in the literature. Although it is thought that this situation disconnects people from real life, a-socializes them and creates bad effects on human relations, the use of social media continues to increase day by day.

As individuals can discover new places, contact companies and choose the services that fit their needs and wishes in the best way through social media channels, they have started to share their experiences on their accounts, and leave some reviews and ratings for making it easy for others to decide. The madness of creating a content to social media has become such a thing today that customers have even started to choose the destinations they visit based on where they can take quality photos and videos to share on their accounts and show to the people that follow them. At the same time, people who travel frequently or make food and beverage tastings, which we call "gourmet", started to share their observations and experiences with the audience through blogs, Instagram accounts, Facebook groups and similar ways. Highly popular social media account owners have turned this into a line of business and started to be used as an element in the marketing activities of companies, going on vacations to different locations with the sponsorship of governments that aim to increase number of incoming tourists or sponsorships from hotels, restaurants and travel-related organizations, and

they have made money by using their ability to reach high number of individuals through their social media accounts. In the old times, newly released compact discs or experiences in celebrities' musical performances were the things people were majorly talking about with friends and relatives, but now it has been replaced by the most current travel or dining experience and have started to be shared on social media accounts (Cushman and Wakefield, 2017). For this reason, the travel process of the people not only covers the prior research and discovery steps and the actual trip, but also the review and sharing after the travel is included in the whole process (World Tourism Organization, 2012). Due to this high usage of digital channels, developments in tourism and the need for correct information, expectation of platforms where people can share their experiences correctly without any influence and where others can reach to reliable information from first-hand sources and to the contents they share is considerably high.

5. Digitization

Digitization means transforming information into a digital form with the use of different types of electronic items. Thanks to digitization, inputs such as text, multimedia and sound are stored, processed and conveyed in digital environment. To accomplish these goals, different equipment and portals have been developed (What is digitization? definition and meaning, 2020).

The use of digitization within businesses does not only mean transferring operations and bureaucratic activities to digital form over paper. Digitization creates a radical change in every field operating within the enterprise and evaluation in working styles. For this reason, fully integrating new technologies into the business, understanding and implementing new developments and working methods of the employees are among the most important factors that will enable businesses to demonstrate speed and accuracy in their conversion from traditional to digital.

Conversion to digital form is of great importance not only for the company, but also for the customers. The introduction of remote communication, in particular, is a very important development that paves the way for a faster exchange of information within the company units and between the customer and the business. As mentioned in the previous sections of this study, the commonly encountered trends and customer expectations in today's businesses are highly related to digitalization and similar topics. Considering the usage amounts of personal computers, it is seen that there has been an increase from 100 million to over a billion comparing the 90s to the 2010s. Additionally, usage of mobile phones experienced a huge raise between those decades. This figure, which was 10 million in 1990, reached over 5 million uses by 2012 (Morgan Stanley, 2009). It is noticed in 2012 that the number of people who can reach mobile devices is more than the number of people who can reach electricity. This, in fact, led to a high-speed progress in the production of data and information (ITU (International Telecommunication Union), 2003). For this reason, it has become very important, especially for policy makers in telecommunications and internet technologies, to expand the developments that will optimize and accelerate the data transmission.

In addition to these, it can be mentioned that the transition to digitization has great benefits not only for customers but also for countries and governments. These gains can be seen in economic, social and public spheres. In fact, in countries that can highly integrate digitalization, there is a 20% increase in economic advantages compared to countries with lower levels of integration. Moreover, it has been proven by different studies that the transition to digitization has led to an improvement in terms of reaching various purposes of governments such as the reduction in unemployed population, improving the quality of daily and personal life, facilitating access to public services and creating efficiency in governments' activities (Dutta and Osorio, 2020).

While the spread of digitization has many advantages for countries, it is difficult to integrate an advanced technology into all operations. For this reason, especially decision-making and implementing authorities face many challenges. These challenges can be categorized into three groups: Primarily, the difficulty of finding performance indicators that can measure the extent to which information and communication technologies are integrated into the public poses a problem for societies. When looking at the secondary challenge, a situation again arises due to the lack of measurement items. This time, it is because of the lack of a tool that shows the social and economic effects of digitalization and related applications while it is adapted to a society. The existence of such a tool can show the success and positive effects of the digital implementations that authorities have applied and enables them to benefit from digital methods and technologies in increasing amounts. Finally, it is about the authorities to establish and implement new policies aimed at ensuring the continuity of digital developments that bring innovations in every field and using their advantages (Dutta and Osorio, 2020).

To understand the level of digitization of a country, there are several attributes that help in the measurement. Based on the analysis of different studies, these attributes are defined in the Global IT report of 2012 as in the following: ubiquity, affordability, reliability, speed, usability and skill. Ubiquity is a concept that explains the access of customers and businesses to digital technologies globally; affordability describes how these digital technologies are priced in an amount that high number of people can pay for it; reliability represents the quality of the digital technology provided; speed describes the time consumed to reach the digital service; usability indicates the practicality of the service and the ability of local systems to integrate these services; and skill describes the extent to which customers using digital technologies adopt them into their personal and business-related lifestyles. These attributes help to find the digitization scores of countries and to determine which level digitization group they are in with the help of these scores. Scores were determined on a scale between 0 and 100 and were divided into 4 groups: between 0-25, 25-30, 30-40 and more than 40. Countries with a score of 0 to 25 are defined as "constrained economies". The reason why this name is given is that they offer a limited service in terms of the use and integration of digital technologies. In addition, their services are high-priced and difficult to access. "Emerging economies" covers countries with a score of 25 to 30. Although these group members have carried out many activities for the development and diffusion of digital systems, they do not yet have a high reliability and digitization system spread across all branches. It is stated in the report that the countries in the 30-40 score range fall within the scope of "transitional" stage. In this stage, it can be mentioned that customers are provided with a digitization technology that they can reach from anywhere. Reliability has become the most focused subject and the delivery of acceptably safe and reasonably priced services has been ensured. Smaller development

has been provided for other measurement attributes. The advanced stage, which indicates the highest level, includes countries scored with over 40 points that can fully benefit from digital technologies, also provide high quality and quick services (Dutta and Osorio, 2020).

Finally, when focusing on the general impacts of digitization, their effects appear in 3 different areas: economic, social and governance. From an economic point of view, expanding the use of digitization has positive effects on countries and contribute to their GDPs. Of course, this increase is seen at different levels in countries with different digitization scores, and therefore in countries being a member of different score groups. For example, every 10 percent increase in the use of digitization contributes 0.5% to the GDP of constraint economies, while this rate is 0.62% in advanced.

When the effects of digitalization on social issues are defined, positive effects such as decreased unemployment or increased innovativeness are encountered. Likewise, digital technologies, which are increased in use by communities and widespread throughout countries, create improving effects on governance. A detailed view of these effects can be seen in the figure below.

Economic Impacts of Digitization

Variable	Metric	Impact
Increase in GDP	Overall GDP per capita	+0.6%
	GDP per capita: Score 0-20 (Group 1)	+0.5%
	GDP per capita: Score 20-30 (Group 2)	+0.51%
	GDP per capita: Score 30-40 (Group 3)	+0.59%
	GDP per capita: Score 40-100 (Group 4)	+0.62%

Social Impacts of Digitization

Variable	Metric	Impact
New Job Opportunities	% Unemployment	-0.84%
Innovativeness	Global Innovation Index	+6.27 points
Life Quality	OECD Better Life Index	+1.29 points
Common Service Access	UN HDI: Score Groups 1 and 2	+0.13 points
	UN HDI: Score Groups 3 and 4	+0.06 points

Impacts of Digitization Concerning Governance

Variable	Metric	Impact
Transparent Governance	Corruption Perception Index	+1.17 points
Electronic Governance	E-Government Development Index	+0.1 points
Educational Activities	Inequality-Adjusted Educ. Index: Groups 1-2	+0.17 points
	Inequality-Adjusted Educ. Index: Groups 3-4	+0.07 points

Figure 15: *Impacts of Digitization on Countries' Economy, Social Topics and Governance (Dutta and Osorio, 2020)*

6. Digitization in Horeca Industry

Definitions, elements and market researches of sectors such as hospitality and food services which are linked to travel and tourism were mentioned at the previous parts of this study. At the same time, current trends and customer expectations were included in the paper. With the special focus on digitization, the prevalence of such technologies, portals offered in the digital world, and items such as mobile phones and personal computers that mediate access to these digital portals have been noticed. In the current part of the study, the evolution to digitization, which provides many positive effects to the communities in different fields, and its relationship with Horeca industry, which is high in demand and open to great change and innovation due to external effects, is examined. In this context, analysing the impacts of digitization on Horeca and different effects on enterprises are some factors that help determining the level and degree of this relation.

The Horeca industry includes sub-industries within itself and is in a dynamic structure with travel & tourism. For this reason, detailing the examination by focusing on different sub-industries helps to understand the effects and use of digitization in Horeca with all its aspects. Accordingly, this part of the study is branched as usage of digitization in different areas, current ideas, innovations, activities, existing start-ups and their comparisons. Focusing on issues under these titles plays a major role to see the strategies, competition, the ways digitization is used in the industry and to deeply recognize the factors providing success for Horeca enterprises.

6.1. Current Ideas and Innovations

Digitization is used in Horeca industry businesses in many different fields and for different purposes. Today, although high-tech products have been developed and provided to customers, not all businesses in the industry are able to access them or want to incorporate all the innovative ideas into their own structure. The reasons for this may be that the services they provide do not require the use of all the technologies provided by digitization, they may have insufficient resources to afford the technologies, or the company may still be in the lower phases of digital transformation.

Some of the applications used in small and medium-sized companies with integrated digitization at a low level can be given as follows, sequenced following the usage levels by enterprises (Dredge et al., 2018):

- Electronic mails,
- Word-Processing and Spreadsheets,
- Websites and social media accounts,
- Online banking systems,
- Specified finance-related software,
- Company-wise electronic mails,

- Web-based data storing,
- User reviews and forums,
- Specified graphic software,
- Stock control systems,
- Video conferencing,
- Ticketing and property management systems.

Practices benefited by small and medium-sized companies that diffuse the digitization at a moderate level are (Dredge et al., 2018):

- Computer-integrated reservation systems,
- Supplier communication systems,
- Contacting with government services,
- Various tools for analytics,
- Customer relationship management systems,
- Mobile applications,
- Instant messaging and chatting systems,
- Web-active professional systems.

As mentioned in the previous sections, large-scale companies are often rarely seen in the Horeca industry and markets are dominated by SMEs. It was not possible to integrate the digitization at a high level, especially due to the inadequacies in the financial field encountered in the high rate of SMEs. For this reason, the applications and systems whose examples are given are the most widely used in the industry. Today, the use of digital technologies at this level is still sufficient for existing companies in this industry. However, day-by-day evolving customer requests and expectations, innovative activities in the fields of travel, tourism, hospitality and food services, and the desire to personalize experiences may require high levels of integration and use of different digital solutions in the near future. The next generation applications can be given as:

- Augmented reality,
- Cloud computing,
- Big data analytics,
- Artificial intelligence,
- Virtual reality,
- Wearable technologies,
- Voice and face recognition technology.

6.2. Digitization in Sub-Industries

6.2.1. Digitization in Travel and Tourism

Same as all other sectors and related businesses, digitization also creates a significant influence on travel and tourism, in terms of a major change and evolution of its

activities. Digitization has become an important tool not only for tourism enterprises, but also for their products, services and customer experiences, business and inter-industry trading activities and it has an effect on different destinations which are economically related to tourism operations. Traditionally determined roles, networks, capabilities and business structures have been replaced, redefined and transformed into a new digitalization-focused style. New platforms, which are increasing day by day within the digitalized world, have raised the demand and variety for tourism services, accelerate the allocation of financial resources, increase the quality of marketing activities, and pave the way for the improvement of customer-focused activities by placing emphasis on customer feedbacks and opinions (Dredge et al., 2018). In short, it enabled the birth of an interactive structure and strategies to create appropriate digital solutions for businesses and their customers.

The travel and tourism industry includes many different types of innovative activities. These activities aim to ensure the integration of new technological methods into the sector and to provide a continuous improvement in tourism activities. One of the services emerging with the advancement in technology is the internet. Internet technology is used in travel and tourism activities such as information sharing, communication and reservation, and creates an environment where a low-cost relation is provided between businesses and customers. Of course, with the increasing use of the internet in the travel and tourism industry, the digitization limits have been expanded, and digitization has increased the innovativeness of the activities. Of course, with the increasing use of the internet in the travel and tourism industry, the digitization limits have been expanded and the digitization has increased the innovativeness of the activities. We can summarize the contributions of digital to this industry under the following items (Dredge et al., 2018):

- ✓ Creates a personalized customer experience
- ✓ Provides higher level of customer satisfaction from service
- ✓ Supports new strategies, structures, supply chain activities and the emergence of new business environments
- ✓ Creates new job descriptions
- ✓ Helps supporting small medium enterprises within this industry

The businesses connected to this industry provide services through digital portals on the internet and have enabled customers to experience a fast and easy process for purchasing and selling transactions that can also be reached through internet. Online sales that have been made over the internet have led to the birth of the e-commerce market, and this industry is actively operating within the e-commerce market. However, the transition of the travel and tourism industry to e-commerce activities did not occur directly, with the development of digitization over time, this industry has experienced a transformation.

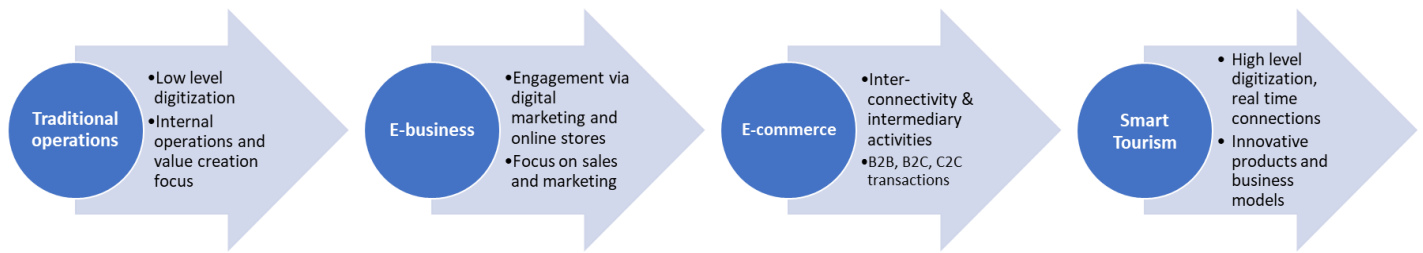


Figure 16: *Transformation towards digitization (Dredge et al., 2018).*

Even if businesses have experienced the transformation shown in the previous figure and have fully adapted the digitization within themselves, a success cannot be precisely mentioned. However, it can be said that companies that have been able to provide a high level of security in e-commerce activities, keep the ID and payment method information of customers confidential and offer an easy, understandable and effective platform to their users can achieve success in terms of e-commerce operations. With mobile and digital payments becoming a trend, electronic shopping has been placed as an important factor in the creation of the economy for enterprises and governments. This type of economy which is created in the mentioned way and is gained from products and services sold through e-commerce is called "digital economy". Such economies are directly linked to the customer and business interactions and payment methods provided through websites and digital platforms created on the internet.

The emergence of digital technologies and e-commerce systems in many areas related to travel and tourism and becoming widely used today have caused their effects on this industry to be very high. Especially the size, profitability and demand of the economies created by digital ways have been an important factor that pushed businesses to invest in these areas. However, this has become a situation that not only changes company operations but also operations related to regulation. Especially violation of information security and personal privacy, as well as experiencing problems like fraud, brought new rules and penalties in the sense of law for the companies in this industry.

Travel and tourism sector is a sector in which demand is high and a "personalized" customer experience is highly desired. At the same time, it is an area where there are a large number of businesses in the regional, national and international areas and high degree of competition between them is experienced. It hosts different market segments. Because of all these given reasons, many difficulties are encountered by enterprises and policymakers. There is a significant need for a well-trained workforce, especially due to the digitally inclined transformation and the possibility of future technological developments. However, since trained labour requires high amounts of payment, some companies prefer to employ people with lower knowledge and competencies. For this reason, knowledge gaps in travel and tourism sector have occurred. Despite this, the sector maintains its position as the 4th sector that earns the most in the world in terms of exporting, following fuel, chemicals and automotive

goods. In addition to that, for countries which have globally known touristic destinations, natural and historical beauties, tourism related earnings have a huge impact on the rise of GDP and provide considerable employment (Hojeghan and Esfangareh, 2011).

6.2.1.1. Digitization in Europe's Tourism

- **Single Digital Market Strategy:** Compared to other parts of the world, Europe has a big difference in terms of the activities, regulations and policies within the market. For this reason, it has to be specially examined and analyzed. "Single Digital Market Strategy", which is accepted by the countries of European Union, has completely integrated the demand by allowing free movement and transfer of digital products and services within the union. In this way, the difficulties resulted from the differentiated laws and policies of member states of the union in the past, especially in the distribution and use of digital tools, were eliminated. At the same time, this strategy has contributed to the developments and changes in digital technologies.

In general, single digital market strategy purposes to support customers and businesses to use digital items produced by union countries easily, to provide a suitable environment and wide range of opportunities for new innovations, and to generate high resources aimed to create increments in terms of digital economy for European countries. When it comes to tourism, four different initiatives that Europe purposes to reach stand out (Dredge et al., 2018):

1. To help increase the business activities and investments in the tourism sector by ensuring that the financial resources of the Union are properly allocated.
2. To create new career opportunities and to provide workforce with high knowledge level and appropriate competencies by eliminating the deficiencies in the tourism sector.
3. Making Europe the most preferred tourism center in the world by providing the right implementations in terms of marketing and promotions, and increasing the demands especially from tertiary countries.
4. Raising marketing efforts carried out through digitization and mobile channels, to meet customer demands and to help Europe to keep up with the most current trends.



Figure 17: Flow of actions of single digital market strategy (European Commission, 2020)

Although the EU tries to establish the digitization within the framework of the whole union and tries to establish a system based on common benefits, it is seen that there are still some difficulties in putting forward this strategy. Some of the reasons that make it difficult for the full implementation of this strategy are the lack of training activities that provide the necessary skills to be created and developed, the lack of correct understanding and application of strategical aspects and digitization, and the difficulty of acting and coordination as a union (Dredge et al., 2018). An important reason for these challenges is the fact that companies in the travel and tourism industry are mostly dominated by SMEs and SMEs are not able to access the necessary resources to be in line with the digital changes and penetrate technological implementations into their enterprises.

6.2.1.2. Digital Transformation of Tourism

Technological domination shows its effect intensely in the manufacturing industry. The operations of the machines and production lines have experienced a radical transition from manual to digital systems. This digitization has enabled automation systems replace the heavy work activities that tire the personnel, and help companies minimize the error and maximize efficiency. This transition period, which has turned towards digitalization in production systems, has brought up the term Industry 4.0. This term introduces and integrates physical systems with digitality and automation, at the same time, it describes a production system in which different digital solution methods have been developed to increase the efficiency of production. Examples of these methods can be big data and cloud computing (Smit et al., 2016).

Industry 4.0 has exceeded beyond its primary area, and has reached to a structure that focuses and operates in other business-related through a relative term “business 4.0” which aims to transform the business activities of companies into digitalization and technological innovations. These new digital perspectives, penetrating into operations, have changed the previous systems and their economic activities (Dredge et al., 2018). These paradigms, seen in the manufacturing industries and business activities, have a structure that includes, not surprisingly, the tourism industry. Besides the tourism industry being suitable for hosting the applications of both industry 4.0 and business 4.0, it also has many aspects and customer behaviors that create an appropriate environment for digital transformation. However, in this industry, transformation did not occur suddenly, it spread to all activities in an order which is following different steps.

The first step in transformation of tourism is the integration of digitization into sales and marketing activities. With the start of the 2000s and the internet suddenly entering our lives, businesses tried to resolve the ways to make the most of this technology. Especially digital platforms, e-commerce opportunities and various channels created to improve and facilitate the communications between customers and employees caused

enterprises to use internet technology primarily for sales and marketing activities. Traditional marketing activities have been replaced by campaigns and advertisements made through websites and applications, and with the help of digital payment systems, product sales have started on the internet. In this way, companies managed to reach many more people with lower costs, and segmentation of marketing activities was provided based on the personal requests and expectations of the customers.

As a second step, digital systems are made to evolve into an environment that will dominate all business areas of companies. Internet systems, which provide access to all kinds of information globally with a click, have become a platform that is frequently used in planning for travelers and allows them to choose the most suitable one by making comparisons between options. The "not only purchase but also experience" perspective developed in the last decade in parallel with digital systems has created a situation where customer experience is of high importance in the industry. For this reason, businesses have been trying to keep up with the new trends and aiming to create a service that will provide prospective customers with a personalized experience. Now, people who are disconnected from traditional travel systems have started to create their own routes and destinations to visit based on the information they obtained from the portals where they can view ratings and reviews over the internet instead of travel agencies, and have started to make all reservation processes on transportation and accommodation through various channels over the internet.

As the last step of the transformation, digital technologies such as virtual reality, cloud computing, mobile apps, chatbots and instant advising services, which will bring physical and cognitive world together, have been created and integrated into the tourism industry. In this way, innovative initiatives that enable customers to be remotely more active have been created and thanks to all, it has been easier for the customers to access international services and make them to be a part of a globalized world.

6.2.1.3. Effecting Factors

The amount of change caused by the digitization and related technological developments within the tourism industry is not minor, but major, therefore, the digitization process within this industry is dependent on external aspects and is completely open to the effects of them. These external factors appear in many different areas and in different ways. These factors can be mentioned as political aspects and authorities; the social and cultural characteristics of the geography in which the industry is located; regulations and law; the existence of different technologies and the degree of accessibility; the economic structure of the place, the amount of investment and financial resources; environmental conditions; the intensity of competition and the degree of the ability to affect the markets (Dredge et al., 2018). The digital applications established by the tourism industry have spread to many countries and regions, and are used by various markets. However, since these political, economic, social and regulatory

structures differ between geographies, their effects on digitization are encountered in different ways. This situation creates challenges in creating a digital system that can be used at the global level. Therefore, it should be ensured that common portals and platforms that can be used by all destinations are established, and efforts must be made for overcoming this challenge.

6.2.1.4. Opportunities, Challenges, Motivations and Impediments

In line with a research conducted in 2003, the interaction between small medium-sized enterprises and digitization in the tourism industry has been revealed. These interactions are seen as the different opportunities created by the use of digitization within the operations, the difficulties resulted from their in-house integrations, the motivations that fire up the desire to make digital implementations despite these difficulties, and the obstacles in using these technologies in operations. Top 5 factors creating all these interactions in line with the results of Mentioned research are shown in the figure below:

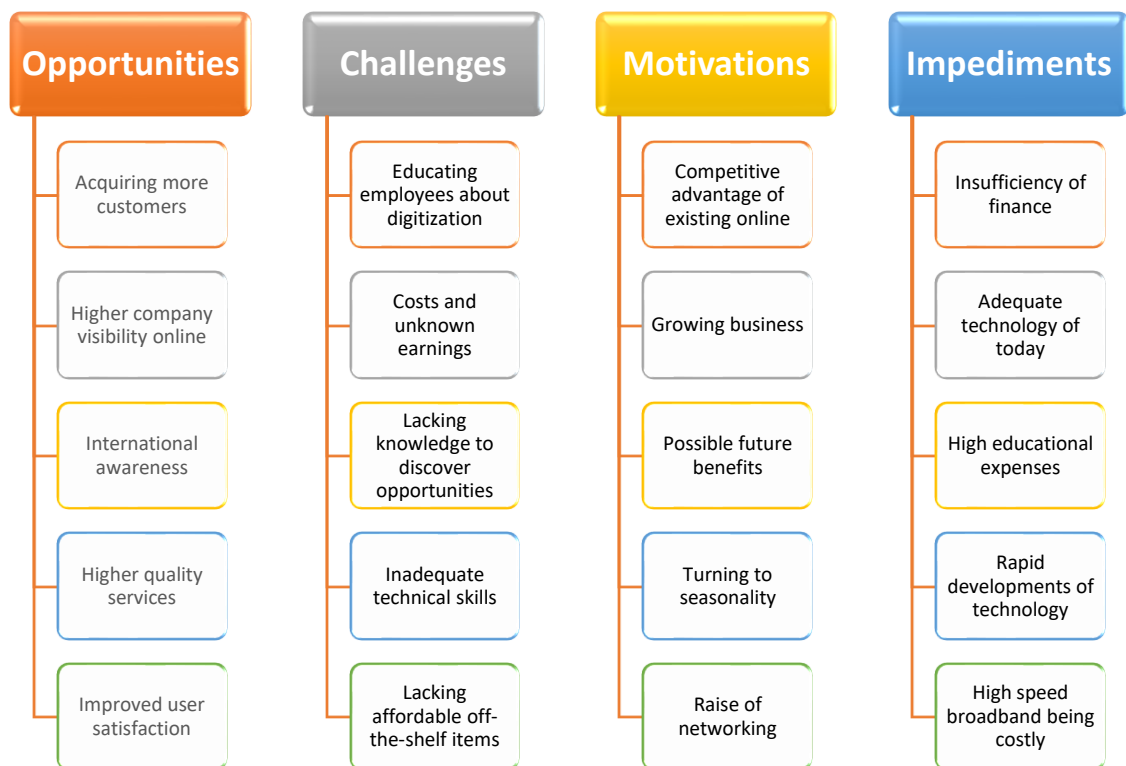


Figure 18: The top 5 factors of the given topics (Collins et al., 2003)

6.2.2. Digitization in Hotels, Restaurants and Catering Services

The evolution of the Internet and the active involvement of digitalized products and services in industries have put it in a structure that regulates and automates the activities of the hospitality industry. Digitalization appears at a level encountered in both primary and secondary operations. Although these services has been encountered as a

sub-topics within the travel and tourism industry, this study has not been given them as a branch in travel and tourism, the reviews have been deepened only to cover the accommodation and food services with all the details to create a better view into Horeca industry. Travel and tourism do not only examine the accommodating or catering side of the business, but also transportation, social and cultural interactions and different activities such as climbing, biking, safari, sightseeing and so on are the focal points of this industry. Nevertheless, since hospitality and travel and tourism industry share mutual customers who are experiencing hospitality enterprises while they are on a vacation, the digitization practices and their effects are similar to those that are mentioned in the travel and tourism industry analysis.

Information and communication technologies are said to create a high-quality environment for accommodation and food services customers, and it is mentioned to provide an improvement of satisfaction levels in the hospitality industry (Buhalis and Law, 2008). The adaptation of new digital technologies to businesses and the evaluation of operations in these areas help the enterprises in this industry to create value and provide them better opportunities. Business processes have completely changed, and operations have begun to move to completely new shapes. The correct use of digitization in this industry is considered as a factor that puts businesses before their competitors in terms of high number of customer gains and properly meeting customer expectations.

6.2.2.1. Digitization in Hotels

The reason for using digital technologies by hotels is to implement innovations that will benefit the customer and meet the expectations of the customer. As explained in the previous sections of this study, the demand for enterprise providers is rapidly increasing day by day. However, the supply to hotels increases at a higher rate compared to demand, and the need for digital technologies and the solutions to be achieved through their use is becoming higher and higher (O'Connor and Andrew, 2004). Although these digital technologies can be integrated at every stage of the hotel operations, it is very important for managers to choose the areas that are most necessary and can create the most value and apply them correctly to provide positive returns to their businesses. For this reason, managers should think strategically, follow the trends and make their plans in this direction. Especially since the beginning of 2000s, the most challenging area for businesses is to make such decision making and to adapt digital technologies. In this context, companies have started focusing on finding solutions to their problems through different IT systems. Innovative decisions for the integration of digitization are now mostly purposed to meet customer demands and expectations, as a result of the great importance of customer focus for businesses (Ives, Piccoli, and Spalding, 2001).

In order to benefit from digital systems, it is necessary to understand which product or service can be digitized or which activity within this service can be transmitted to the

customer with the help of digital technologies. This situation sometimes results in the digitization of the entire product, and sometimes some of the service is left as traditional while the other part is digitized and offered to the customer. "Brand image" is one of the intangible elements of the business that can be digitized. This item is strengthened in digital environment by providing business existence in the internet environment or by marketing itself through social networks and it is desired to leave a good perspective about the business in the customer's mind.

6.2.2.1.1. Information Digitization

Information is one of the items that contribute to the operations by digitizing by hotels. Information is the name given to the items that can be defined as bits, and all kinds of items created from bits are formed as a structure that can be digitized (Shapiro and Varian, 1998). The card system comes first among the digital technologies obtained from the transformation of the information used in the hotels. This automatic card system used for opening the rooms is made by defining the room information into the card with the help of electronic tools. In this way, problems that may arise from losing the room key can be prevented.

The internet has undoubtedly played the most important role in the digitization of information. The opportunities created by the internet in gaining a global existence and transferring information have created a new era in the world in terms of digitization. This situation has also provided a great advantage for hotel managers. Businesses, which have been able to share information over the internet, have become accessible to even the most remote customers live in overseas locations. This shows how important the use of the information digitization for the fact that it can be "instantly accessed if desired, regardless of physicality, time and place" (Beekman, 2003), which is one of the biggest advantages in terms of gaining customers. With the help of the internet, the hotel businesses have also been able to share regularly updated information about their services such as the number of free rooms, the number of guests who can stay in a particular room, the dates when the rooms are available, room details, prices, amenities, and customers can now access and do instant transactions, such as reservations, check-ins, and payments, with one click thanks to their web pages. Websites for businesses are one of the tools that play the most important role in transferring information to inside departments of the company and outside clients. Although website design is a process that can be done easily today, it is very difficult to make a good design that covers all functions and provides a versatile interaction with customers. For this reason, especially small-scale businesses have failed to organize a website that includes promotions or applications to communicate with the customer. In large companies, these communication channels can be made either through an on-site message or mail-dropping service, by speaking to an online customer representative or via chat-bots. Chat-bot is a kind of artificial intelligence (AI) technology that answers common and basic questions without a need for a full-time representative. These

questions of hotel clients can be “how can I get to the hotel from the airport?”, “how many types of rooms does the hotel have?” or “what are the restaurants inside the hotel?”. The system understands the question and sends an automatic reply with a proper information. This is a useful tool, especially for customers with introvert characteristics to get benefit from, since they are more likely to avoid talking with a person (Silenaite-Enyed, 2018).

Information is also a thing that can be stored in digital environment and can be used later for different purposes. For example, with the use of property management systems, hotel managers are able to collect the data of previous clients and their behaviours while receiving services. All the information that are stored can be utilized to make strategical decisions, marketing and campaign scheduling, and help employees to calculate their expected future earnings. Customer Relationship Management (CRM) tools also help managers to gather and store the data of customers in a single database to get benefit for their sales, marketing and supporting activities in the future. Another example that can be given in relation with the data and taking advantage of previous information in digital technologies is the use of Internet-of-Things (IoT) in hotels systems. IoT is a tool that is used to sell services to clients who have already taken the services before or if he/she is a regular customer that visits the hotel in a particular season of a year. Looking at the historical data, food types and hotel activities customers mostly choose, the holiday period they have stayed before and the preferred services can be understood, and the clients who want to benefit from these services another time can be returned to the hotel by the automatic mails IoT tool sends as a reminder if they want to visit again. At the same time, this technology helps enterprises to provide a personalized hotel experience by recommendations given while the clients’ visit for the second or later times according to their ex-preferences (Silenaite-Enyed, 2018).

6.2.2.1.2. Digitization of Product and Services

Today, there are many products and services that are transferred to the digital environment and delivered to the customer through technological activities. The services that are transferred to the digital environment are initialized by customers, and the biggest advantage of these services for businesses is that they do not require their employees to be involved, the important thing is the presence of the receiver. For this reason, customers can benefit from these services wherever and whenever they want without a need for anyone, and the workforce of enterprises saves time and effort and can focus on other activities. Devices that include internet technology, like computers, which provide information digitization and its transfer to customers are some of the tools that deliver digitalized products and services of hotels to customers.

As a result of a research conducted in 2002, product and services can be examined in 3 different layers (Kotler et al., 2002). The central part represents the core product that

demonstrates the main solution providing the prior need and expectation of customers. In hotels, this means “a room” where guests can stay. The above part of the centre shows the services concerning and relating to the process of “delivering” the core product to clients. These services are the ones where digitization is used the most in the hotel business. The variety of communication, reservation and payment systems, services regarding the room quality and room-service personnel can be given as examples. On the third, the outermost, layer, different services such as water sports, golf, spa, sauna, Turkish bath, cinema and concert can be included. These services have the least relation with the core activity and are generally associated with entertainment and recreation in hotels. The range of this kind of products and services offered by hotels vary depending on their size and star quantity. Especially in large multi-star resorts, where the hotel facility is spread over a large area, customers are more likely to get a high variety of services and activities like that. Although it is not compulsory for hotels to provide all the other external services, it is in an important position for them to serve, in order to increase their potential of being preferred and to have a solid and strong place in the competition.

The digitization in products and services has led to a radical evaluation of the working styles of businesses (Coupey, 2005). This change can arise both in the form of offering products and services, in the value provided to the customer, and as an aim that radically changes each branch of a business. A similar situation is experienced in hospitality sector enterprises. In some of the hotels and similar accommodations which place a high emphasis on transformation towards digitization, all processes have been transferred to the internet environment and the services provided have evolved accordingly. To give an example based on a customer experience from 2016, Omena Hotel, located in the center of Helsinki, appears as a place that has transferred the digitization to the hotel operations at a high rate. There is no reception exist in this hotel, and customers do their reservations as an online booking via the internet. A 5-digit door code is sent to guests via message or email, starting from the check-in time on the day of their stay and the entrance to the hotel room is done with the help of the code, without a need for a door key.

Today, it is seen that the quality of a product is determined not according to the physical characteristics, but the information provided by the product. Today, most of the hospitality industry customers prefer tours that they can customize and plan instead of prepared-tour packages (Sigala, 2005). In this way, regardless of the schedule of the prepared ones, guests can spend as much time as they want in a destination they prefer to stay longer or skip a tour if they are not interested in visiting. Customers also can book different types of accommodation services and use different means of transportation during their travels between the destinations, and thus, they can make the most suitable choices in the most affordable ways. The personalization of the products and services transferred to digital media is one of the most important

elements that increase the satisfaction level of customers and meet their expectations. They become the planner and the leader in terms of creating their own experience. Knowledge management systems, which ensure that the data related to customers is stored and processed correctly, and that the hotel staff are trained and experienced in managing customer relations and communication are the most important factors that affect the success of the services with the participation of customers, as they create and customize the services for themselves. For this reason, businesses in the hospitality industry have hired some employees to manage information and knowledge in the most accurate way (Coupey, 2005).

6.2.2.1.3. Digitization of Brand Image and Marketing

Increasing the business activities and services on the internet and social media channels and providing mobile applications have been a source of advantages for businesses in all sectors that make customers be more able to easily access and use the services. Companies that are fully aware of the current environment and has noticed the fact that the number of customers reaching to data and internet services are increasing day by day, they have sought ways to establish attachment with more customers and turn the opportunity into their favour. This, of course, can be done through marketing and promotions. Digital media and marketing channels provide businesses ways to reach more customers with lower costs. In particular, increasing the effectiveness of mobile applications in Hotel operations creates a cheaper marketing opportunity for businesses and greatly helps them reach possible future customers (Kwon, Bae and Blum, 2013). At the same time, with the understanding of the behaviour of customers on the internet and with the determination of what they are searching for, marketing activities have started to be more targeted and have become personalized according to customer needs and expectations.

In the past, while marketing activities have focused on new customer acquisition, this has been directed towards the retention of the customer at the present time (Sigala, 2005). For this reason, digital technologies aimed to create future relationships according to the past preferences of customers, deliver customized services to customers based on their previous choices, and distribute them following the most convenient ways and digital channels to reach the customer. Digital technologies also create an opportunity for the business to create a brand image in the eyes of the customer. A well-defined brand is an element that empowers the business in competition (McDonald and Payne, 2006). With the right marketing efforts, businesses can change this image in a better position and in this way, they can gain new customers in addition to their current ones.

Today, the concepts of "personalization" and "customization" have gained great importance for all businesses. The desire of customers to organize their stay according to their own wishes and expectations, and the concept of "customer experience"

becoming an important trend in the present day, companies have started taking big steps in this regard. In this context, it has emerged as a great and effective strategy for hotel businesses to collect information about customers such as name, gender, location, purchases, needs and interests, and show them personalized advertisements and promotions via digital channels. If privacy laws and clients' information sharing arrangements are not violated, it is possible for businesses to collect information about customer interests. This information gathering action can be collected with the help of cookies, filtering systems, data mining, chatting channels and activities on forums, virtual and e-mail sources and similar technologies (Sigala, 2005).

There are several effective digital marketing strategies and channels which the accommodating enterprises can use to acquire and retain customers (Laroyenne, n.d.):

- ✓ **Content Marketing:** Marketing with contents describes the usage of photographs, blogs, case studies, videos and similar graphical information to provide the customer with the knowledge and to draw attention to this product. It also aims to enable older customers to use the product again. It is a frequently used form of marketing that is successful in attracting the attention of the customer on the product by using content marketing visuals, especially in hotels where decorative and design is an important element.

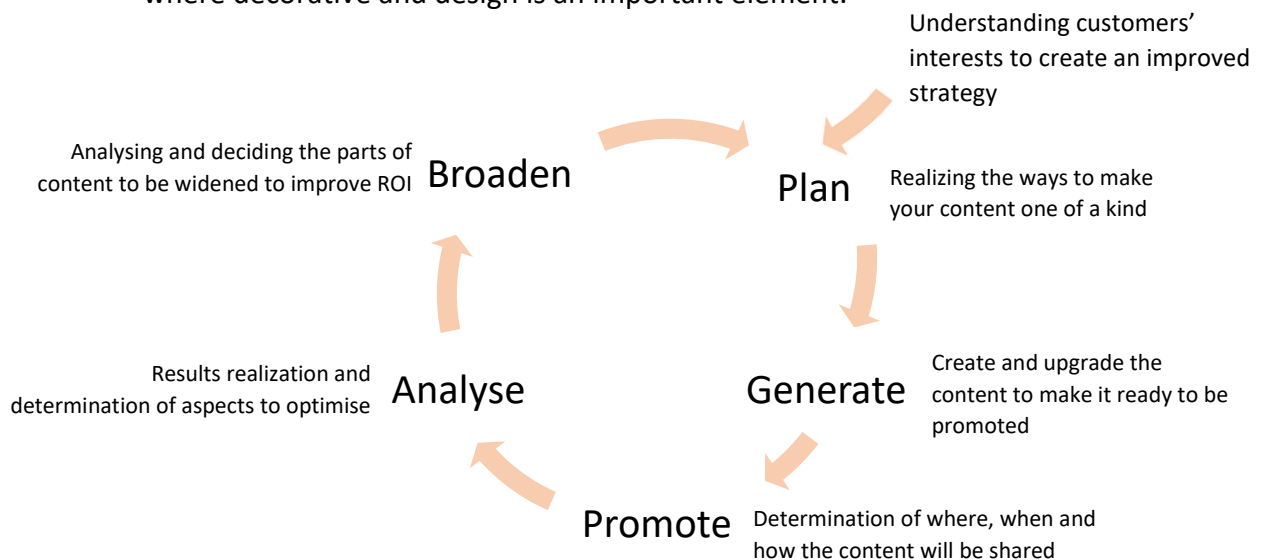


Figure 19: *Lifecycle of content marketing* (How to do content marketing? Marketing Strategy 2020-21, 2020)

- ✓ **Search Engine Optimization:** Search engine optimization is one of the most crucial areas of digital marketing and helps ensure a high degree of customer return. This strategy aims to move the business to the top of the results in the search engine by identifying key words related to the services provided by the business and using them under headings and main headings within the website.

It is very important to conduct a broad research about the customers and to identify the groups of words they frequently use in search engines in order to determine key words which will be beneficial to use for success. Considering that 3/4 of the internet traffic is caused by search engines, the high return potential of this strategy can be understood. For this reason, businesses frequently use this strategy in their marketing activities and many professionals who are trained in this field are needed and hired.

- ✓ **Search Engine Advertising:** Search engine optimization is a challenging and time-consuming strategy for businesses. It needs a lot of professionalism. For this reason, from time to time, enterprises prefer to use other ways that they can benefit from search engines faster. This led to the "search engine advertising" strategy. Through payments made to search engines such as Google, Yahoo and Bing, businesses can confront the customer as "paid search results" under the key words they set within search engines. Google AdWords and Google Ads are highly used for this strategy.

This strategy also requires research, such as Search Engine Optimization, to analyse customers and identify the most frequently used key words. Since there are many companies that want to advertise under the same key word, competition in the market is reflected in this field as well. For this reason, companies enter into a bidding war with others in order to be among the ones in the top of search engine results. It is very important for businesses to optimize the site and fulfil the requirements in order to be profitable in the competition.

- ✓ **Existence of Social Media Networks:** Today, another element that comes to mind when it comes to internet is social media networks. Users spend considerable time in social networks. Especially hospitality and travel are some industries that customers are generally among the ones who frequently publish posts on social media and prefer to share their experiences with their followers. Therefore, marketing implementations through social media create great opportunities for hotels and other accommodating enterprises. Companies can publish different campaigns in a media or text format and share them through networks such as Instagram, Twitter, Facebook, Snapchat, LinkedIn and Pinterest. In this way, they can reach to a big audience who is more likely to select the offered services.
- ✓ **Email Marketing:** Although it is one of the first methods of digital marketing, e-mail marketing is still used today. It is a frequently preferred method to keep in touch with existing customers, to inform them about new offers and to make them benefit from services proposed by the business. Customers of hotels are

kept updated by the new opportunities such as deals for the upcoming seasons and national holidays when customers often leave their hometown shared through emails such. It is highly important for businesses to create the content of emails sufficiently informative and interesting.

- ✓ **E-Reputation:** e-reputation is a digital marketing technique that aims to provide the brand image of a business in the best direction in the eyes of customers. It aims to increase the reputation of the business, especially among social media and similar sites where customer reviews and comments are frequently shared. Today, "research" has become a part of customer experience, especially in the areas related to hospitality and tourism, and it has gained a place as an aspect that significantly affects the preferences of the customers according to good or bad comments they see on the internet at the time of this process. It would not be surprising for businesses to turn to e-reputation applications to reverse this situation and prevent loss of customers and money.
- ✓ **User Experience:** Unlike other digital marketing techniques, user experience aims not to attract customers to the business website, but to make them stay within their website and make purchases. Research has shown that companies that can provide a good user experience within their websites are able to provide customer retention at a rate of 9/10, and that their customers are highly likely to visit the site again and purchase products. Businesses that want to provide a good user experience should first design their sites in a convenient and appropriate way from different devices. It should also be arranged to attract the attention of the customer and keep them on the site.

6.2.2.1.4. Digitization of Processes

Digitization is not only used as a tool among companies, it also means that the enterprise as a whole changes from traditional to digital. For this reason, the functioning of the works follows the innovations and changes brought by digitization. This brings along the digitization of the processes. Business processes cannot be strategically limited as they provide flow between many departments. It is especially crucial for all departments that are related to each other to work jointly and diffuse digitization completely into the company. For this reason, especially the authorized units in administrative departments should not be distracted from the company vision in the process of generating strategy-related decisions and selection of digital solutions (Heiskanen, 2010).

The first thing to understand during the digitization of business processes is to understand which processes are suitable for digitization and to select the ones that will add maximum value to the customer and bring competitive opportunities for enterprises. In this context, it is necessary to create a strategically high diffusion in order

to use Information and communication technologies which improve the value-added in the enterprise. For this reason, companies especially intensified the use of the internet within their departments and started to carry out the operations by using digital technologies. The use of web-based technologies within the company has also changed the activities. Acting with an optimization-oriented perspective, businesses have changed the channels of communication with their customers and suppliers and the way of coordinating their activities (Heiskanen, 2010). Customer-orientation and establishing a correct interaction with the customer is one of the aspects that companies attach great importance to in digitizing their business processes. When it comes to hotels, the areas of customer interaction are not limited to the time of stay at a hotel. At the same time, services before and after the stay such as information supply about services and room reservation, payments, feedback sharing channels and after-sales services are the activities that contain interaction with customers. The strategies and areas digital implementations that can be used in hotels during main and supporting processes are shown in the figure below:

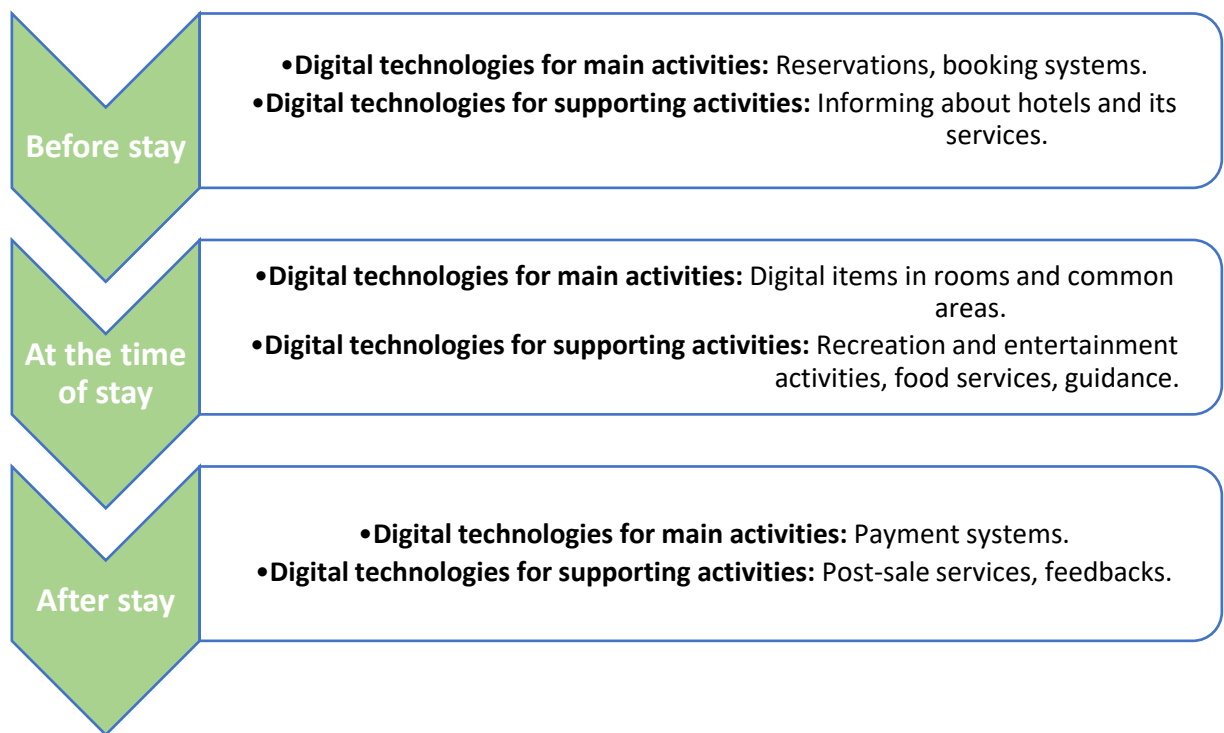


Figure 20: Activities include customer interaction and their digitization (Barua et al., 2004)

6.2.2.2. Digitization in Food Services

As in other industries and other areas within Horeca, digital applications have started to be used in high amounts in food service companies. Especially due to the changes in competition, new technological solutions and customer expectations, food and beverage service businesses have experienced great changes throughout the sector.

Digital solutions have become one of the most important elements in ensuring that they can keep up with these changes. However, the implementation of these solutions certainly poses challenges for businesses. Just like in the food processing industry, problems are seen for some organizational and employee related issues for food services enterprises. In particular, the reorganization as a result of these changes and the insufficient knowledge and education of employees about using new technologies have made it difficult to implement effective digitization inside these sectors (CSB-System AG, 2020). However, digitization is very important in terms of creating new products and services and ensuring continuous innovation, as stated by Khan and Turowski, businesses that cannot catch technological changes are doomed to act on these issues (Khan and Klaus, 2016).

Focusing on customers and their expectations has become a major factor in almost all service sectors. Businesses have begun to offer customized experiences in accordance with the wishes and behaviours of their customers. Individuality has started to be given importance not only in food service enterprises, but also in food and drink manufacturing companies, and the manufacturing operations has been planned and presented according to customer demands. Due to the importance of customer-orientation, it has become crucial to determine customer expectations and latest trends and take actions based on these in all areas related to hospitality. As well as operations focused on customers and products, marketing of these services has also been understood as an important factor. For this reason, determining and implementing the strategies to be used in terms of the high value added to the products and achieving them becomes important. Besides, the use of digital technologies that can provide the highest value has become a significant strategic tool (Beltramino, Limón-Ulloa, Ramos-Escobar and Valdez-Juárez, 2019). Nevertheless, it should not be forgotten that the tools used in digitized operations differ among businesses. For this reason, food service companies should understand their structures, activities and customers well and adapt appropriate technologies accordingly.

Data analysis has become an important factor in the transition to digitalization for businesses in the food and beverage industry. Thanks to the data analysis, the authorities that determine the strategies within the enterprises can be more aware of the values that can be created and the advantages of the company in the competition. However, this is a difficult field to implement. In particular, the multitude and confusion of data makes it difficult to manage. Therefore, the use of high technology and especially subjects such as artificial intelligence is a factor that makes it easier for businesses to make data analysis more effectively (McNamara, 2017).

6.2.2.2.1. Technology in Operations

Digitization is an important factor in the change and transformation of operations within businesses that provide food service. Technological tools are increasingly replacing

human power, and the need for people in the enterprise is decreasing day by day. Examples of these areas where technology is used are mobile payment services before arrival, interactive kiosks for self-ordering, digital menus, servant robots, self-payment counters and tables owning touch screen (Bhargava, 2016). These types of digital solutions help to increase the speed and efficiency of the business processes of enterprises, as well as to ensure the perfection of the operations for customers.

Almost all the clients have started using mobile channels to decide for their next meal and where they are going to eat it. For this reason, the use of smartphones has started to play a decisive role in operations related to food services. The widespread use and 24/7 availability of smartphones and tablets have created opportunities for food service businesses to increase customer growth, retention and satisfaction levels, as well as stronger communication and connection channels between the customer and the restaurant. Businesses have frequently started to include these tools in their operations. Today, these devices appear in restaurant operations in the following ways (Bhargava, 2016):

- Customers started to order meals before coming to the enterprise,
- The use of phones and tablets in the enterprise provides an advantage for customers to spend time during the product waiting period,
- With the integration of payment systems, speed and practicality have been created for customers,
- The devices can be used for informing and notifying customers that their products are prepared,
- Acceleration of operations through these devices has increased the number of guests that can be served overnight. At the same time, it reduced errors caused by the business and its employees,
- Customization and rapid satisfaction have been achieved, as well as the expectations of today's customers have been better met.

With digitization and following changes, different software started to be used inside restaurants to help restaurateurs about managing their operations in a more efficient way. The software systems offer great benefits not only for customers but also for restaurant owners. First of all, thanks to the online reservation systems, the data of incoming customers are automatically recorded in the system, so that businesses can perceive the occupancy level of the business according to the number of future customers. In this way, it is ensured that the operations are planned in advance and prepared accordingly, and occurrence of unexpected errors are avoided. At the same time, by recording customers and their choices within the system, the profile associated with that client's preferences can be created and used as an input information in personalized marketing efforts. In addition, customer behaviors are statistically

measured and applied to strategical decision-making processes to reach better customer-oriented approaches. In addition, thanks to automatic reservation systems, it is ensured that the number of empty tables is minimized, and the profit is maximized by understanding the suitability of the tables in each hour (The transformation of the restaurant in the digital age, 2018). Besides all those, the use of these software systems creates an environment where effective communication can be provided between restaurants and customers. In this way, it is possible to make instant chats with customers and contribute to marketing activities.

Mobile ordering and payment systems provided great convenience for both food service companies and their customers. Orders that were previously written on paper are recorded in tablets or mini digital devices and this information is automatically sent to the kitchen. In this way, problems arising from verbal communication between the waiter and cook are prevented, an automated relationship is created between the food lounge and the kitchen through the use of digital technologies, and time savings are achieved. With the introduction of technology into food service enterprises, payments have also started to be received by digital means. Operations are facilitated through different payment systems such as credit cards, apps, smart phones and other similar ways. By looking at statistics, the level of preference of new payment systems by customers and businesses can be understood (Gilbert, 2020):

- 62% of customers coming to food and beverage service companies prefer to use credit or debit cards for low-priced product payments.
- 88% of customers use cards in high-priced products or services in restaurants.
- 49% of restaurant managers think that mobile payment is a service that should definitely be used in restaurants.
- However, only 31% of the restaurants use systems that provide mobile payment services.

In addition to payment systems, small surveys that help enterprises understand the quality of customer experience and satisfaction levels have been located in digital tools, and they are generally put at the section where the counter is located so that the survey can be filled following the payment process (The transformation of the restaurant in the digital age, 2018). These surveys can also measure customers' satisfaction by mobile channels such as restaurant apps, emails and social media that create an environment for communication with customers.

The use of technology in food service businesses is not only seen as mobile, tablet and smartphone services or software, but also physical technologies can be positioned within businesses. Examples of these can be given as kiosk systems and robots. Robots which are developed using the artificial intelligence system can be used by restaurants.

These robots not only reduce the preparation and delivery times of meals, but also increase the daily production capacity of restaurants. Kiosks, which also use artificial intelligence systems, offer customers a digitized ordering system (Raut, 2017). This system provides the customer with the opportunity to create a detailed product in which the ingredients can be customized, as well as a reduction in waiting time.

Although not directly related to the services offered to customers, technological applications are also used by restaurants in the supply operations of products and ingredients. Raw material and ingredient purchasing have started to be managed with the use of "internet", and tracking systems helped managers to understand the instant location of the products during shipment. For restaurant owners, buying products via the Internet has led to huge time savings in terms of researching the most appropriate ones and purchasing them. In addition, all transaction information is recorded in the systems and that facilitates cost calculation and inventory controls. In general terms, the time saved in the activities implemented from the selection of the product to its delivery to enterprise, has started to be used for quality control of purchased products, searching for new and better alternatives, and reaching to more suitable suppliers (The transformation of the restaurant in the digital age, 2018). Using digital applications and integrating information into software provided many advantages to restaurants, from serving products to adjusting working hours and managing operations such as customer reservations, stocking and billing.

6.2.2.2.2. Food Delivery

When looking at the developing world and changing trends, "food delivery" services have experienced a big boom compared to other services in this field. In fact, the real disruptive change in restaurants is claimed not to be related to food, but to be related to their delivery (Raut, 2017). This service, which also existed in the past, was achieved before by reaching food enterprises via telephone, and now it is done through various applications. With just a few clicks, a quick and easy system has been created in which a meal is selected with the desired ingredient details and delivered to the specified address with the help of intermediary companies. These intermediaries, which are reached through applications, are not the firms that prepare the selected food, they are only responsible for its delivery to the address. This system is generally made with the service fees received over the payment and has also created employment like courier within the locations it operates. However, 70% of customers who want to reach the food delivery service prefer to make the order directly through the restaurant itself instead of paying service fees to third party intermediaries (Gilbert, 2020).

The increasing demand for food delivery or take-away systems has begun to create problems for restaurant businesses. The high level of this demand can also be shown based on different statistics (Gilbert, 2020):

- 3 out of 5 of the customers living in the United States prefer to eat home or take-out food from restaurants at least once a week.
- 63% of customers find it more logical to order their food home than going to a restaurant as a family.
- 38% of customers have become more inclined to order food to home compared to two years ago.
- 60% of restaurant owners state that food delivery has an improving effect on increasing the sales of a business.

This trend has been influenced by many factors and itself has created many changes within the industry and its enterprises. For example, in some restaurants, a separated kitchen or a separated section inside a kitchen has been created where only the products to be delivered are prepared, and a separated workforce is specifically used for this operation (The transformation of the restaurant in the digital age, 2018). Delivery and take-away food have become very popular due to the trend of "streaming" applications and the fact that people want to spend the time of a meal at home watching TV series or movies, instead of going to a restaurant. This is the reason why food is started being ordered from restaurants by food delivery systems, or people simply buy from a drive thru or as a take-away and bring it to their place (Bhargava, 2016). At the same time, it can be added that a fierce competition has started among the companies that provide food delivery (Carson, 2019).

6.2.2.2.3. Mobile Services for Customers

The fact that customer experience covers every operation related to a given service caused the activities not only during the service, but also the ones before and after the primary one being included in the whole experience. This situation also applies to food and beverage services. For this reason, it is important for the companies in this industry to offer their customers online services for reservation and communication, in addition to their presence on the internet or as mobile applications. In particular, some businesses both make reservations through apps and at the same time provide their customers with food and beverage options that they can customize before they come to the restaurant, and ensure that they have access to order and pay in advance. This has enabled customers to receive a flexible menu service. Addition to that, at the time of meal decision process, mobile services with artificial intelligence tools can make recommendations of food and dishes which customers are likely to enjoy by taking into account of their previous choices (Raut, 2017).

As mentioned in the previous parts, mobile applications have many different functions offered to restaurant clients. Among these functions, the most important ones can be explained according to the statistics (Gilbert, 2020):

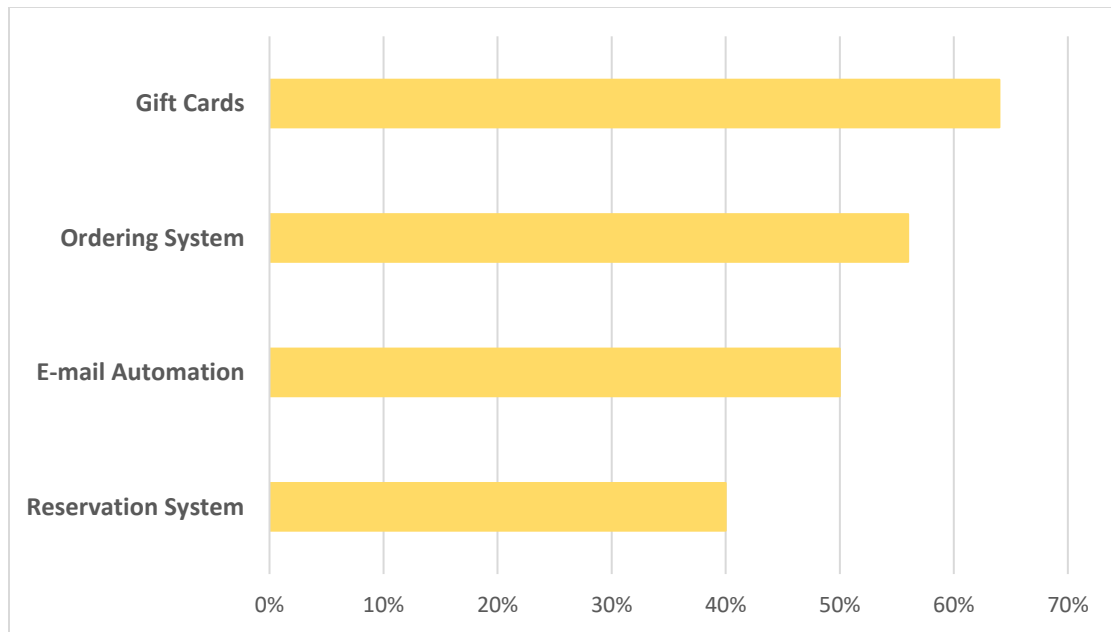


Figure 21: *Features Demanded from a Restaurant Application (Gilbert, 2020)*

When it comes to online services, communication channels that customers use instantly come to mind. Digital communication channels are preferred by restaurateurs because they create added value for food service businesses. For this reason, social media channels are often preferred because they provide easy and digitized communication. It is noticed in previous researches that social media use can be said to create a reassuring brand image in the eyes of the customer by providing a transparent and accountable communication creation to food service enterprises (Ilieş, 2018).

Customers can communicate with businesses with live chat services - if it is offered - at any time. This service allows customers to connect with a real employee. However, due to the fact that this service requires a lot of employees and it is not sufficient in times of high customer density, the emergence of a new technology that meets this need has been inevitable. This technology contains virtual assistants called "chatbot" (Raut, 2017). These assistants are basically software applications and they are designed to be used in the service industry. They aim to answer questions of customers and find solutions to their problems by imitating written or spoken human speech. Although the algorithm that creates the chatbots is complicated, their ability to respond to the street language increases according to the level of development. The simplest levels can only answer questions that concern a particular service and are prepared in accordance with grammar rules.

One of the mobile services provided to the customers is related to expressing their opinions after the service or by making choices based on the comments of others during the service selection. These expectations are aimed to be met with the emergence of

"review" sites and applications. The "digital footprints" of companies created by these reviews are an important factor affecting the success of restaurants in the industry (Ilieş, 2018). Especially in recent years, these sites play a very active role in the selection processes for customers. At the same time, customers who are satisfied or complain about food related enterprises' services are highly likely to share their experiences with other people. According to past studies, the factors that played the biggest impact in rating restaurants are as follows: food, service, pricing, restaurant location and ambience (Zhai et al., 2015). Companies which are aware that the comments in the review sites affect their brand images have started to pay particular attention to e-reputation applications to avoid losing customers. Also, in some enterprises, there is an existing system which reminds customers after the service by emails, texts or app notifications to write reviews or leave comments about their experience.

6.2.2.2.4. Technology for a Better Dining Experience

The popularity gained by the food being delivered to home, of course, creates negative effects for enterprises that do not provide delivery services. Managers who want to minimize these bad effects and regain their customers have paid particular attention to the in-restaurant ambience and the creation of an experience that customers cannot gain by eating at home. Using a remarkable signage to attract customers into the restaurant, the use of visual tools and qualities such as interior decoration are some aspects that give businesses an advantage. The ambience has a positive effect on customers and provides a good start to their experiences within the restaurant. The fact that social media networks, in which photographs and videos are shared, and that are being used actively by the customer, have become tools that give businesses an idea to use this subject for their own benefit. This can be a way that attracts customers to the company, and it can be ensured that a business is marketed as various posts shared by customers from the restaurant within social media accounts and reach customers' followers. For this reason, creative uses of items such as sound, image, light that provides a sensory experience have been several factors that pushed the new generation members to go to a restaurant. The new generation wants to have a vibrant and intimate experience accompanied by an interior with colourful visual arts where light systems are used extensively and alive enterprises containing loud music (Bhargava, 2016). Although the type of design being used inside a restaurant differs according to the decision of a manager, design-related activities have gained importance in almost every business. As a result, it can be noticed that companies which pay extra attention to this topic have agreements with various interior design offices. There are some other services that cater companies which offer a good visual experience and serve quality products should pay attention to meet customer expectations in the business. For example, Wi-Fi connectivity is a crucial factor for an effective customer experience (Raut, 2017). In addition to that, digital applications that facilitate services, increase efficiency, do not require a waiter and where customers can

pay with a smartphone or even split the invoice with the help of the information entered from mobile while continuing to sit at the table are among the frequently demanded services today (The transformation of the restaurant in the digital age, 2018).

6.2.2.2.5. Marketing Related Digital Solutions

It is very important for the restaurants to stay in contact with the consumer 24/7, to keep the customer's continuous interest in the enterprise with marketing related activities and to make it a part of his life. For this reason, digital channels, websites and social media tools are frequently used. The reason for using such networks in restaurants are the aim to reach more affordable advertising practices, the desire to gain an important place in the market and to increase product sales (Needles and Thompson, 2013). Remarkable contents shared in these networks are some of the tactics aimed at providing customer retention and gaining new customers. Especially, the awareness of competition and awareness of the importance of these channels by all enterprises cause food service companies to create content that will create competition and compete against each other through social media tools. These contents are some of the strategies that affect the image of the brand in the eyes of the customer. If the client chooses the place for dining taking into account of the last image shared by the restaurant on the social media account or the chef's food preparation video presentation, then these strategies can be considered successful (The transformation of the restaurant in the digital age, 2018).

Digital channels also offer businesses solutions to help them retain their previous customers. The enterprises, which can take advantage of the communication opportunities effectively, constantly inform its customers about new products and campaigns by using means such as email, text, notification, and kept the customer's interest alive and make them re-benefit from the service. In addition, the businesses that have a grasp of details such as date of birth, gender and occupation of customers have guaranteed to provide a personal service to the customers by making use of these information regarding the promotion of the person's characteristics. Loyalty programs are also an example of customer-oriented promotions. Especially for customers who frequently use the app of a business or constantly visit the website, special promotions and offers have started to be given and the loyalty of a customer has been awarded by the business.

6.2.2.2.6. Innovation of Menus

Menus are the most important tools that provide direct communication and marketing with customers for businesses that provide food and beverage services. The term “menu” has been described in many different ways in the past. To summarize, it can be explained as “a list of dishes, food and other products served by a food and beverage providing enterprise”. Menus have created as marketing items that guide customers and influence their choices to help identify the products that suits them the best (Kershaw,

2009). Since menus are lifeless products that directly tell about a restaurant, they can be described as "salesperson without sound" for restaurants (Pavesic, 2005).

The use of menus, which has a history of over 200 years, has been influenced by the transformation towards digital, which shows its effect in all areas, and has experienced a change towards today's trends. With this change, digital menus have started to take their places in restaurants. Research shows that digital menus facilitate access to different types of food and drink options compared to traditional paper menus, increase sales and reduce the need for human labour. In these ways, as a result it helps restaurants to increase profit (Wang, 2012).

No wonder, the interfaces of traditional and digital menus differ. Differentiated design and usability levels have played a key role in providing an effective customer experience for restaurants. For this reason, companies have sought ways to create an easy and effective design that will be available to the customer. To achieve this purpose, digital menus, which are being used frequently in restaurants and increasing in number, have enabled businesses to offer a customized and personalized service to their customers. Speaking through research, there are some customers in restaurants that require special attention on product selection and services, and they are the people who are more likely to have problems when it comes to menus. These customers can be summarized as people with health problems, requiring attention due to their age, or having problems in restaurants in terms of communication. These customers can be examined in four groups (Chy and Hickey, 2005):

- Customers with special needs in terms of allergens and ingredients.
- The elderly customer group whose body has reached a structure that makes the process of eating difficult, and which should avoid especially hard and heavy products,
- Customers with disability that will prevent them from understanding menus,
- International customers who have problems with understanding the language of a specific country or region.

The success of businesses is inevitable if they can create a menu service that focuses on general customers and customers with special needs and if they are able to provide a customer experience that can appeal to any customer group. At the same time, it should never be forgotten by food and beverage serving business owners that the menu is a tool that communicates directly with the customer. Therefore, clear use of symbols and words, making use of images and ensuring that the information in the menu is correct and upgraded are some of the aspects that contribute to the success of the business. Each item used in the menu contributes to creating an expectation about the product in customer's mind. The more consistent the product served with the customer's expectation, the greater the level of satisfaction customer gains from that restaurant and his/her probability of revisiting increases accordingly (Miller and Pavesic, 1996).

Today, a high focus is placed on issues related to digitization within restaurants. However, despite the high demand from restaurant owners and designers, there are not many studies focused on the evolution of menus. This situation makes it difficult for businesses to act at a proven maturity and causes them to try to determine the most appropriate by doing their own scale. However, it can be said that the digitization of menus will contribute much more to businesses in terms of marketing and protection of the brand compared to traditional (Wang, 2012). In order to create a good digital menu, it is very important for all managers to follow the graphic and interface design works closely.

7. Real-Life Studies for Digitization in Food Service Activities

In this part of the study, the aim is to understand the real-life adaptation of digitization in Horeca industry. To achieve that, both the customer side and developer side should be focused to realize both of their needs and the interactions in a proper way. For this reason, at the beginning of the study, a research project has done to a diverse group of people to clearly understand their behaviours inside food serving enterprises, restaurants, their expectations from restaurants regarding digitization and in what level they could implement digitization in their before, during and after restaurant activities.

From the research solutions and data received from each question, the outcomes are compared to the findings of the studies which were implemented into the previous parts of this thesis to see if the information gained from article researches in the previous parts is balanced with this real-life research on a 67 people community. The results of comparisons are attached to the end.

In the following, the case of an ex-I3P start-up Numenu, who has developed a digital solution for restaurant clients whose behaviours were investigated in the beginning part of this study is focused. Primarily, a study on this start-up's business model is attached to create a view about its operations and understand it with all aspects. Not only this start-up, but also the incubation centre, I3P, which Numenu was a member of is included to understand its services and to realize in what levels the centre helped a seed-stage, digital solutions focused start-up. For the information to be given correctly, an interview with the entrepreneur of Numenu, Andrea Grippi, is done and attached to the end of this study.

7.1. Understanding Customer Behaviours on Digitization in Restaurants while Traveling

To really understand the behaviours of customers in food service enterprises and usage of digital solutions while traveling, a survey was done to 67 people from different countries, ages, genders and occupations and results were obtained. The questions were prepared to understand the characteristics of the crowd, their language abilities, their frequency of traveling, their eating habits while traveling, the channels which are used for discovery of restaurants, and their preferences regarding digitization.

7.1.1. Questions

16 questions were asked to the research group to recognize different aspects. The first five questions is formed by personal questions written as a short text and they are aimed at learning and recognizing the personal information of the people involved in the research study, since the personality, lifestyle and identity are some factors that build a person's character and affect his / her behaviour and viewpoint in different situations. Those were customers':

- 1) Age,
- 2) Gender

- 3) Nationality,
- 4) Occupation,
- 5) The number of languages they are able to speak.

Starting from the sixth question, the research tried to learn different information of responder group related to travel and then continued with questions related to restaurants. The questions are constituted either as a multiple choice or as a selection base from 1 to 5. They were proceeded as follows:

- 6) How many countries did you visit in the previous year?
 - a. 0
 - b. 1-3
 - c. 4-6
 - d. 7+
- 7) I prefer to use different sources of information during my travels (range from 1 to 5).
- 8) I try to discover new restaurants when I go abroad (range from 1 to 5).
- 9) It takes a long time for me to decide for a restaurant I would like to go (range from 1 to 5).
- 10) I use applications and web services to find the restaurant I would like to go (range from 1 to 5).

On 11th question, the preferences in terms of restaurant discovery were tried to be understood and it helped us realize the ways, either digital or traditional, that are mostly used by the responder crowd. Also, some information regarding companies that give services in the process of discovery were noticed.

- 11) How do you find restaurants when you are traveling? (Checkboxes, more than one option can be selected.)
 - a. Blogs
 - b. Social Networks
 - c. Web Sites for Reviews
 - d. Map Services
 - e. Recommendations from Others
 - f. Discovery by Own

12th question was asked to recognise the frequency of facing with a trouble for responders while choosing the most suitable product in restaurants abroad.

- 12) I have problems in restaurants in terms of choosing the most appropriate products and services when I am in abroad (range from 1 to 5).

The 13th question was created to see the tendency of the research group of choosing digital/mobile ways to pay instead of traditional payment systems. It was an important question to understand how much people could diffuse the digitization into one of their

activities inside restaurants, as it was founded from abstracts and article researches in the previous part of this thesis that digital and mobile payment systems is a growing trend in Horeca industry.

13) I prefer to pay via digital/mobile payment channels when I go abroad (range from 1 to 5).

The last three questions were prepared to understand if digitization and digital solution were actually be seen as problem-solving methods in the operations of restaurants and while individuals are travelling abroad. The questions were also helpful to recognize the difference between people thinking that a solution is useful and people actually using an implementation as a solution.

14) Digitization would provide my expectations when I am abroad (range from 1 to 5).

15) A digital solution would be useful concerning problems in restaurants abroad (range from 1 to 5).

16) I would always like to use a digital solution in restaurants during my travels (range from 1 to 5).

7.1.2. Answers and Analysis

1) The age of responders

The information about ages have asked to responders to understand the characteristic and variety of crowd. As understood from the results, it is seen that the age groups of 67 responders who participated in this research study ranged between 20 and 69. When we look at these age groups, it is seen that the study is under the influence of each of the members of Baby Boomers, Generation Jones, Generation X, Millennials and Generation Z, therefore it is a wide-ranging analysis and has an audience of different age groups.

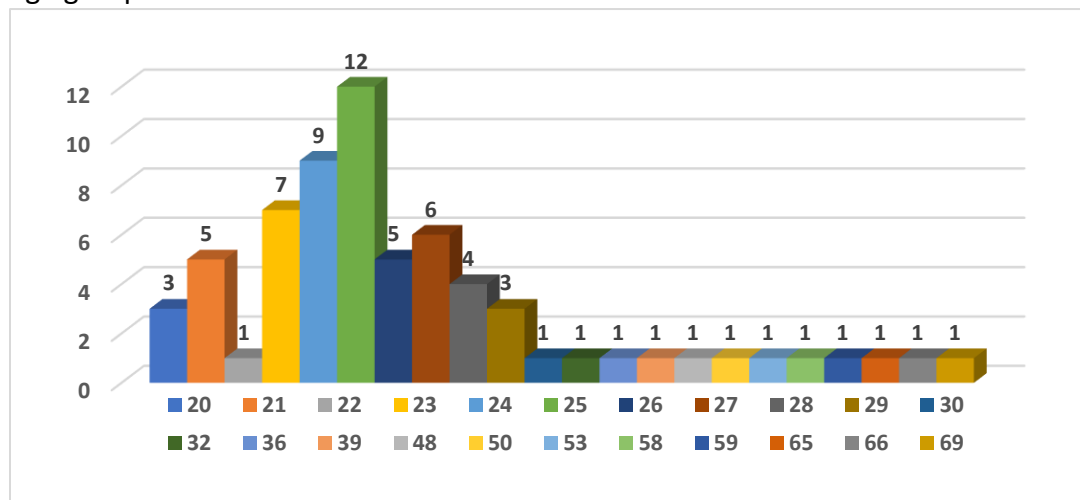


Figure 22: Distribution of the age of the responders

As can be seen from the data, there are 25 responders who were born between 1999 and 1995 and belonged to the Z generation group. The millennials group, which covers people born between 1977-1994, plays a dominant role in the research with 34 people. The x generation and baby boomers, which are at lower levels in terms of their effectiveness in the research, were included in the study with only 3 people. In this study, it was noticed that the generation with the least effect and the fewest number was generation jones with only 2 people.

2) Gender of Responders

Another aspect that is particularly noticeable in this study is gender. As the different genders' customer behaviours may vary in industries, the proximity of the responder genders in terms of numbers is important for the results of a study to create a level of accuracy that can be spoken in a general context. Therefore, care has been taken to include approximately number of responders from both genders.

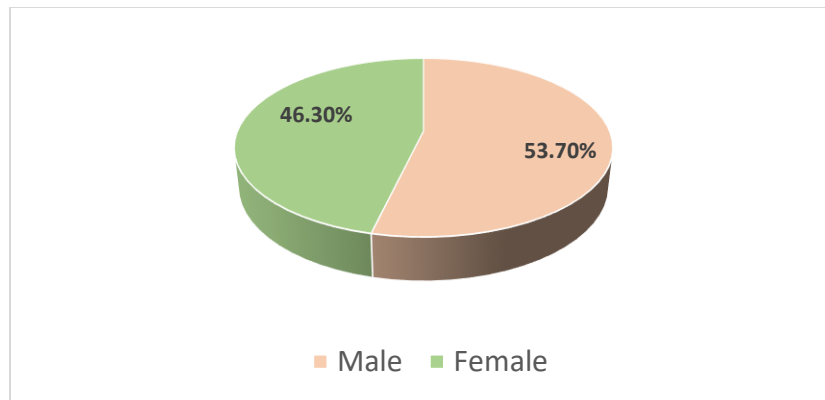


Figure 23: *Gender of the responders*

36 out of 67 responders, which is equal to 53.7% are formed by males, while the remaining 46.3%, 31 people, are occupied by females.

3) Nationalities of Responders

With the aim of reaching conclusions that may apply to the sake of diversity and behaviours worldwide, it is of great importance that this research study be implemented on a diverse crowd as nationality. It is especially significant that this service, which provides opportunities in restaurants for customers with different languages and for owners to reach and increased number of tourists and international guests, to shape itself according to the attitudes and behaviours of people.

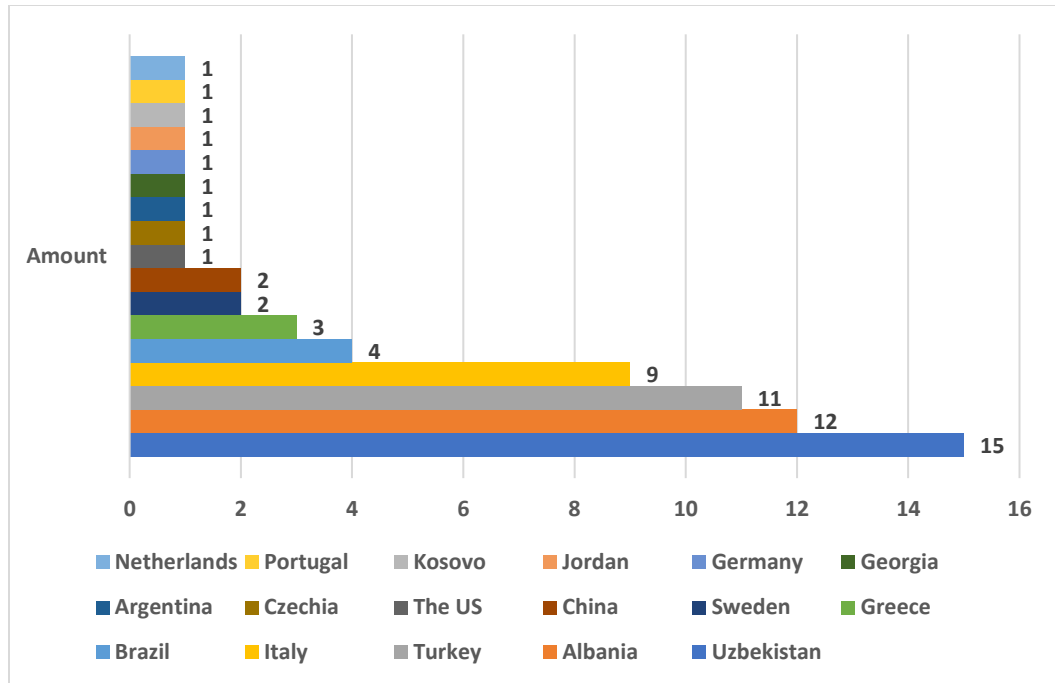


Figure 24: *Nationalities of the responders*

The results show that, this research study has been done to 67 people from 17 different countries in 4 different continents: 31 are European citizens, 30 are Asian citizens, 5 are South American and 1 are North American citizens. The main idea is to understand an equal and diverse view of customers from different countries with different cultural backgrounds to clearly see different behaviours digitization while receiving food service outside of their own country.

4) Occupation of Responders

Digital product users are generally younger generations, and their adaptation to new digital services is high. In addition, with the increasing popularity and agreements between different countries, younger generations highly participate in educational exchange programs and they are more likely to live outside their own countries for a long time. Despite this, the fact that food service enterprises are in an industry that appeals to all age groups and offers different alternatives according to each income level indicates that it is important in terms of obtaining accurate data that customers with different professions take part in the research study.

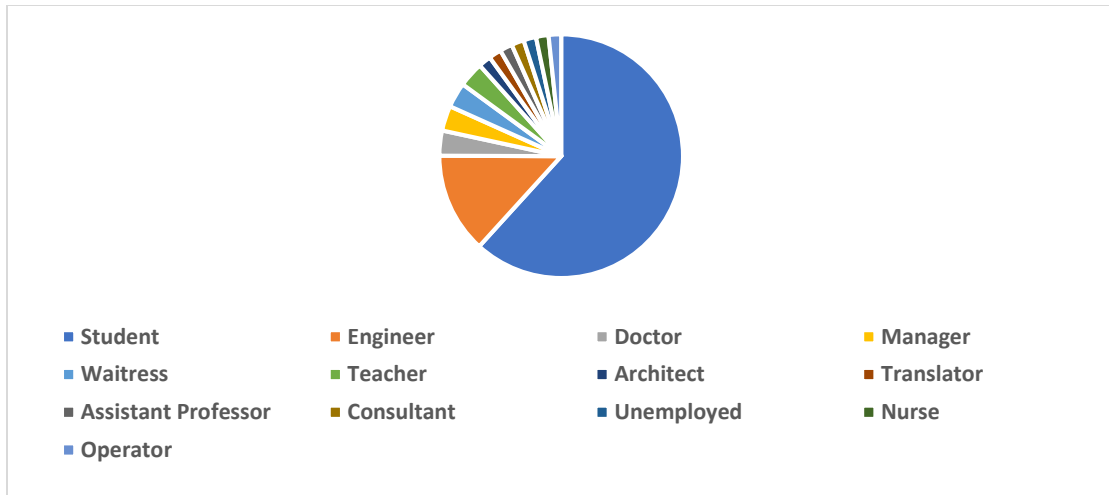


Figure 25: *Occupations of the responders*

As most of the responders are in their 20s, it is not surprising that the most common occupation group is "student" with a rate of 61.66%. Following that, "engineering" is noticed as the second place with a share of 13.3%. Apart from those two, although all other occupational groups represent very different areas, their percentage in the study stays below 4%.

5) Number of Languages to Speak

As we have noticed from previous parts of this study, the fact that travel is shifting abroad with increasing trends and that new transportation channels are available at affordable prices have enabled people to experience different services in different countries. In this context, one of the most common problems abroad is communication and, as can be understood from the customer expectations examined previously, flexibility in the language is an important factor affecting the preference of businesses. The language knowledge of responders was also questioned in this research because people who speak more languages is less likely to experience language problems in their international travels and their preferences become less focused on this issue.

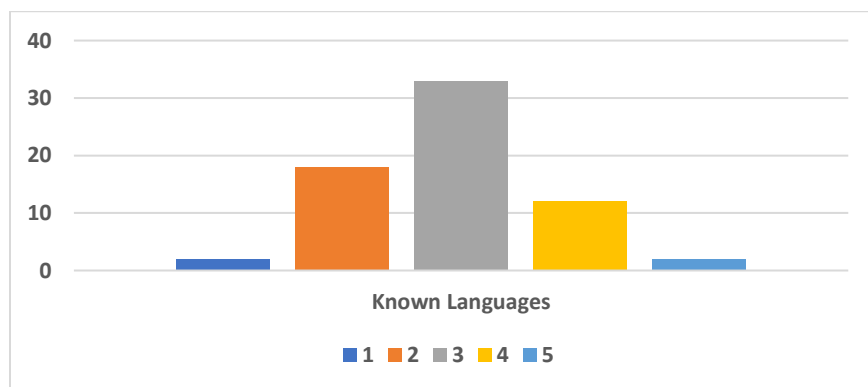


Figure 26: *Number of languages known by responders*

This part of the research actually provides interesting information. The vast majority of the responders are those who know different languages besides their own language and another second language. As it is seen in this step of the study, 33 of 67 people who participated in this study know three foreign languages and constitute almost half of the community with 49.3%. It can be added that globalization, education systems focusing on internationalization and interest in different languages are some of the reasons of this situation.

6) Number of Countries Visited in the Previous Year

Understanding the number of countries people travel annually is an important element for this research. Of course, people traveling to different countries often will be more likely to use digital applications created for the usage and giving solutions while people are outside of their home countries, and their preferences in abroad will create an important input for this study.

Number of Countries	Number of Responders	Percentage
0	4	6%
1-3	40	59.6%
4-6	21	31.4%
7+	2	3%

Table 1: *Countries visited by the responders last year*

Looking at the results, almost all of the responders travelled in the past year. Only 4 of 67 people, which means 6%, never visited other countries. Customers who have travelled to 4 or more countries have a considerable proportion in the survey, even if the highest amount of travel has been reached with a 59.6 percent option between 1-3 countries and the frequency of travel to other countries is not that much high considering the majority. But it can be added that these rates reveal the fact that travel is an activity preferred by almost everyone at least once a year and the importance of reaching customer expectations related to travel.

7) Tendency of Using Various Resources while Travelling

At this stage of the research, it was asked to understand whether the people benefit from different information resources to reach appropriate services during their travel period. For this reason, the research group was asked to understand the tendency to research various sources that provide information about the destination they are visiting and if they are likely to use different information sources to find the best services during their visits. In this way, an opinion can also be obtained about the frequency of people applying to digital channels that bring information about different aspects of traveling.

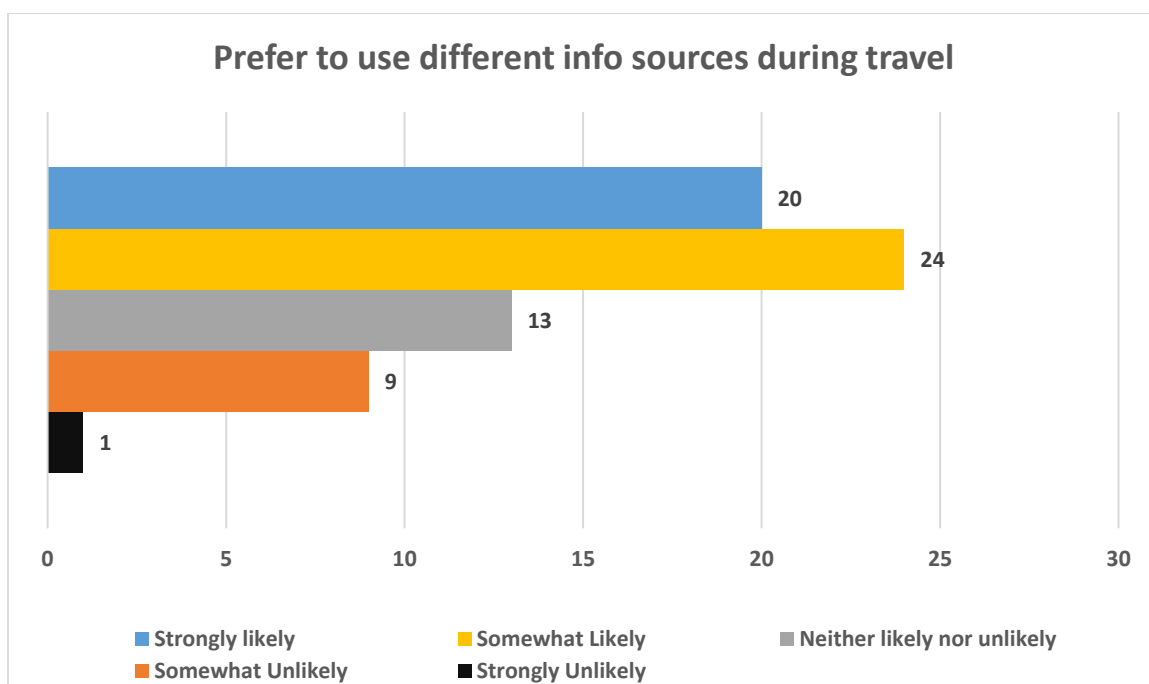


Figure 27: *Tendency to use different resources abroad*

According to the results, people are highly inclined to use different sources of information. 44 of the 67 responders, which is 65.7% of the whole group, show a high degree of tendency to benefit from different resources. While 19.4% of the group remained at a medium level, it is seen that the remaining 14.9% of the group rarely or almost never prefer to use different sources.

8) Interest on Discovering a New Restaurant Abroad

In this part of the research, it is aimed to understand the perspectives of people to discover restaurants during travel. Since the people who love to explore and prefer to get services from enterprises they have never been in during their travels, it may increase the possibility of benefiting from digital applications at the time of the restaurant discovery as they show high interest on using different information sources during traveling which is seen from the responds on the last question. For this reason, it is preferred to ask the responders about this problem and to take their perspectives.

Answers	Number of Responders	Percentage
Extremely Likely	29	43.3%
Somewhat Likely	17	25.4%
Neither Likely nor Unlikely	11	16.4%
Somewhat Unlikely	8	11.9%
Strongly Unlikely	2	3%

Table 2: *Responders' interest on restaurant discovery while travelling*

According to the data gained in response to the question "I try to discover new restaurants when I go abroad" directed to the interested responder group, it is seen that more than 40% of the people are in the group that is most inclined to discover new restaurants. In total, 68.7% can be said to be inclined over moderate to discover new places, which shows that the applications and websites that will assist in discovery have high preferability potential. It is seen that only 10 out of 67 people prefer to discover new restaurants at low rates during their travels abroad.

9) Discovering a Restaurant - Time Spent for Decision Making Process

The introduction of digital applications into our lives has enabled it to be brought together with the most suitable food service enterprises in line with the wishes and expectations of individuals. Applications developed especially for use in restaurant discovery phase and websites that have started to serve have become important information sources for customers who want to go to a restaurant. Whether or not to use these resources depends on customers and the time spent on the decision-making process depends on the character of individuals and how careful they are in the discovery process. For this reason, in this research study, the time that customers devote to making decisions was first examined in this part.

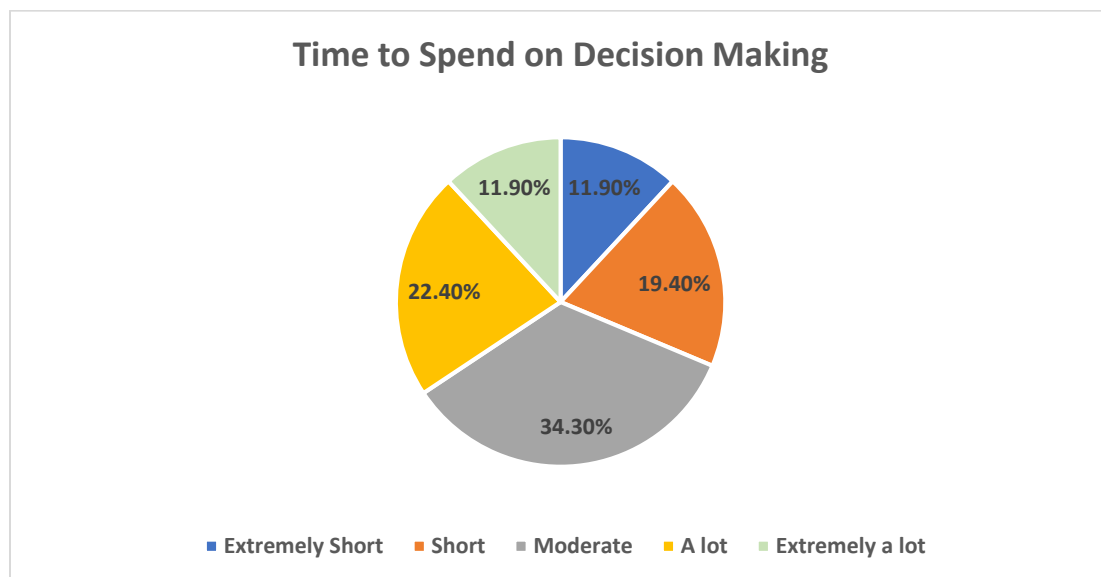


Figure 28: *Time spending for restaurant decision abroad*

Looking at the results of this stage, we can say that the distribution occurred in a parabolic way, with almost the left and right sides being equal. Individuals who spend "moderate" time constitute the top of the parabola with a share of 34.3%. Since both the least and the most time-consuming groups represented an 8-person responder group, they were equally distributed in this study. It can be said that the remaining

crowd is mostly included in the group of people who spend "a lot" time with only a difference of 3%.

10) Discovering a Restaurant – Tendency to Use Applications and Web Portals

The usage of resources while travelling, the desire to discover a new restaurant and the time devoted to this discovery process has been revealed in previous questions. At this point in the research study, applications and web services utilization levels were asked in the restaurant discovery process, and the frequency of using the digitization during the restaurant discovery was tried to be understood by comparing with the previous two questions.

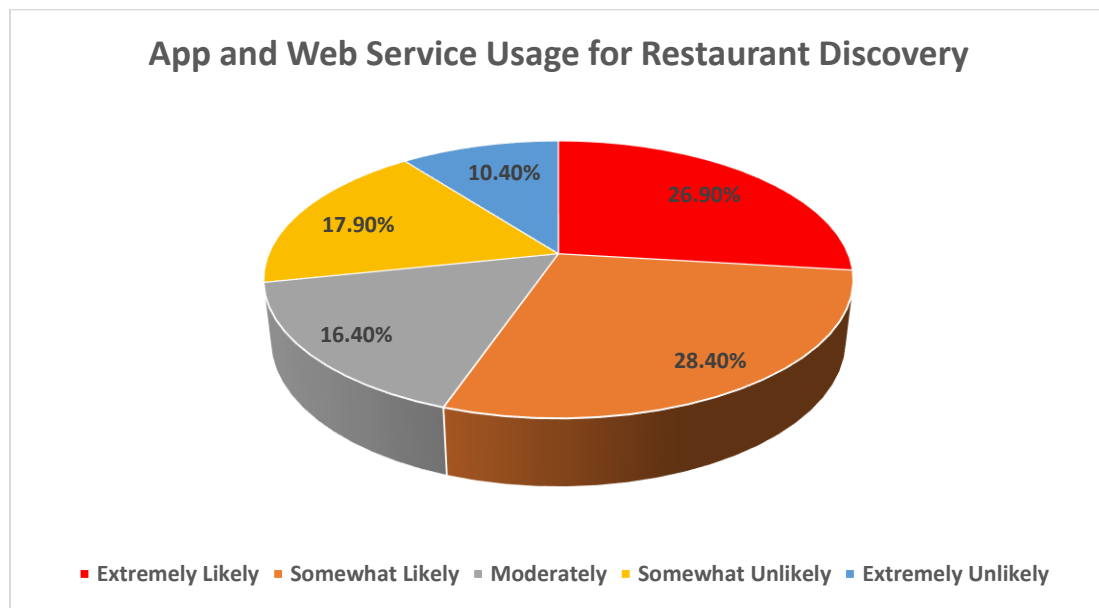


Figure 29: *Responders' interest on using digital tools for restaurant discovery*

94% of the participant group went abroad at least once last year. 44 of the people in this group, which is 65.67%, make use of different resources above the middle level in order to obtain information throughout their travels. Participants are also highly engaged in exploring restaurants while abroad, and generally spend medium to high time on the discovery process. Despite these historical data collected, an interesting information about the responder group was received in line with the question asked now. The level of utilizing apps and web services to discover restaurants draws a similar but lower-trend graph compared to other questions in research. While the people above the moderate level constitute 55.3% of the total group, the rate of people using applications and web services at a level below the middle is around 30%. The reason for this can be said as there are groups of people over the age of 42, such as Baby Boomers and Generation Jones, and the interest of these groups in web services and applications is less than the other younger ones.

11) Discovering a Restaurant - Ways to Find Restaurants while Traveling

This question of the research aims to understand the level of using the digital applications during the discovery phase of food service enterprises by the focused customer group. At this point, it is possible to see which way different sources such as digital, internet oriented or traditional channels, are preferred by more people than others, and which way the customer is trying to understand the most appropriate service. With the help of the result, it can be understood that which of the existing companies and start-ups are more likely to be used by customers while the discovery of restaurant process abroad.

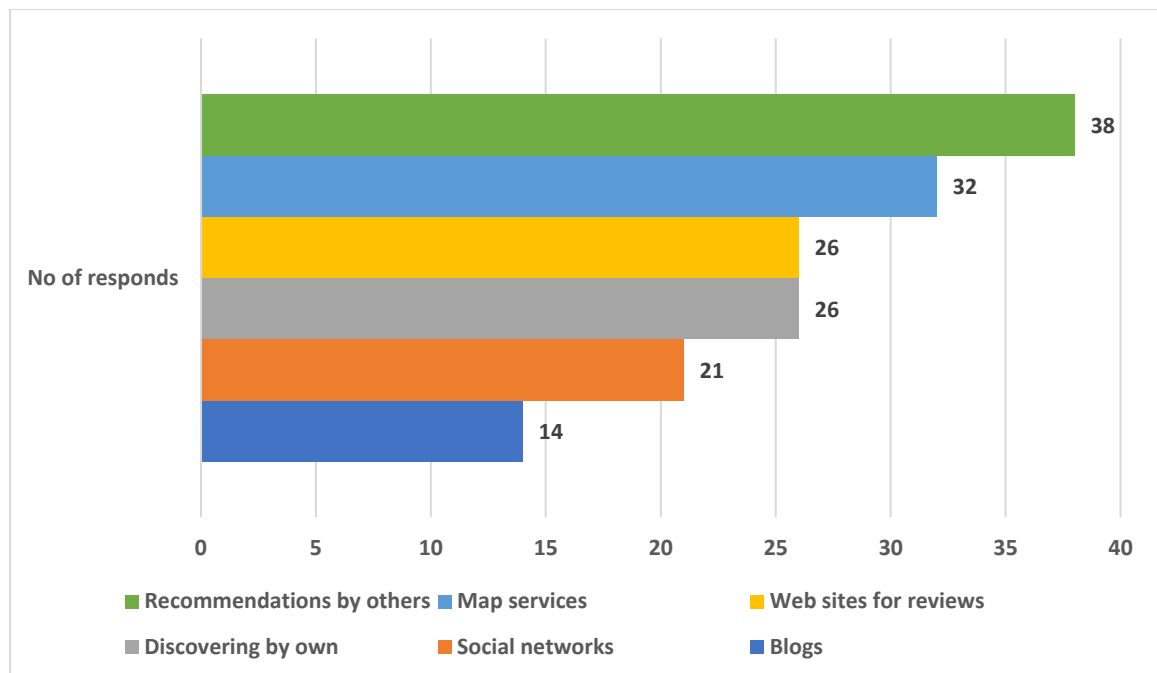


Figure 30: Preferred digital ways for restaurants discovery while travelling

At this part of the research, it is seen that customers mostly act based on the recommendations coming from the environment. It can be inferred that the reason for this is that they see communicating with people they know and trust in their taste as a way that gives them more suitable results than the external elements on digital platforms. Although it can be said that no other option than recommendations can reach half the percentage of the crowd, map services which are preferred to be used by 47.8% constitute an important criterion for customers decision process. At this point, we can conclude that the effect of the location also comes into play and almost half of the responder groups are into using applications like "Google Maps".

Web services with reviews are the most preferred after Maps services. Examples are portals such as Trip Advisor, Yelp, Foursquare, Zomato. "Google" has gone one step further in its services and has not only included restaurant locations in its maps

application, but has also included user reviews and ratings related to them. For this reason, it can be said that Google is a highly preferred company in the restaurant discovery process as its product “Google Maps” can fit both map services and review site products.

Despite the abundance of digital platforms that aim to facilitate the restaurant search process and bring people together with appropriate services, self-discovery covers the 3rd place with review websites and is preferred by almost 40 percent of the crowd examined. The result shows that there are still some people who like to behave within the framework of their request from time to time, although most of the people in general do not take risks about self-discovery and more likely to be interested in other people's views and experiences.

Although social media channels such as Instagram, Facebook, Twitter, Pinterest are highly preferred by both business and customers today, they remained under recommendations, map services and review websites in terms of restaurant discovery processes during travel. This situation shows that social media channels are not the most preferred and most suitable networks in the eyes of the responder group, who would like to reach informativeness at a “medium-level” preferred time limits reserved for discovery and who would like to gain high level of variable and clear information that help them discover restaurants with all aspects to choose the most suitable one which meets expectations.

As a final result of this study, the least preferred service in the search process of the food service establishment is blogs with approximately 20%. In fact, although there are many different blogs that specifically refer to experiences such as travel and food and provide detailed information, interestingly blogs have the lowest level of power to be used in the restaurant discovery process abroad compared to others.

12) Processes at the time of Restaurant Services – Choosing Products / Services

Customers experience difficulties not only in terms of restaurant discovery, but also in restaurant activities and at the time of choosing products and services in foreign country visits. As seen in past paper and abstract researches that providing expectations play a significant role for Horeca industry enterprises to be the selected by customers, but it is also highly important not to create any problems regarding customers' experience. Since there are multiple aspects of receiving services in a restaurant abroad that may make customers face some troubles in terms of language and cultural differences, communication with employees and different implementations on operations which customers may experience hard times to keep up with. In order to understand the accuracy of this information in real life, the researched community was asked if they have had any problems inside restaurants while they were abroad. It is important for this study to understand whether customers with different characters, different skills

and age groups are facing such problems at any time. Because not having a problem in terms of providing the most appropriate service will not only increase the satisfaction level and the amount of meeting the expectations of the customer, but also increase the preference rate of the restaurant owners and their profits accordingly.

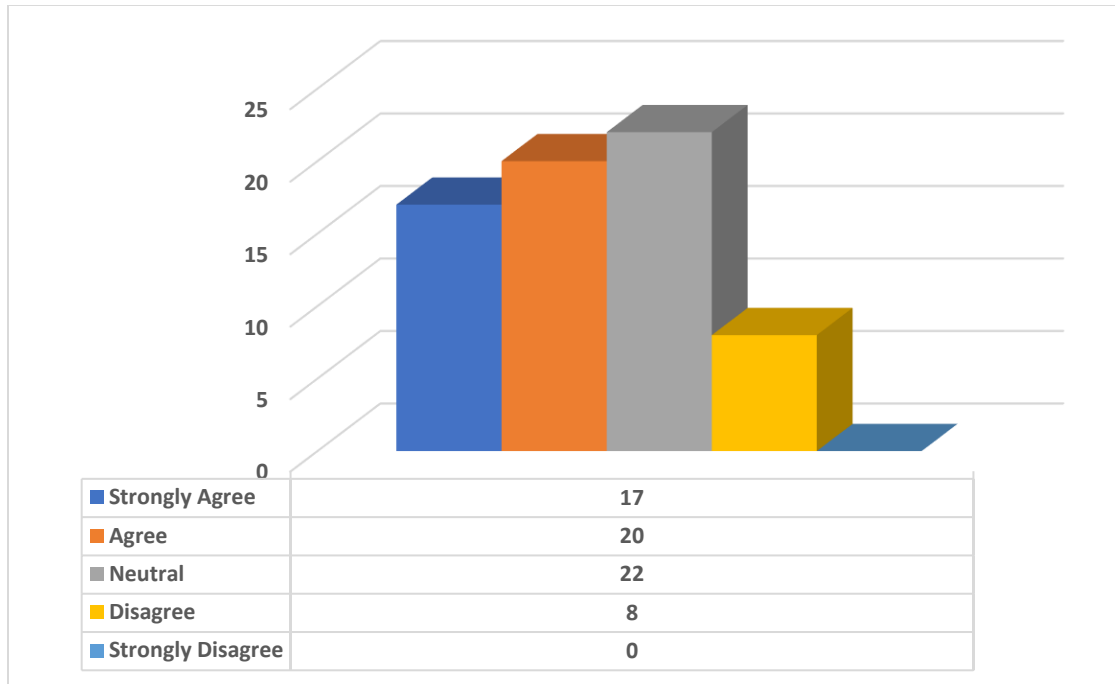


Figure 31: *Responders' thought about problem existence for selection in restaurants abroad*

As it is understood from the research results on the question "I have problems in restaurants in terms of choosing the most appropriate products and services when I am in abroad. ", there is no one who has been in a restaurant abroad and has had no problems with choosing the best product for their taste. It is understood that this shows how likely the customers have issues in restaurants abroad and that the travellers in general have had problems at least once in their restaurant visits. Although most of them are gathered on "neutral", 88 percent of responders in total agree in the existence of problems at middle and upper levels as they have experienced in their restaurant experience while travelling. Only 8 people, which represents 12 percent of the research group, disagree with this issue and state that they have had very rare difficulties in choosing the products and services during their stay abroad. Considering that the total number of people who speak 4 and 5 languages in the group is 14 and considering that 33 of 67 people are capable of 3 languages, it is noticed that knowing high number of languages cannot provide 100% understanding in restaurant processes and can not be enough for customers to meet with a product which can supply their expectations. Therefore, it can be said that an external solution should be integrated restaurants solve the problems and create a better experience for their international customers.

13) Processes at the time of Restaurant Services – Ways of Payments

Another form of digitization that can be used in restaurants is payment systems. As a result of different studies and researches, it has been noticed that digital and mobile payment systems are frequently used by companies in the Horeca industry, and this type of payment systems has emerged as a trend. In order to understand how often these payment systems are used in real life and in the researched group, this question has been asked and tried to be understood to what extent the digital / mobile payment system trends are being used by the research group in restaurants when they are abroad.

Answers	Number of Responds	Percentages
Strongly Likely	9	13.4%
Somewhat Likely	20	29.9%
Neither Likely nor Unlikely	14	20.9%
Somewhat Unlikely	10	14.9%
Strongly Unlikely	14	20.9%
Total:	67	100%

Table 3: *Tendency of the responders about using digital/mobile payments*

Although it is stated that digitization applications are an increasing trend in payment systems, the number of people in the research group who never use digital / mobile payment systems is also considerably high with 20.9%. Despite the fact that above-average use has resulted in 5 people more than below-average use, 29 people versus 24 people, which means 7.5 higher in percentages, it can be said that food services still need a while in terms of payment systems leaving cash and switching to completely new digital applications worldwide, and to make this idea become fully perceived and accepted by customers.

14) The Degree to Which Digitization can Meet Customer Expectations while Traveling

As customer-orientation is the main aspect to focus on in this thesis study, it was important to see whether customers believe that digitization can solve their problems and provide their expectations while they are abroad. Even though some information has gained from the intense research through abstracts and other studies in the previous parts of the study, it was significant to take the opinions of the diverse group attended to this research including individuals from different countries, from different generations and with different occupations to show some numbers and percentages gained from real life.

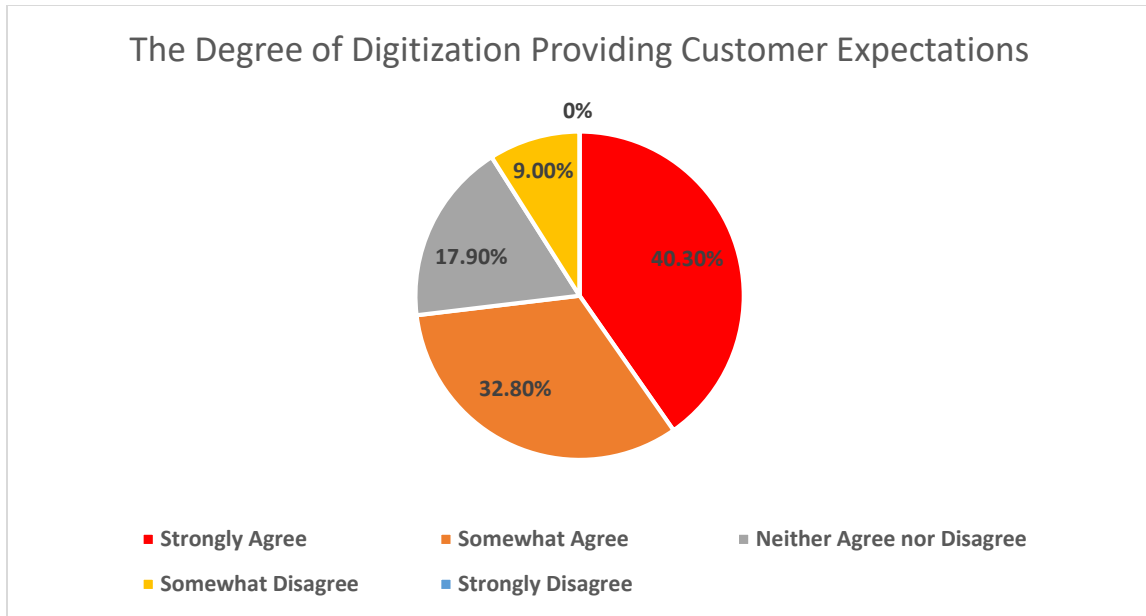


Figure 32: *Though about digitization providing customer expectations abroad*

As can be seen from this result of the research, all 67 responders think that digitization will meet their expectations at some point. Looking at the pie chart, in the context of meeting expectations, people's belief in digitization is increasing from disagree to agree and reaches a peak with a 40.3% share on strongly agree. This shows that customers will prefer to benefit from digital applications during their visits abroad and provides an understanding of their belief in achieving a better customer experience through the use of digital applications. In this context, it is understood that the results of this research coincide with the information obtained in the previous parts of the thesis study.

15) Usefulness of a Digital Solution to Solve Problems in Restaurants Abroad

In this part, a question has asked to the research group if a digital solution provided would be useful concerning their problems in restaurants while they are abroad. As it was seen from a previous question that all the responders have experienced a problem at least once in a food service enterprise abroad, about choosing the most suitable product and service for them. From the result of the previous research question, 25.4 percent of the people encountered these problems very frequently. In this step of the research, it is tried to be understood whether the solution of these problems can be solved with a result based on digitization according to the perspectives of the responders.

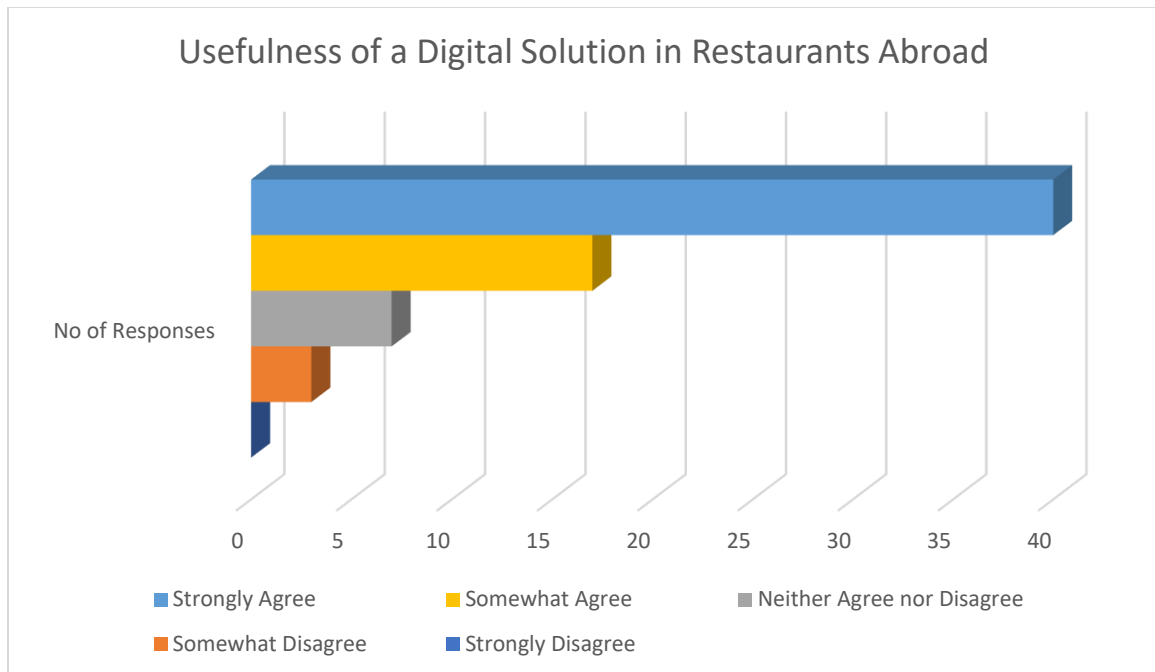


Figure 33: *Digital solutions' usefulness for responders in restaurants while travelling*

The answers of the research participants in this part show that more than half of the participants, 40 of the 67 people, think that a digital solution can definitely solve the problems that customers experience in the restaurant. Compared with the data obtained from the previous question, it is understood that the problem that most of the customers experience in the restaurant can be eliminated with digital solutions during their travels abroad, while lesser majority of these people think that digitization will meet their expectations in all areas related to travel. According to these two results, it shows that the use of digitization in the Horeca industry's food services area will have a greater impact on solving customers' expectations and problems than the overall travel and tourism industry.

16) Tendency to Use Digital Solutions in Restaurants During Travelling

The previous question of this research was included to understand the point of view of customers towards a digital solution and their belief in the advantages of their use in restaurants. However, people's belief in the effectiveness of digital solutions does not mean that they would definitely prefer to take advantage of these applications: As we saw it in the digital / mobile payment systems being an effective method, however 40% of responders said that they rarely or not at all use these methods. Data of the tendency of using a digital application focused on solving the problems experienced by customers in restaurants abroad are given below.

Answers	Number of Responders	Percentages
Strongly Agree	28	41.8%
Somewhat Agree	23	34.3%
Neither Agree nor Disagree	11	16.4%
Somewhat Disagree	5	7.5%
Strongly Disagree	0	0%

Table 4: *Tendency of responders to use digital solutions in restaurants abroad*

Although based on the previous results, 59.7% of the community thinks that the use of digital applications in restaurants for the solution of problems would absolutely be useful, the data received at this part about the tendency of digital solutions to be used in real life shows that the percentage of responders saying "I strongly agree" is only 41.8%. Both of the data is quite similar and close to each other in terms of shape and percentages, but customers have not yet fully accepted the digital applications and transfer them into their real life.

7.1.3. Findings

This study was used to test and understand the information found in previous parties by examining different abstracts. For this, the behaviour of individuals in restaurants in different countries has been tested and their perspectives on digitization have been tried to be understood. To summarize, important points are:

- Regardless of age group, nationality, occupation, the vast majority of people travel to a different country at least once a year. This confirms the high demand and increasing desire to travel around the world, mentioned in previous parties, through previous reviews on the travel and tourism industry.
- Travel and tourism industry customers need different information channels that they can use during their travels. This shows how important the companies serving and providing information to this industry are in the eyes of customers. The results also show that their customers tend to make use of not only a single one of them, but several different sources during their travels. For this reason, it confirms the fact that travel and tourism is an industry that creates different types of opportunities for businesses, as mentioned in the previous parts, due to the high use and the high degree of information requirements of customers.
- Although there are groups of people with different characteristics, the general majority of all these customers tend to gain different experiences specific to the places they visit and, accordingly, to discover new places. This conclusion drawn from research confirms that "Discovery and Ease of Reaching to Quality" and "Personalized Local Experience" mentioned in the previous sections of the thesis work are some of the topics customers of Horeca Industry expect to receive.

- Although customers tend to utilize different resources to reach businesses that will best meet their needs and increase their satisfaction levels, and tend to do research on behalf of discovery, the time they prefer to spend on this process remains medium-high for the majority of individuals. Therefore, it was noticed that "ease of reaching to quality" was reached again at this point as a customer expectation.
- While the use of websites and apps is an important way to use in the restaurant discovery process, it has not been fully accepted by 30 percent of responders and has not been used to with a high degree in restaurant finding operations. As research participants included people from different generations and their responses to the questionnaire differed, it is confirmed that digitization and internet services are not equally integrated into different age groups, and their use is not particularly preferred by older age groups, parallel with the mentioned information in the previous parts.
- Interestingly, despite the fact that there are many different applications and websites that provide information about businesses and help with the discovery process in the digital environment, it seems that customers still attach the highest importance to the recommendations of people around them. This shows that digitization and easier access of customers to different information still do not have a dominant effect on all traditional ways while discovery. On the other hand, maps and reviews can be shown as services that are frequently used by customers, confirming the importance of digitization applications. Social networks and blogs, on the other hand, remained inferior to other channels of access to information in this process.
- Regardless of the known language amount, age, occupation or nationality, all customers who have been examined have problems in making product and service decisions at least once in their lives. This creates a very important information input for businesses within the Horeca industry, creating customer focus and reducing problems and meeting expectations. This situation, which is independent of the knowledge level of individuals and encountered while providing services to international customers, especially in the enterprises, has revealed the importance of creating an external solution for businesses and meeting the expectations with the support of different applications. This proves to us that Horeca sector businesses need to apply digital applications to provide the "flexibility and easy-to-understand services" expectation which was focused and detailed in the previous parts of this thesis study, especially for their foreign customers.

- Research on payment systems leads us to two different conclusions. Firstly, it appears that the use of digitized payment systems as one of the technological innovations in food service operations is preferred by the majority of customers at medium and high levels, confirming the popularity of the "mobile and digital payments" trend examined in the past sections. Despite this, there is still a 35% within the customer group examined that does not prefer digital and mobile payment systems. This leads us to a result that shows that there are still many customers who have not been able to break away from being traditional in terms of payment systems and these systems haven't been fully integrated into the community yet.
- The belief in digitization in terms of meeting the expectations of the customers during their travels is quite high, and no one in the analysed group has said that practices based on digitization will not work in reaching the expectations. This fact shows that the digitization applications to be used in the travel and tourism services that are in direct connection with Horeca are very important for customers to create high satisfactions levels, and the focused real-life research proves that the theories put forward in terms of the importance of digitization in the first part of this thesis study are actually correct.
- In line with the issues mentioned in the previous sections of the thesis study, it has been confirmed based on the results of this research that digitalization and the applications created in this way create advantages for customers in terms of solving their problems experienced in food service enterprises outside their own countries.
- It can be said from this research study that digital applications are facing an increasing trend and considered by customers as a useful way to solve their problems and meet their expectations. However, keeping up with such solutions and diffusing them as a new style of life is difficult for some individuals, especially the ones who are members of older generations and still trying to have benefits from traditional approaches in food service enterprises.

7.2. A Study About an ex-I3P Startup Providing Digital Food Services: Numenu

The ex-I3P start-up called "Numenu" and its operations have been examined in order to effectively see the customer problems, needs, the place of digitization and its use in the Horeca industry, which have been applied and understood in the previous parts of this thesis study. It is important to understand the start-up's business model, products and operations before moving to interview which is done to recognize the own view of entrepreneur about the services, and the relations and activities within I3P.

First of all, I3P should be the focus to understand what it is with details and what kind of services are given to its member start-ups.

7.2.1. I3P

The incubation centre of Polytechnic University of Turin, which stands for "Incubatore Imprese Innovative Politecnico", is called "I3P" for short. Having a respected place as one of the best business incubators, I3P ranks 4th in Europe and 11th in the world based on the University Business Incubator ranking.

The aim of the I3P is to establish and support start-ups of students, university research assistants or different entrepreneurs that have future potential, produce high-tech and innovative solutions. In this context, services such as facilities, initial growth funds, network and linkages, co-working spaces, consulting and mentoring services are provided.

I3P's mission is to contribute to entrepreneurship activities and to assist development, financial growth and employment within innovative industries. As a way of achieving this mission, working together with different institutions and organizations on issues such as research, development, education, financing services, technology and innovativeness and globalization has been adopted. The most important point in reaching the missions is to provide different resources and opportunities to start-ups by using technical and scientific powers in terms of research and development with the help of continuous relations with Polytechnic University of Turin.

7.2.1.1. I3P Start-ups

The start-ups in the I3P can be directly linked under the name "I3P", or as a member in the "treatabit" type which has emerged in 2011 and contains digital business, mobile applications and web services. In addition, there are a number of start-ups currently divided into early stage, incubate and alumni within the framework of the I3P. Early stage generally includes seed stage start-ups in pre-incubation phase. Whereas, incubated start-ups are the ones which have passed the pre-incubation stage, created a proper business model and strategies which make them ready to operate in the market. On the other hand, alumni are the start-ups that have successfully completed the incubation process thanks to the services and supports they received from I3P, have reached an active customer base with the right business model and appropriate strategies, have started operating and earning money.

I3P has many start-ups that provide cleantech, deeptech, industrial, IT and medtech services. I3P has many startups that provide cleantech, deeptech, industrial, IT and medtech services. Right now, I3P has 15 start-ups in pre-incubation stage, 41 start-ups that have already been incubated and 71 start-ups that have become an "alumni level".

7.2.1.2. I3P Networks

I3P networks has created from mentors and partner companies. I3P mentors consist of senior executives and managers of major companies, successful start-up CEOs or founders, university professors, entrepreneurs, investors, business angels and lawyers. These mentors are individuals with high level of knowledge, skills and experiences concerning entrepreneurship and business development, as well as they are important sources of information especially for start-ups which give services in industries or about topics similar to mentors' various professions.

I3P also has partnerships with businesses that serve the finance, services and network, and technology and communication industries. Examples of these important businesses are Banca Popolare di Novara, GoFundMe, Intesa San Paolo, Italian Angels for Growth, FCA, ItaliaStartUP, Cern, IBM and Microsoft for Startups.

7.2.1.3. I3P Services

I3P supports start-up teams in pre-incubation or incubation programs depending on their stage. The services delivered to start-ups with the aim of these supports are consulting, fundraising, networking and internationalization. Consulting services have given priority to information and training in areas such as business model and strategic planning for start-ups, while also dealing with IP, financial and law-related rights and employee rights associated with the establishment of the company and company operations. In this context, I3P contains mentors with different knowledge and skills. At the same time, it helps to supply technical requirements by creating connections between start-ups and the university research centres.

From a financial perspective, I3P supports start-ups to earn capital through investors, business angels and VCs in the network. At the same time, it helps to entrepreneurs in terms of reaching institutional measures that will enable them to create establishments and in terms of finding strategies to gain fundraising. I3P also supports start-ups to create interactions with important companies, organizations and people in its network, thereby offering privileges to reach environments that will help start-up entrepreneurs in an innovative way. Thanks to the networks not only regarding individuals and institutions, but also regarding access to foreign markets, the international growth of start-ups is supported.

I3P services are not only linked to member start-ups, but also companies and investors are offered assistance on different topics. From the companies' perspective, I3P offers them open-innovation solutions with the help of start-ups and different technological applications. In addition, different events are organized that bring them together with the most appropriate start-ups where they can invest, and at the same time, networks are created to provide companies an access to the right suppliers and partners they are looking for. Looking at the services provided to investors, it is seen that actions are

taken that will enable them to interact with target start-ups by staying within the principles of sharing and privacy.

7.2.2. Numenu

Numenu is a start-up established for restaurant customers and restaurant owners to have a more interactive and fully digitized experience. This start-up ensures that restaurants that are B2B customers and restaurant clients that are B2C customers meet and benefit from the services in a digital environment, enabling a faster, more effective and high-value processes inside restaurants.

The start-up was established in 2017, it decided to expand its team and operations in 2018 and join to I3P in 2019 as a “treatabit”. The start-up team currently consists of 7 people and the teams’ tasks are divided into app development, web development, graphic / design, marketing and business strategy.

7.2.2.1. The Product

Numenu has a business model as B2B2C. Therefore, two different product types have been created for two different types of customers. Numenu offers its B2C customers a mobile application where they can see the menus in their own language and be sure of what they are going to eat without having a trouble to experience problems related to language. Users can reach detailed menus of restaurants offered by this application with upgraded prices, photos, ingredients, allergens and similar details. In addition, this application offers a choice of maps, QR code system or search buttons to facilitate access to restaurants. In this way, customers can have information about restaurants, such as working days, hours, phone numbers, and at the same time, they can book a table from the application. Numenu also provides its customers the opportunity to order their meals and pay within the app at the end of their activities in a restaurant. The app also creates a platform where customers can save their favourite restaurants, receive notifications and news from them, and earn discount coupons depending on their re-engagement levels.

Numenu provides a product that helps its B2B customers to digitize their menus and acquire more clients, especially the foreign ones with the help of the automatized menu translation service. Thanks to this web platform, managers can change the details of their products such as name, description, ingredients, pictures and prices whenever and wherever they want with a single click. It also allows them to reduce paper menu usage and save money, creating an environmentally friendly brand image. This web portal helps B2B customers to manage their business more easily. With using Numenu, managers are able to see valuable examination about their business, collected through the application and they begin compelling discounting and advertising efforts powered by Numenu's center of Big Data Management.

7.2.2.2. Business Model

7.2.2.2.1. Key Activities

Application and Website Development: As can be seen from the research on the focused group, customers experience difficulties especially in restaurants during their travels and the majority believe that a digital solution would solve their problems. The start-up "Numenu", which was precisely born for this reason, has designed a mobile application that can give benefits for its customers in restaurants, meet their expectations and solve their problems, and has created a web portal for restaurant owners where they can manage their business in a more effective way, follow their customers and create customer retention with promotions. Since the services offered by Numenu to its customers are based on an application and web service, it has been understood that the key activity is "Application and Web Site Development".

7.2.2.2.2. Key Resources

Equipment and Software: When it comes to the design and development of a website and an application, items and tools such as software, PC and laptops that need to be used for the design of the applications that are compatible with IOS and Android, and the web portals which are suitable to use with different browsers are required. Having these resources is a key feature for Numenu in terms of providing the main activity.

Human Resources: Similar to tangible resources, intangible resources such as knowledge are also essential for website and application development. Since this start-up has a team with the necessary skills needed for these subjects, human resource has a key resource feature for Numenu.

7.2.2.2.3. Proposed Value

For Numenu, proposed value is the value created for customers and restaurant owners by using the app and the web portal. This value is created by providing an interactive environment for both B2B and B2C clients to be beneficial for each other. For restaurant owners, they became able to show and modify their menus including dishes and meals with ingredient and allergen information and price details in various languages and create customer retention and loyalty with the help of promotion and discount opportunities. For users, they became able to reach higher number of different types of restaurants, to display their menus in the language they know with all information anytime and anywhere they want. They also can book their tables beforehand, order meals and pay by the app.

7.2.2.2.4. Customer Segments

Numenu has 2 types of customers that are using different products offered by the start-up: Restaurant owners and restaurant clients. Due to the different needs and expectations, restaurant customers are examined under two separate groups: Locals and international guests.

Restaurant owners can put themselves to be visualized by its clients inside the app and inside the maps service by creating an account for their restaurants with requested information. They can create and modify their menus, add information about the address, phone number and opening hours of their enterprise. They can also get business analytics and data about customer behaviours for effective management strategies and provide targeted promotions and discounts. For tourists, the most useful feature is to discover restaurants via maps or simple searching, and to see the restaurants' menus and information in their own language. They can also benefit from booking and in-app payment options. For locals, Numenu's tool which is a mobile application helps them to discover and interact with the restaurants in their own countries. Then can see the menus digitally, book a table beforehand and pay inside the app after the service inside restaurants. They also have an option to subscribe their favourite restaurants to personally hear about the upgrades and gain from discounting opportunities.

7.2.2.2.5. Target Markets

As the application is useful for tourists, but also for restaurants who receive international guests in the first place, first phase of Numenu is to be used in touristic capitals in Italy, then reach to European touristic capitals and Asian big cities where digitization is highly demanded and plays a major role for Horeca-related activities.

7.2.2.2.6. Cost and Revenue Structure

For Numenu there are two types of costs which are resulted from marketing activities and app/website development. Application and website development costs consist of annual software, App Store and Google Play fees and prices of design and development tools which is considerably low comparing to the costs of marketing. Since it is the most important factor for a start-up to reach different markets and gain attention by investors, Numenu has been giving high importance for marketing activities such as joining events about start-ups and creating campaigns to create attention and acquire customers. Since at this stage, team is working voluntarily, there is no cost occurred from wages paid.

Focusing on revenues, they are created from three different aspects: the first one is restaurant subscription fees. Restaurants have an option to choose the paid version of the app to get benefits from extended services such as variety of business analytics, sending notifications and discounts opportunity. The second source of revenue is the transaction fees resulted from the payments inside the app. The fees are planned to be taken as 1% from restaurants using the free version and 0.5% from restaurants using paid version of the service. And the last revenue stream is created from the small amounts taken from each ads or notifications restaurant owners send for their customers who has favoured their enterprise inside the application.

7.2.2.3. SWOT Analysis

Strengths:

- Team with various skills,
- Young mindset and heterogeneous team,
- Access to needed equipment,
- In-house development,
- Innovative product aiming to digital expectations of customers and include the whole ecosystem,
- Relations with different restaurant owners,
- Easier reach to the focused market thanks to centring in Italy.

Weaknesses:

- Small team due to lack of resources,
- Hard to access data of the sector,
- High marketing expenses.

Opportunities:

- Growing and profitable sector becoming very strong worldwide,
- Growing smartphone use in daily life,
- Opportunities of Italy in terms of tourists,
- International audience and customer base,
- Trend of food-oriented tours to foreign countries,
- More and easier ways to travel abroad.

Threats:

- Low adoption by restaurants,
- Restaurant owners' resistance to change,
- Increasing study of other languages,
- Domestic travel opportunities,
- Prices of travelling abroad,
- Intense competition in travel and tourism related sectors and digital food services.

7.2.3. An Interview

As a research study has been done to a focused international group with different ages, nationalities and occupations to see their characteristics, behaviours and in their thoughts about digitization used in restaurants while they are abroad. The results showed the audience's existing problems in restaurants and in foreign countries, also their high interest on digital solutions inside restaurants was understood. The results

were in line with the findings from various abstracts and articles that were examined with details in the first parts of this thesis study.

In this part, the aim was to see the opinions of a start-up providing digital solutions for customers who take services from restaurants and mostly for the ones who are traveling abroad, in short the focused group which was examined in the previous part. For this reason, an interview has done with the entrepreneur of Numenu, Andrea Grippi. Another point that is tried to be understood is the effect of I3P and its services on a seed stage start-up like Numenu which provides digital solutions to Horeca industry customers and understand at what extend being a member of I3P has helped the start-up to reach its goals and targets.

7.2.3.1. Idea-Related Questions and Answers

- 1)** How was the idea come to your mind? What were the aspects that made you think it was needed?

“When I was in China couple years ago, I had so much trouble inside restaurants as there weren’t English menus in most of them, neither on a paper nor as digital. For this reason, I needed help from employees, but they weren’t also able to speak very well to help me decide which meal I desire to take. I realized the problem as a tourist in a foreign country. In addition to that, all around was a society that digitised basically everything, and I realized that we lack such digital solutions. The two things together made me create an idea which initiated Numenu.”

- 2)** Which customer problems you have focused with that idea?

“Foreign restaurant customers can hardly understand what's on the menu when they are abroad. Ingredients, allergens and pictures are fundamental for many reasons during mealtimes. They also don’t have enough digital solutions to reach all the restaurant services at once before or during the time in restaurants.”

- 3)** What services you considered to provide at the beginning? And what is the product now? Do you have any differences between the first idea and the last idea in terms of app-web portal functions and services? If yes, why did you need to change?

“At the beginning the app was a simple scanner for the QR codes that opened a list of dishes. With our work and huge brainstorming, it has become much more elaborate, like a portal including maps, “favourite” system, restaurant owner web portal and comprehensive analytics.”

- 4)** What do you think about digitization in the industry you are a member of? Why did you focus on digitizing solutions with your product?

“Restaurants rely a lot on user experience and customers expect different solutions regarding their needs. For this reason, digitisation must come to the terms of actual

needs of restaurant owners. Hence, there is hardly any digital product that tries to disrupt the interaction between customers and waiters. I focused on this field because I perceived a need.”

5) Which functions of your product help you digitize the Horeca Industry operations?

“Menu digitisation and its translation within the app, and digital services creating customer retention.”

6) In what markets and which segments you have focused to reach with your product?

“We wanted to deploy it in Italy as a first phase, because of the strength of its tourism industry. For later stages, we aim to reach touristic cities in Europe and big cities in Asia. The target were originally low-mid tier restaurants, but we figured high level ones are more prone to use such platforms creating digital solutions. To speak of customers, we created different solutions both for tourists and locals to benefit from.”

7) In which ways you think your idea have a possibility to be successful in these markets? What are the opportunities and threats exist in them that may affect you?

“The opportunity is the big tourism market and high interest on digital applications, especially in Asia. The threat is that our customers are not really prone to accept anything that disrupt the way work had been handled until that moment.”

8) What are your strengths and weaknesses that may effect your success in those markets?

“Our strength is for sure a versatile solution that can be adapted to different customer needs. Weakness is a low understanding of the needs of the restaurant owners, including how much time they could give to onboarding.”

9) What were your goals to achieve with that product?

“Changing the way of customers operations in restaurants and make their experience easier and more effective, also the way restaurants re-engage with their customers”

10) Do you think your idea/product have already achieved your goals? If no, why do you think you haven't achieved your goals yet?

“It didn't because we spent too much time focusing on the product, and not enough on our customers. The product was definitely good, but it solved the problem in a way that owners didn't like. Any solution related to the restaurant world should not take away any time of the restaurant owners from their job.”

7.2.3.2. I3P-Related Questions and Answers

1) When was the time you joined to I3P?

"In February 2019."

2) What were your expectations when you joined to I3P? What were your goals?

"I expected support in understanding what it means to build a start-up, to be given tools, knowledge and support in the realization of the idea."

3) Which services and resources have you gained from I3P?

"In my opinion, mentoring was quite scarce, as resources are allocated to give precedence to more established start-ups. Small ones basically must figure it out on their own at the beginning. But we definitely received some useful advices and mentoring to figure out the best strategies we should follow, but I would have been more satisfied if they could be delivered in a more effective way. We were also given a table in an office."

4) In what ways I3P helped you to achieve your goals?

"Definitely helped us to have more exposure and more respectability outside."

5) Have you ever participated to any I3P events or have you ever done a presentation in one of them?

"Yes, I found an opportunity to participate and do a presentation in the B-Heroes event. Although it wasn't an I3P event, I hosted by I3P in the common working space."

6) If yes, in which ways the event helped you?

"It gave us some good contacts, networking opportunity, exposure and the possibility to be criticized by experts."

7) Could you find an opportunity to meet with other start-ups via I3P which operates in the same sector of yours?

"I can say "kind of". We had a deal with Scloby, a start-up which creates an innovative cash points with a cloud platform that helps about management-related issues and can be used in restaurants and bars, to deliver our service to their customers. In exchange, we agreed to deliver translations for all of their customers. But unfortunately, we couldn't find enough support regarding the API integration and sponsoring as promised."

8) Did you get networks and a way to connect to investors with the help of I3P? Was it helpful for your development?

"Yes, we got many networking opportunities, mostly for mentoring. I'd say it was helpful in a way to see more effective ways to choose as our strategy to reach our goals."

- 9) Overall, what do you think about your experience within I3P? How did it effect you about achieving your goals? Do you think if there are some ways they need to change in their operations or if there are some more services they need to implement in their system?

“I think I3P has the potential to be really a great tool for start-ups. One thing they lack that I have experienced in my case, is acknowledging that especially young teams lack all the knowledge and all the terminology to even make good use of their advice. A stricter path would be highly beneficial such as a real tutoring, with milestones to be set as date and time, and determined outcomes to reach. I wish I could have had more chances to learn from them how to be an entrepreneur, since I am still young and lack of experience about how to turn an idea into a real thing. Entrepreneurship is a lonely ride they say, but it doesn't have to be. If experts follow younger start-ups in their early days, the survival rate would definitely increase, being highly beneficial to the start-up ecosystem and the country as a whole.”

7.2.3.3. Findings

According to the interview with an entrepreneur of an old I3P member start-up which creates digital solutions to be used in food service enterprises, some points have been found regarding the idea of digitization in restaurant business concerning both customer and restaurant owner side, also regarding the services of I3P given to a seed stage start-up. The findings are given in the following:

- During the discovery of the idea, the entrepreneur acted like the focused group we examined in the previous part of this thesis study and understood the necessity of digital solutions as a restaurant customer who travelled abroad. Therefore, the problems he noticed show similarities with the inferences made through the previous research.
- The idea has started as a basic digitization of menus, but then expanded by including various services restaurant owners and customer need to solve their problems and provide their expectations at the time, before and after the restaurant processes.
- According to the searches and experiences of the entrepreneur, the use of digital solutions in food services is more preferred by large scale restaurants comparing to small and mid-tier ones. It can be said that the reason for this may be that the owners of small and medium-level restaurants have a higher desire to provide more traditional experiences for its customers, or if they would like to use such solutions, they are still not ready for digital adaptations due to lack of skills, knowledge or resources.
- Both type of customers' resistance to change in the way they act inside restaurants has harmed the enterprise to achieve the goals, although they provide a versatile solution for both restaurant owners and their customers.

- With the information gained from the entrepreneur, it can be said that restaurant owners would not prefer solutions that take their time away from working.
- In entrepreneur's opinion and experience, I3P provides useful and effective services in terms of mentoring and networking, but it was understood quite weak to help younger start-ups to grow due to their higher focus to more established ones.
- It was an unlucky experience for this start-up, as it couldn't take the advantage of being a member of I3P due to being so much young and inexperienced about how to turn an idea into a real solution. There were also other reasons why the start-up wasn't successful such as the hardness to make restaurant owners approve the idea and change their structure as required by the start-up's digital solution, also due to unsuccessful partnership attempt which could have been helped the start-up to gain customers.

8. Conclusion

In the light of the subjects studied and detailed in this thesis study, it is observed that rapidly developing entrepreneurship and innovation concepts, the desire to turn people's ideas into practice and share this with the world as a new business model have accelerated the realization of start-ups and similar new breakthroughs. It has been understood that such breakthroughs in areas where technological, social and political investment has increased and demand is quite high are much more than other industries, and new entries are concentrated in those areas. In addition to that, the strategies put forward by companies have started focusing on customers due to increasing demands and the importance of the customer experience is realized. It is noticed that in the sectors that have high level of interaction with travel and tourism, especially in the "Horeca" sector which stands for hotels, restaurants and catering, operations and activities have started focusing on customer orientation and aimed to provide consumers' expectations and needs properly. In parallel with the changing world conditions and the development of technology, digitalization has become a part of our life and customer demands and needs evolve accordingly. These digitalization-related activities and implementations have also started to be used frequently in the Horeca industry and purposed to improve the services that are offered to the customers, to fully meet the expectations and needs, and to ensure high satisfaction.

The Horeca industry is divided into sub-sectors as hotels, restaurants and catering and each group has examined individually in this thesis work. When the data gained from researches about hotels is spotlighted, it is seen that this sub-sector covers not only hotels and large resorts, but also different types of accommodation used in travels. At the same time, it has been observed that the number of tourists that countries accommodate annually has an impact on the demand for hotels and similar enterprises operating in that particular country. It is important for all the companies, either they are freshly created or already in the sector, and either they are in highly demanded markets or in niche markets, to keep in their minds that serving what customer really wants, as well as integrating technological developments and digitalization into their services are crucial to survive and gain reputation.

Same as hospitality, it is also noticed from the researches about restaurants that this sector hosted high number of customers and created a very important source of income for countries and enterprise owners. Moreover, the technological applications are put into action parallel to customers' technological needs and they appear in restaurants as digital menu usage instead of traditional, digital payments, websites and restaurant applications to provide food delivery services and reservations. Even though catering has less demand compare to accommodation or food services, technological developments and new communication channels between enterprises and customers also occurred to create higher effectiveness and satisfaction.

The changes and developments that are going to be made on the activities and operations of companies in Horeca mainly focus on customer expectations and follow the existing trends in this industry. Today, trends appear as smartphone usage, mobile and digital payment systems, user experience design, responsible traveling, digital marketing and social media activities, and streaming. As an important inference, it has been noticed that these trends directly evolve the customer needs. However, for customers, only following trends is not a sufficient factor to choose a company instead of another. Companies that can meet different customer expectations as well as trends can be one step ahead from the others in the competition. These expectations can be listed as follows: discovery and ease of reaching to quality, personalized local experience, reliability and engagement, flexibility and easy-to-understand services, sustainability and reduction of waste and experience sharing. In general terms, these expectations show the desires and demands for social, cultural, environmental and technological developments related to the Horeca industry.

Digitalization accounts for one of the greatest evaluations in our era and has created a change that is effective from company strategies to individuals' daily lives. It provided a fast and efficient way to meet customers' needs and solve their problems. Thanks to digitalization, companies had the chance to establish an interactive network with their customers and enterprises are now able to provide a communication channel that their customers can easily reach with only one click. This innovation has either a small or a large usage area in every sector and Horeca is one of these fields. In the industry, digitalization can be encountered in many different ways. In addition, all the trends examined within the Horeca industry are somewhat related to digitalization, and the advantages of digitalization can be described as a strategic weapon which companies use to meet customer expectations that were specified previously. A development that provides such great and powerful advantages, of course, has given entrepreneurial ideas to different companies and enabled them to stand out in the competition by providing different solutions to the problems in the market. It has been observed that digitalization is frequently used in the Horeca industry, especially in providing activities such as booking, ordering, reservations, payments and digital menu creation. There is a huge variety of small, medium and large-scale companies that carry out these activities through digital channels, and every day new companies are trying to join this industry to validate their innovative ideas and find themselves a place in the market. Looking at today, there are many million-dollar companies that serve the Horeca industry and exist digitally. These companies are the companies that can take advantage of the opportunities provided by digitalization and draw the attention of customers by creating a right business model and a marketing strategy. According to information gained, it can be added that the birth of each company actually focuses on solving an existing problem or meeting expectations, and being successful in this way help them to reach their goals at the end.

The study conducted to understand the effect of the use of digitization in restaurants visited during a travel based on real crowd shows that the information obtained in the previous sections of the thesis study is in line with the results obtained from the customer group. According to the results, it has been determined that travel is a highly preferred activity and different resources are used to access related information. For customers, it was seen that the pre-travel discovery phase is an important process in order to have new places and local experiences, digital apps and mobile applications are used for discovery, but they are not preferred much for older generations. Also, to create an interesting conclusion, although it is seen that map applications, websites where reviews are provided, and social media networks are the digital tools used for discovery, it is still found that the most preferred method is to get suggestions from others. In addition, it was observed that all the people participating in the study had a problem at least once while they were in a restaurant abroad. This shows that a solution should be applied in food enterprises in order to solve the expectations. Customers also believe that digital ways can solve their problems and meet their expectations, and they are preferred by most of them for use in food service enterprises abroad. This research study carried out on a customer group shows that the conclusions made in the previous steps of the thesis study are in line with those found in real life.

The conclusions drawn from the final part based on the examination of Numenu, a start-up which was under the roof of I3P, and I3P, an incubation centre within the Polytechnic University of Turin, describe the meaning of digitization for a seed stage start-up and the contribution of receiving I3P services. First of all, the reason for the emergence of the start-up idea is actually happened the way it was seen as a problem that is needed to be solved in restaurants abroad as a customer by its entrepreneur, therefore, it was created with an aim to eliminate problems with customer orientation and digital solutions. At the same time, the start-up has expanded its initial idea to improve and offer better solutions to its customers with the changes it has added to its services over time. Another fact gained from the meeting with the founder of the start-up is that large-scale restaurant establishments are more open to digital changes in their operations than small and medium-sized ones. In addition, although digital transformation is a rising area in every field, it has been understood food service operations could not be fully digitized due to resistance to change of some restaurant owners and customers. For this reason, the start-up could not reach all of its goals properly.

According to the interview, when I3P and its services are focused, it has been seen that the services that are most useful for a seed stage start-up that produces digital solutions were mentoring and networking. However, due to the start-up being very young and inexperienced, couldn't manage to put what it has earned from I3P into real life, customers anti-change attitude, and the failed partnership opportunity, in overall, start-up wasn't able to reach its goals, and stayed below the targeted performance level.

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