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BARCELONA

Analysis of Michelin-starred restaurants and their geographical concentration: the case of Catalonia

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2022

PhD in Business | **Raúl Escalante Álamo**

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Thesis title:

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Date:
August 2022

UNIVERSITAT DE BARCELONA

A mi familia

If you want to go fast, go alone. If you want to go far, go together

African proverb

Success in management requires learning as fast as the world is changing

Warren Bennis

ACKNOWLEDGEMENTS

Ten years ago, in 2012, I obtained my bachelor's degree in Business Administration and Management (ADE) at the Faculty of Economics and Business of the University of Barcelona (UB). It was at that time when one of the professors I had in my first years of my degree, Mercè Bernardo, trusted me to start collaborating with the former Department of Business Organization, now Department of Business, first as a scholarship assistant and later as a part-time teacher teaching Quality Management. Two years later, I enrolled in the master's degree in Business Research at the UB where I met colleagues and professors who helped me understand what research was and why it was necessary in the field of Business. Once again, Mercè Bernado gave me the opportunity to start a new project and, after obtaining the master's degree in Business Research, I began my path towards a PhD in Business.

During these years of PhD, I have met many people who, consciously or unconsciously, have helped me to progress and not give up in the elaboration of this thesis. It is possible that I will forget some of them in these next sentences, but I would like to thank them for all their support and collaboration.

First of all, I can not begin these words without acknowledging the support, trust and patience that my thesis supervisor, Mercè Bernardo, has given me over the years. Without her, I would not be where I am today, nor would this thesis have been possible. I would also like to thank Professor José María Castán for initially being my thesis tutor. I am also grateful to the UB Business School for accepting me in their master's degree in Business Research and then in their PhD in Business program. I would also like to thank all administration and teaching staff of the former Department of Business Organization, now Department of Business, especially the Department directors, Jaume Valls and Ana Maria Lauroba, the Department secretaries, Pilar Lopez-Jurado and Xavier Llopart, the coordinator of the Business Organisation section, Paloma Miravitlles, and the section secretary, Ana Núñez.

I am sincerely thankful to Anna Arbussà for her contribution to the fieldwork and the team of Edicions UB for their work in editing and promoting the books. I really appreciate the collaboration of Francesc Solé Parellada and

Toni Massanés and of course the participation of the chefs and staff of the restaurants interviewed, especially Joan Roca for his support. Without their predisposition and positive attitude towards the research, this thesis would not be possible.

I also have to acknowledge all the staff, especially Francesc Moreu, Roberto Suárez and Nuria Viñals, at Grupo Cadarso, where I have been working as a financial controller since 2013. I am very grateful for giving me the opportunity to grow professionally and for supporting me to finalize this thesis.

Last but not least, I have to thank my family and my closest friends. I thank my parents, my brothers and especially Victor Peña. Although on many occasions they have had to put up with my *boring talks* and mental breakdowns, they have always been my support and the ones who have encouraged me the most to carry out my projects, especially this one. This thesis is as much theirs as mine.

Thank you all for your help!

SUMMARY

One of the most important sectors for developed economies is the restaurant industry. It is a sector closely linked to tourism, which under the umbrella of the hospitality industry employs millions of people around the world and in countries such as the United States and Spain represents more than 4% of their gross domestic product (GDP). The importance of this industry has attracted the interest of the academy and several studies have been published on restaurants, their practices and their success and failure factors.

Among the main sectors of the restaurant industry, the gastronomic or haute cuisine sector stands out as one of the most successful. In fact, fine dining restaurants have become a tool for promoting territories and attracting culinary tourists. In addition, these restaurants play a key role as pioneers in innovation and benchmarks for the rest of the sector.

The diversity of classifications, awards and quality standards on gastronomy that have recently appeared are evidence of the success of this sector. One of the most outstanding classifications in haute cuisine is provided by the Michelin Guide. Its star system is considered synonymous of gastronomic quality and is accepted worldwide by critics and consumers. In fact, despite the differences with other management system standards, such as ISO 9001 or ISO 22000, the Michelin star system is considered an accepted standard for the gastronomy sector and confirms that companies, also in this sector, prefer sectoral standards as they better fit their operations and allow them to achieve a competitive advantage, compared to more generic standards.

In this context, Catalonia has stood out in recent years as the region with the highest number of Michelin-starred restaurants in Spain and one of the most recognized in the world. Important chefs such as Ferran Adrià, the Roca brothers or Carme Ruscalleda, among others, have placed Catalan cuisine on the world map and have contributed to spreading Catalan culture around the world. The excellence of Catalan cuisine and, consequently, the concentration of haute cuisine restaurants in Catalonia is the result of many factors, including their innovation and creativy, the products and the territory, as well as the interest of society in gastronomy and the proximity to France. However, other factors related to chefs may also have played an important role in explaining the concentration of gastronomic restaurants in the territory. Therefore, this thesis aims to contribute to the research gap through

the analysis of two additional factors, their education and training and the relationship among them.

Regarding the education and training, some authors have highlighted the importance of experience in the restaurant business as well as experience in gastronomy for success in this sector. Other studies have analysed education and job-related learning and have determined that their combination is a major intangible asset in the restaurant industry. Thus, one of the objectives of this thesis is to analyse the education and training received by haute cuisine chefs in Catalonia and to determine if there is a common pattern of training.

On the other hand, some authors have stated that some of the most important sources of innovation in these establishments are the restaurant staff and cooperation with other chefs. Exiting theoretical innovation process models show that creativity does not occur in isolation and networks and social systems are necessary for the transfer of knowledge and information between individuals. Thus, another factor to be taken into account to explain the high concentration of gastronomic restaurants is the interaction of their chefs. Therefore, this work also analyses what elements of the relationships favor the generation and exchange of ideas and what effect they have on the achievement of success in this sector.

Thus, the contributions of this thesis are the following. Firstly, it contributes to the literature through an analysis of four (management system) standards in the gastronomic sector. Taking as a reference one of them, the Michelin star system, this thesis also contributes to research in the gastronomic sector by being one of the first studies to qualitatively analyse practically the entire population of Michelin-starred restaurants in a territory. Based on the literature on restaurants, this thesis identifies two factors that have an impact on the high concentration of haute cuisine restaurants in a given territory. More specifically, this research demonstrates that there is a common training pattern for chefs and their relationships can foster knowledge sharing and achieve success in this sector. Finally, this thesis aims to fill the gap in the literature on haute cuisine while providing practical implications for the restaurant industry and governments.

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CHAPTER 1. INTRODUCTION

1.1. The restaurant sector within the hospitality sector

The hospitality sector is a main pillar of national economies and one of the largest employers in the service industry (Lee and Hallak, 2018). Traditionally it comprises two main areas of activity: accommodation and restaurant services and is often closely linked to tourism. It includes a wide variety of types of establishments, such as hotels, hostels, inns, rooming houses, rural houses, bars, wineries, beach bars and restaurants, among others (Slattery, 2002). However, although the hospitality sector is diverse, there are some common dynamics. The most important is the customer's experience and satisfaction with the product or service, and in this industry, the greatest impact on the customer will be determined by the human factor, directly or indirectly (Iglesias and Guillen, 2004).

In Spain and Catalonia, the hospitality sector is particularly an economic driving force and the two most important business entities in this sector are CEHE (*Confederación Empresarial de Hostelería de España-Hostelería de España)* and CONFECAT (*Confederació Empresarial d'Hostaleria i Restauració de Catalunya*). Both entitites group and represent the businesses of the two main branches of this sector in Spain and Catalonia, respectively.

According to CEHE in 2019, prior to the COVID-19 pandemic, the restaurant activities contributed with more than 98 million euros to the Spanish economy, representing 4.7% of its Gross Domestic Product (GDP) and 1.3 million employed workers (Table 1). In fact, if gastronomic activity is considered as a value chain, the sector represents more than 30% of the Spanish GDP and accounts for 20% of the employment (Daries *et al.*, 2021).

Table 1. Hospitality sector data 2019

	Restaurant services	Accommodation	Total
Establishments	280,078	35,862	315,940
Employed workers	1,307,575	407,800	1,715,375
Production (milions of euros)	98,060	31,281	129,341
GDP contribution	4.7%	1.5%	6.2%

Source: Hostelería de España (2020).

In a global and competitive context, tourist destinations such as Spain and Catalonia use gastronomy as a differentiating element, becoming a lure for tourists (Sánchez-Cañizares and López-Guzmán, 2012). In 2019, for example, Spain received 83.7 million of international tourists, 18% of them – more than 15 million - visited Spain motivated by its gastronomy (Daries *et al*., 2021). As a result, the restaurant sector has grown significantly in recent years, leading to the emergence of various types of restaurants. Among the most important types are quick-service franchise chains (Mendocilla *et al*., 2021), independent restaurants (Parsa *et al*., 2005, 2007) and fine dining restaurants (Presenza and Messeni Petruzzelli, 2020).

As mentioned by Daries *et al*. (2018), the increasing competitiveness of the sector has in turn led to a more specific and personalised demand. Today's customer is more informed and seeks not only to satisfy their appetite but also to enjoy the experience (Vargas-Sánchez and López-Guzmán, 2020). Likewise, the gastronomic tourist, who values gastronomy as a means of socialising and exchanging experiences, is increasingly demanding and has a higher level of spending compared to other types of tourists (Daries *et al*., 2018).

In fact, eating is an experience that transcends food (Gavilan *et al*., 2021) and acquires a social dimension that allows sharing moments and generating feelings and experiences in people (Hurtado Justiniano *et al*., 2017). In this context, the gastronomic or haute cuisine sector offers a different gastronomic experience in order to attract customers. Haute cuisine restaurants are considered pioneers in innovation and act as benchmarks for the rest of the industry (Presenza and Messeni Petruzzelli, 2020).

Thus, gastronomy, and in particular high-level gastronomy, is in vogue. In recent years, numerous culinary programmes have appeared in the mass media, as well as cooking magazines and books. Moreover, today, top chefs have become public images of brands, tourist destinations and even products (Daries *et al*., 2021) and events such as the Michelin star galas or the World's 50 Restaurants list are followed by millions of people around the world.

1.2. Haute cuisine

Haute cuisine is a style of cooking characterized by refined elaborations, the use of quality products and the professionalism of its chefs. As defined by Gomez and Bouty (2011) and Presenza and Petruzzelli (2020), haute cuisine

is a sector in which chefs usually receive extensive practical training with the aim of developing the five senses for professional cooking.

The concept of haute cuisine (see Figure 1), differentiated from home cooking, appeared in France in the seventeenth century with the publication of François La Varenne's *Le Cuisinier François* in 1651 (Beaugé, 2012). However, it was not until the French Revolution and the creation of professional cooking schools that the concept spread throughout Europe.

During the twentieth century the concept was consolidated. A first important fact was the coding and documentation of French restaurant processes in the manual *Le Guide Culinaire* by Escoffier *et al.* (1903). This manual, which aimed to train professional chefs and kitchen staff, became a classic manual for haute cuisine (Albors-Garrigós *et al.*, 2018). This situation would change, and in fact other authors place the origin of modern haute cuisine between the 1960s and 1970s, with the advent of *nouvelle cuisine* (Rao *et al.*, 2003). This culinary movement arose from a generation of chefs, led by Paul Bocuse, Michel Guérard, the Troisgros brothers and Alain Chapel, who revolted against many facets of the haute cuisine of the time, *cuisine classique*. This new style of cooking, which the journalists Christian Gault and Henri Millau named as *nouvelle cuisine*, was characterized by the use of fresher ingredients, including local and seasonal products, more minimalist presentations, fewer condiments and sauces and the use of shorter cooking times (Mennel, 1996; Petruzzelli and Savino, 2014).

Figure 1. Origin of haute cuisine
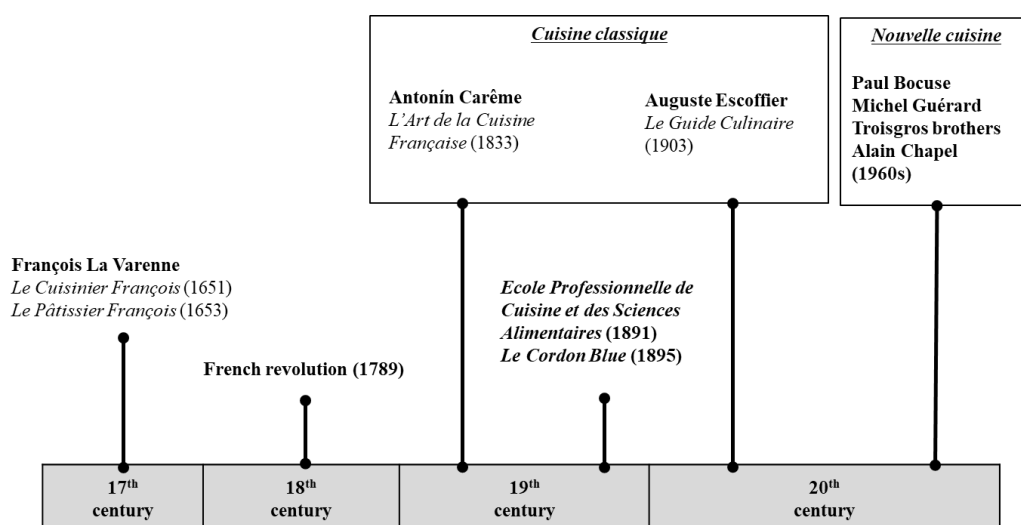
Source*: Own elaboration based on Albors-Garrigós *et al*. (2018)

One of the main features of this type of cuisine is the key role played by its cooks (Petruzzelli and Savino, 2014). In this sector, the chefs are the center of all operations and are always under pressure to find new dishes, menus and ingredients to achieve maximum satisfaction for their customers. Creativity and innovation are key pieces as chefs are constantly looking for and developing memorable culinary experiences and defending their competitive position in international cuisine (Presenza and Petruzzelli, 2020). Moreover, chefs have contributed enormously to the popularization and dissemination of haute cuisine (Petruzzelli and Savino, 2014), initially with French chefs such as Georges Auguste Escoffier, Paul Bocuse and Michel Guérard and more recently with chefs such as Ferran Adrià, Joan Roca and René Redzepi, among others.

The globalisation and internationalisation of this style of cuisine around the world has led to a significant increase in competition. The initial hegemony of French cuisine has been challenged by cuisines from other regions and cultures such as Catalan, Basque, Nordic and Italian culinary movements, as well as culinary trends from the United Kingdom, the United States and Australia (Presenza and Petruzzelli, 2020; Svenejova *et al.*, 2007).

Today, fine dining restaurants compete in a highly institutionalised environment and their success is largely defined by guidelines and standards set by critics, journalists, cooking schools and especially by guides and organizations such as the Gualt-Millau Guide, the list of the 50 Best Restaurants in the World by William Reed Business Media, and the Michelin Guide (Presenza and Petruzelli, 2019).

The latter, also called the Red Guide, is considered the opinion leader and, according to various studies, as the most prestigious and reliable guide in this sector (Di Stefano *et al.*, 2017; Durand *et al.*, 2007; Fauchart and von Hippel, 2008; Rao *et al.*, 2003, 2005).

1.2.1. The Michelin Guide

The origins of the Michelin company go back to 1889 when the brothers André and Eduoard Michelin decided to found a tyre company in Clermont-Ferrand, in central France (Harp, 2001). Eleven years later, in August 1900, they published the first edition of the Michelin Guide, a small red-cap guide initially designed to make traveling easier for motorists. This free guide

contained a wealth of practical information, including a list of places to stay and eat (Vinh Hoa and May, 2021).

During the 1920's, with the expansion of the automobile industry, there were a number of changes to the guide. First, in 1920, the guide ceased to be freely distributed and was priced at seven francs. According to the Michelin Guide, this decision was made after André Michelin walked into a garage and noticed that copies of his guide being used to prop up a workbench. Outraged and based on the principle that "Man only truly respects what he pays for" he decided to charge a price of 7 francs for the guides (Michelin, 2021).

The second change came in 1923, when independent restaurants began to be included in the guide, as so far only hotel restaurants appeared. This new section awakened interest in the public and the Guide decided to hire a team of people to evaluate the restaurants anonymously. In 1926, the star rating system for restaurants was introduced, although initially only one star was awarded. It was not until 1931 that the current rating of one to three stars was established (Michelin, 2021). The criteria for awarding stars were published in 1936 and are still used today:

-One star: "A very good restaurant in its category"

-Two stars: "Excellent cooking, worth a detour"

-Three stars: "Exceptional cuisine, worth a special journey"

Today, the Michelin Guide has become one of the most respected rankings in the haute cuisine sector. Its star system has become an example of gastronomic quality (Jonhnson *et al.*, 2005) and is respected by chefs, food critics and consumers (Winkler, 2008). The process of selecting and awarding stars is rigorously applied around the world and follows the same criteria (Michelin, 2021). In fact, according to the Guide, "the stars are on the plate and only on the plate" and the evaluation criteria are five:

1. Quality of the products: "to use fresh ingredients with an exceptional taste"

2. Mastery of flavour and cooking techniques: "to combine differents flavours in the dish and master the technique of plating food"

3. The personality of the chef in his/her cuisine: "to reflect the creativity and personality of the chef in the meal"

4. Value for money: "to provide something exceptional in the dish as well as an enjoyable atmosphere that justifies the cost"

5. Consistency between visits: "to be consistent and maintain culinary standards between the sudden visits of the inspectors"

The selection is made anonymously by professional inspectors. According to the Guide, the inspectors are full-time employees of the Michelin Group, with excellent training in hospitality and with five to ten years of experience in the sector (Michelin, 2021). Table 2 summarizes the six basic principles of the inspection process.

Table 2. Principles of the inspection process

Principles	Explanation
Anonymity	Inspectors test restaurants anonymously, pay the bill, and then can reveal their identity if they want additional information.
Independence	The selection of establishments is done completely independently and registration in the guide is free. Decisions are made by consensus between inspectors and the editor-in-chief.
Choosing the best	The choice made by the inspectors is the result of a rigorous process of applying a method regardless of the country in which they are located.
Update	Information, classifications and distinctions are reviewed and updated annually.
Homogeneity	The evaluation criteria are the same for all countries.

Source: Adapted from Michelin (2021).

The process of evaluating and awarding stars is not easy. As mentioned, inspectors visit restaurants acting as anonymous customers and evaluate them with an objective methodology and criteria. Once the assessment is completed, there is no feedback from the inspectors, the restaurant does not receive any reports or comments on their situation. In recent years, the results of the assessments are announced at a ceremony held by the Guide once a year. At this gala, restaurants can get up to three stars and renew, increase or even lose the recognition achieved the previous year.

Michelin stars are not the only recognition given by the Guide. Bib Gourmand, named after Michelin's famous mascot, Bibendum, is a recognition for more modest establishments that feature outstanding cuisine. With this category, the Guide wants to recognize restaurants that serve menus with starters, main courses and desserts for a price of around 35€ in most European countries (Michelin, 2021).

Starting in 2021, the Guide also recognizes some restaurants with the green star. This category, which first appeared at the Michelin gala for Spain and Portugal 2021, recognizes and gives visibility to restaurants that are at the forefront of sustainable cuisine. With this leaf-shaped distinction, the Guide aims to materialize its commitment to sustainability and make it easier for readers to identify restaurants that respect the environment and strive to innovate by carrying out initiatives that preserve the environment. This category is independent of Michelin stars and the restaurant category (Michelin, 2021).

In Spain, the Michelin Guide has been publishing a joint edition for Spain and Portugal since 1910. Since 2010, the year of the centenary celebration in Spain, the Guide presents the list of restaurants awarded for the following year in an annual traveling gala. The list of award-winning restaurants in Spain is the result of the work of a group of more than ten inspectors led by a chief inspector.

1.2.2. Haute cuisine sector in Catalonia

In recent years, Catalan cuisine has received international recognition from gastronomic critics and magazines, chefs' associations and the media. The appointments of Ferran Adrià or Joan Roca as the best chefs in the world or the Michelin stars achieved by Catalan restaurants are just some of the many examples of distinctions that Catalan cuisine has received (Vackimes, 2013).

One of the keys to this succes is that it does not focus on a single chef but rather there is a group of professionals with a high level, including a new generation of chefs who are following in the footsteps of the great masters. This level is evidenced by a high concentration of Michelin-starred restaurants in Catalonia, especially in the areas of the provinces of Barcelona and Girona. The following sections review recent history and the evolution followed by Catalan haute cuisine restaurants.

The origins of Catalan haute cuisine can be traced back to the 1960s. In 1961 Josep Mercader founded the Empordà Hotel in Figueres, a roadside hotel that became popular with the nickname "Motel" and was characterised from the beginning by its cuisine. The Motel is considered to have revolutionised the Catalan cuisine at the time, as it adapted the French *haute cuisine* to Catalonia while using traditional products. Josep Mercader is considered the father of modern Catalan cuisine (Fàbrega, 2011) and turned the Motel into an avant-garde cuisine center that was visited by some of the most important chefs of French cuisine and by young Catalan chefs.

The eighties were characterized by the *nouvelle cuisine*, as mentioned, a French movement based on lighter dishes, shorter cooking times and the use of fresh ingredients (Rao *et al.*, 2003). This movement was enthusiastically welcomed by Catalan chefs, since some of its principles coincide with those of Catalan cuisine. The arrival of democracy and the economic recovery of those years boosted creativity in kitchens and the opening of cooking schools throughout Catalonia (Castanyé, 2017). This led to the emergence of chefs such as Santi Santamaria, Ferran Adrià, Carme Ruscalleda and Joan Roca, among others, and the opening of important gastronomic restaurants. Two of the most outstanding restaurants during these first years were Can Fabes by Santi Santamaría and El Bulli by Ferran Adrià.

Located in Sant Celoni, the Can Fabes restaurant (formerly known as El Racó de Can Fabes) was opened in 1981 by Santi Santamaría and his wife, Àngels Serra. Acknowledgements were not long in coming, and seven years after its opening, the restaurant received its first Michelin star (1988), two years later, in 1990, its second, and in 1994 its third. It became the first Catalan restaurant to receive the three Michelin stars and kept them until 2011, the year in which Santi Santamaria died. The restaurant closed in August 2013 (Bon viveur, 2017).

The origins of the restaurant El Bulli go back to 1961, when the German couple Hans and Marketta Schilling founded a bar in Cala Montjoi in Roses for divers and tourists in the area. The business was named "El Bulli" in honor of the French bulldogs that the couple had as pets. As the years went by, cooking became more and more important and the establishment became a restaurant. During these early years, several chefs worked at the restaurant,

including Jean Louis Neichel, the chef who achieved the first Michelin star for the restaurant in 1976. In 1981, Juli Soler joined as director and two years later, with Jean Paul Vinay as chef, the restaurant was awarded its second Michelin star. In August 1983, during a military service leave, Ferran Adrià stayed at the restaurant and was invited to return the following season as chef "de partie". The following year he took over as joint head chef together with Christian Lutaud. In 1985, Albert Adrià, Ferran Adrià's younger brother, joined the squad. One of the Michelin stars was also removed this year. In 1987 Ferran Adrià was left alone as head chef and Albert Adrià assumed responsability for desserts and sweets. Three years later the restaurant regained its second Michelin star (elBullifoundation, 2021). The consolidation and success of El Bulli in those years can be explained by a number of specific circumstances. First of all, the fact that the restaurant was closed during the winter months due to low demand allowed them to reorganize and plan for the future, while at the same time they trained by visiting and spending time with great chefs. The incorporation of new chefs such as Xavier Sagristà also contributed to the success of the restaurant (elBullifoundation, 2021).

From 1994 onwards, a series of gastronomic courses began, which lasted until 1999. These courses served to establish closer contact with customers and to disseminate the new cuisine. During these years, the restaurant received several distinctions, including those from the French Gault & Millau guide and the third Michelin star in 1997. Several books were also published and consulting for important brands was launched. In 2000, the Bullitaller was inaugurated in Barcelona, a space for developing creativity and the search for new concepts, techniques and recipes. In 2002, Restaurant Magazine named El Bulli the best restaurant in the world for the first time. This distinction was repeated in 2006, 2007, 2008 and 2009. Another related project was started in 2004, when the Alícia Foundation was created, a private foundation located in the Món Sant Benet (Sant Fruitós del Bages, Barcelona), and with the aim of promoting better nutrition. In 2010, the University of Barcelona presented the Ferran Adrià-UB Prize, with the aim of distinguishing the best research works related to food, nutrition, cooking and gastronomy. Finally, in 2011 the restaurant closed its doors and became a foundation, the BulliFoundation (elBulli, 2011).

The void left by El Bulli was quickly filled by restaurants run by chefs from Ferran Adrià's generation. Thus, restaurants such as Sant Pau by Carme Ruscalleda or El Celler de Can Roca by the Roca brothers took on the role of leaders and referents of Catalan haute cuisine.

Located in Sant Pol de Mar, the Sant Pau restaurant was inaugurated in 1988 by Carme Ruscalleda and Toni Balam, in an old tower dating from 1881. The restaurant achieved three Michelin stars, the first, three years after opening (1991), the second in 1996 and the third in 2006. She also opened the Sant Pau restaurant in Tokyo in 2004 and collaborates with the Moments restaurant at the Mandarin Oriental Hotel in Barcelona where her son Raül Balam is the chef. Currently, Carme Ruscalleda is the only woman to have been awarded seven stars for her restaurants (three for Sant Pau in Sant Pol de Mar, two for Sant Pau in Tokyo and two for Moments in Barcelona).

The Celler de Can Roca was founded in 1986 by Joan Roca and Josep Roca in a place adjacent to Can Roca, their parents' bar. In 1997, the younger brother, Jordi Roca, also joined them. It was twice distinguished as the best restaurant in the world by Restaurant Magazine (2013 and 2015) and the restaurant currently has three Michelin stars, the first achieved in 1995, the second in 2002 and the third in 2009. The distinctions and recognitions, both individual and collective, have not ceased and today the three Roca brothers are considered the benchmark of haute cuisine not only in Catalonia but also for the rest of the world (Vackimes, 2013).

The trail left by the aforementioned chefs has been followed by several chefs from all over the country. Some examples are Paco Pérez with Miramar and Enoteca restaurants, both with two Michelin stars, Fina Puigdevall with Les Cols restaurant also with two stars or Albert Adrià with the elBarri project which included some restaurants with one star. It is also worth metioning the three stars obtained by Lasarte restaurant, directed by Martín Berasategui and with Paolo Casagrande as head chef and also the three stars achieved by Àbac, by Jordi Cruz. The two stars obtained by the restaurant Disfrutar by Mateu Casañas, Oriol Castro and Eduard Xatruch and also the two stars achieved by Cocina Hermanos Torres by Sergio and Javier Torres (2019), and by Bo.Tic by Albert Sastregener and Cinc Sentits by Jordi Artal (2021).

1.2.2.2. Evolution of Michelin star restaurants in Catalonia

During the period 2010-2022, the number of Michelin-starred restaurants in Spain has increased by 91 establishments, from 137 to 228. In the same period, the number of Michelin-starred restaurants in Catalonia ranged from 44 to 55 restaurants (see Figure 2). These figures place Catalonia as the region with the most award-winning restaurants in Spain, followed by the Basque Country and in recent years also by the Community of Madrid (Michelin, 2022). Thus, a geographical concentration of these restaurants is identified.

In 2013, the year in which this study began, Catalonia had 49 Michelin-starred restaurants, of which 2 had three stars, 7 had two stars and 40 had one star. Over the years, the total number has increased, reaching 53 restaurants in 2014, 50 in 2015 and 2016, 54 in 2017 and 2018, 53 in 2019 and 52 in 2020. The year with the most restaurants with stars was in 2021 with 55 award-winning restaurants. This figure could not be maintained and currently the number of restaurants has been reduced to 49, 6 less restaurants that lost the star due to closures by COVID-19 or by decision of the Guide.

Of the total number of restaurants currently awarded with Michelin stars in Catalonia, 79.6% are concentrated in the geographical areas of the provinces of Barcelona and Girona. These provinces also have restaurants with more stars, 3 with three stars and 9 with two stars. The city of Barcelona with 19 starred restaurants is the city with the most award-winning establishments in 2022.

Figure 2. Evolution of the number of Michelin-starred restaurants in Catalonia and Spain (2010-2022).

Legend: Three stars, Two stars, One star

Year / Region	Total	Three stars	Two stars	One star
2010 CAT	44	4	3	37
2010 SPAIN	137	7	11	119
2011 CAT	46	4	3	39
2011 SPAIN	139	7	14	118
2012 CAT	44	2	5	37
2012 SPAIN	137	5	17	115
2013 CAT	49	2	7	40
2013 SPAIN	147	7	17	123
2014 CAT	53	2	6	45
2014 SPAIN	161	8	17	136
2015 CAT	50	2	6	42
2015 SPAIN	169	8	18	143
2016 CAT	50	2	6	42
2016 SPAIN	174	8	20	146
2017 CAT	54	3	5	46
2017 SPAIN	182	9	23	150
2018 CAT	54	3	6	45
2018 SPAIN	195	11	25	159
2019 CAT	53	3	6	44
2019 SPAIN	206	11	25	170
2020 CAT	52	3	7	42
2020 SPAIN	214	11	29	174
2021 CAT	55	3	9	43
2021 SPAIN	224	11	31	182
2022 CAT	49	3	9	37
2022 SPAIN	228	11	33	184

1.2.2.3. Geographic concentration of Michelin-starred restaurants in Catalonia: main factors

According to the literature, the concentration of restaurants and qualified chefs in a particular territory can be explained by several factors. On the one hand, there are factors inherent to the chef, such as his or her education and training, experience, personality and leadership (Lee, 1987; Haswell and Holmes, 1989; Sharlit, 1990; Agarwal and Dahm, 2015). On the other hand, there are factors beyond the chef's control, such as the local culture and economic environment, the existence of networks and the availability of resources (Camillo *et al.*, 2008; Parsa *et al.*, 2005, 2011).

Other studies do not classify the factors according to the chef's circumstances but analyse the restaurant environment (Plaza, 2000; Aldamiz-Echevarría *et al*., 2014). Thus, the three main explanatory factors for the high concentration of restaurants in a territory are, according to these studies: proximity to markets, availability of specialized labour and low transaction costs (Table 3). Each factor is explained next.

Table 3. Explanatory factors for the geographical concentration

Factors	Explanation	References
Proximity to markets	Existence of customers interested in gastronomy	Tzeng *et al.* (2002); Mandabach *et al.* (2011)
	Existence of gastronomic tradition	Aldamiz-Echevarría *et al.* (2014)
	Existence of tourism	Jeambey (2016)
Availability of specialized labour	Existence of hospitality schools	Plaza (2000)
Low transaction costs	Proximity between restaurants and high frequency of interaction	Plaza (2000); Aldamiz-Echevarría *et al.* (2014)

Source: Based on Plaza (2000), Tzeng *et al*. (2002), Mandabach *et al*. (2011) and Aldamiz-Echevarría *et al*. (2014).

Proximity to markets

Each territory has specific characteristics that define its identity and in most cases are difficult to imitate elsewhere. Some of the factors that favor concentration are the availability of resources and the diversity of the territory, capable of providing quality, varied and seasonal products (Tzeng *et al.*, 2002; Mandabach *et al.*, 2011). In addition, an important culinary tradition and society's interest in gastronomy encourage the creation of a solid foundation for haute cuisine (Aldamiz-Echevarría *et al.*, 2014).

Gastronomic tourism is also one of the key aspects in this sector. It is a less seasonal type of tourism, becoming a solution to the tourist overcrowding in high season, as it allows diversifying supply and distributing demand throughout the year (Jeambey, 2016). It also attracts high spending, thus enabling the costly investment in research and development (R&D) that these restaurants entail (Plaza, 2000; Aldamiz-Echevarría *et al.*, 2014).

Availability of specialized labour

Another factor favouring the concentration of haute cuisine restaurants is the availability of a specialized labour market. The existence of cooking schools, or even university degrees, that meet the training requirements of future chefs is necessary for the development of the sector. As Plaza (2000) states, local cooking schools provide most of the staff that restaurants need for their operation.

Moreover, culinary education is an important factor not only because it allows the transfer of knowledge but also because it allows for networking (Parsa *et al.*, 2011).

Low transaction costs

Geographical proximity facilitates interaction between restaurants, as it creates an environment of trust by reducing transaction costs imposed by geographical distance (Aldamiz-Echevarría *et al.*, 2014). Trust between chefs is important in networking, as it facilitates collaborative processes and creates a personal code of ethical behavior (Plaza, 2000).

Thus, geographical proximity helps in the formation of networks and therefore in the interaction between individuals. These networks are useful for the creation and exchange of knowledge and thus achieve a competitive

advantage in the sector (Di Stefano *et al.*, 2014; Giuliani, 2007). In addition, proximity increases the frequency of exchange and thus develops reciprocity among network members, overcoming competing pressures that may exist within the network (Di Stefano *et al.*, 2014). According to Bathelt *et al.* (2004), repeated exchanges driven by geographical proximity stimulate information transfer, joint problem solving, and the development of trust.

Related to interaction between individuals, some authors have used social network analysis to characterise networks and to study how knowledge is transferred between individuals (see Phelps *et al.*, 2012 for a review). Aubke (2014) applies this technique to analyse the connections between 262 chefs and their jobs, in order to identify creative hotspots in Germany. The study uses a quantitative methodology to define the most central and influential chefs and also to identify some factors to explain the structure of the networks. The results show a network with a dense core, although some very prolific cooks can be found on the periphery or even isolated. Relationships between chefs with a similar number of stars occur less frequently than between chefs with a different number of stars. It is in the latter that there is a greater transmission of knowledge. One of the conclusions of this article is that, although creativity is understood as an individualised process, the social environment plays the role of external validator, accepting and adapting creative production.

At the same time, Aldamiz-Echevarría *et al.* (2014) use a qualitative methodology to analyse the case of the Basque Country. As mentioned, this region of Spain is internationally renowned for its cuisine and is one of the geographical places in the world with the most Michelin stars per square kilometer (Michelin, 2019). Through seven interviews with founding chefs of The Basque Culinary Center[1], a pioneering academic institution whose aim is to develop and promote gastronomy, the authors analyse the relationship between these chefs and their environment, identifying a cluster that has generated significant benefits for the region, the industry and its members. Table 4 summarizes the factors that explain the success of the cluster.

Regarding Catalonia, the high geographical concentration of Michelin-starred restaurants is probably the result of several factors. On the one hand,

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[1] https://www.bculinary.com/

from the point of view of supply, the deep-rooted culinary tradition of the country and the availability of a variety of local and quality products resulting from the diversity of the Catalan territory (Noguer-Juncà *et al.*, 2021), have favored the establishment of restaurants and the development of the sector. Moreover, the proximity to France and the influence of its culinary trends have been a determining factor in Catalan haute cuisine (Capdevila *et al.*, 2018).

Table 4. Success factors for the Basque haute cuisine cluster

Conclusions	Explanations
Basque culture	They have placed the principles, ideals, values, a sense of commitment and the defence of Basque culture and gastronomy above personal disputes.
Strategic management	They have applied strategic management concepts that have been key to their success.
Training and continuous improvement	They have applied continuous improvement and have been able to surround themselves with expert people, showing the necessary humility to improve, advance and innovate.
Entrepreneurship	They have enjoyed their work, investing time and money to achieve their goals.
Be up-to-date	They are constantly aware of what is going on around them even when they are not working.
Humility and personality	They can combine their humility with a strong character and personality.
Collaboration	They know that they have achieved individual and collective success through collaboration.
Word of mouth	They have used word of mouth in order to achieve synergies in terms of visibility, image and attractiveness.
Cooperation between competitors	There has been active cooperation between their competitors. Although they are rivals, they share common personal and business interests.

Source: Based on Aldamiz-Echevarría *et al.* (2014).

From the point of view of the demand, Catalonia has a gastronomically aware society (Capdevila *et al.*, 2018). In addition, tourism, attracted by the good weather and the variety of landscapes in Catalonia, has contributed to the emergence of new restaurants and the consolidation of excellent Catalan cuisine.

The success and role played by some important chefs has also contributed to the social relevance of this sector. Ferran Adrià is probably the best known Catalan chef and his restaurant El Bulli changed the rules of contemporary cuisine (Capdevila *et al.*, 2018). The cuisine developed by Adrià and his team has been followed by a large number of chefs and nowadays his generation mates have established themselves as great international chefs. The success of the Roca brothers, Carme Ruscalleda and many other chefs has enabled the dissemination of the richness and value Catalonia's current culinary offer. Haute cuisine restaurants have become a magnet for both local and foreign customers, which not only favours the haute cuisine sector, but also the rest of the restaurant industry (Presenza and Messeni Petruzzelli, 2020).

Although there are factors that contribute to concentration, such as location, the tradition of the territory, the personality of the chef or the resources available, among others, this PhD thesis focuses on two specific factors: the training of chefs and the relationships that exist among them. The choice of these two factors is based on the fact that they have been little analysed in the literature on haute cuisine. In fact, previous haute cuisine studies have focused on studying the creativity and innovation processes of these restaurants (Feuls, 2018, Albors-Garrigós *et al*., 2018, Stierand *et al*., 2014) but none of them have used these factors to analyse the concentration of fine dining restaurants in a territory.

1.2.2.4.   *List of participants*

In the following section, the participants in the study are briefly described. Both current awarded restaurants' chefs and other contributing participantes have been interviewed. This description mentions the updates of the data of some restaurants after the sample selection. The final number of participating restaurants was 54. In the first part of the project (July 2013-December 2014), chefs from 49 of the 53 Michelin-starred restaurants in Catalonia in 2014 were interviewed. In the second part of the project (February-April 2017), chefs from 5 new restaurants that had achieved a star in 2017 were

interviewed. The final sample consisted of 2 restaurants with 3 stars, 5 restaurants with 2 stars and 47 restaurants with 1 star. The list of participants is shown in table 5 and are classified according to the number of stars and within each category in alphabetical order at the moment of the study (Table 5).

Three stars restaurants

El Celler de Can Roca

The restaurant El Celler de Can Roca was founded in 1986 in Girona. It is currently run by the three Roca brothers, Joan Roca, Josep (Pitu) Roca and Jordi Roca. The restaurant currently holds three Michelin stars (the first was awarded in 1995, the second in 2002 and the third in 2010) and has been named the best restaurant in the world twice according to Restaurant Magazine (2013 and 2015). Among several awards, they have been also received the green star by Michelin (2022) and other sustainability awards.

Sant Pau

Sant Pau restaurant was founded in 1988 by Carme Ruscalleda and Toni Balam in Sant Pol de Mar (Barcelona). Under the direction of Carme Ruscalleda as head chef, the restaurant achieved three Michelin stars (the first in 1991, the second in 1996 and the third in 2006). Finally, in October 2018, the restaurant closed its doors. In 2022, their son, Raül Balam, has re-opened it.

Two stars restaurants

Les Cols

Les Cols restaurant opened in 1990 in Olot (Girona). The establishment is located in a farmhouse where the owner and head chef, Fina Puigdevall, was born. The restaurant has been awarded two Michelin stars (the first in 2005 and the second in 2010). In 2021, they were also recognized with the green star by Michelin for their sustainable practices.

Enoteca

Located in Barcelona, the Enoteca restaurant opened its doors in 2008 under the direction of chef Paco Pérez. The restaurant has been awarded two Michelin stars (the first in 2009 and the second in 2013).

Lasarte

Lasarte restaurant opened its doors in 2006 in Barcelona under the direction of chef Martín Berasategui. Since 2012 Paolo Casagrande has been the head chef and the restaurant currently holds three Michelin stars (the first in 2007, the second in 2010 and the third in 2017).

Miramar

Miramar restaurant is located in Llançà (Girona), in an establishment founded in 1939 as a beachfront inn. Under the direction of its chef, Paco Pérez, the restaurant has achieved two Michelin stars (the first in 2006 and the second in 2010).

Moments

Moments restaurant opened its doors in 2009 in Barcelona and is currently co-directed by chef Carme Ruscalleda and her son Raül Balam. The restaurant has two Michelin stars (the first in 2010 and the second in 2013).

One star

Alkimia

Alkimia restaurant opened in 2002 and is located in the city of Barcelona. Under the direction of Jordi Vilà as the chef, the restaurant was awarded a Michelin star for the first time in 2005.

L'Aliança d'Anglès

L'Aliança d'Anglès is located in Anglès (Girona), and its origins date back to 1953. In 2000, Lluís Feliu and his brother took over the establishment and in 2008 it was awarded a Michelin star. Five years later the restaurant lost the star due to the death of the chef. Today, the restaurant is called L'Aliança 1919 d'Anglès and with Àlex Carrera as the chef it has been awarded a Michelin star (2021).

L'Antic Molí

Located in Ulldecona (Tarragona), the restaurant L'Antic Molí opened its doors in 2004. Its head chef is Vicent Guimerà and under his direction, the restaurant received its first Michelin star in 2017. The restaurant received the green star by Michelin in 2021.

Els Brancs

Els Brancs is located in Roses (Girona). In 2009, the chef Javier Cabrera took over the kitchen and the restaurant achieved its first Michelin star in 2012. At the end of 2019, without Javier Cabrera in the kitchen, the restaurant lost its Michelin star.

La Boscana

La Boscana is located in Bellvís d'Urgell (Lleida) and opened as a gastronomic restaurant in 2014. Under the direction of Joel Castanyé, the restaurant achieved its first Michelin star in 2016.

Bo.Tic

Located in Corçà (Girona), the Bo.Tic restaurant opened in 2007. Its head chef is Albert Sastregener and the restaurant currently has two Michelin stars (the first in 2010 and the second in 2021).

Ca l'Arpa

Located in Banyoles (Girona), the restaurant Ca l'Arpa opened in 2008. Under the direction of Pere Arpa, it was first awarded a Michelin star in 2009. At the end of 2015 it lost the star but regained it in the following edition. In 2021 the restaurant closed its doors.

Ca l'Enric

Ca l'Enric was opened in 1882 as an inn in Vall de Bianya (Girona). Today the restaurant is run by the Juncà brothers, Jordi, Isabel and Joan Juncà and was awarded a Michelin star for the first time in 2003.

Caelis

Caelis opened its doors in 2004 in Barcelona. Under the guidance of its chef, Romain Fornell, it was awarded a Michelin star for the first time in 2005.

Can Bosch

Can Bosch restaurant was founded in 1969 in Cambrils (Tarragona). In 1982, Joan Bosch took over the kitchen and two years later, in 1984, he was awarded a Michelin star for the first time. In 2012, the restaurant incorporated the third generation of the family, represented by Arnau Bosch and Eva Perelló.

Can Jubany

Can Jubany is located in a farmhouse in Calldetenes (Barcelona). Since 1995, the restaurant has been run by Nandu Jubany and his wife, Anna Orte. In 1998 the restaurant was awarded a Michelin star for the first time.

Capritx

Capritx opened its doors in 2002 in Terrassa (Barcelona). Under the guidance of its chef, Artur Martínez, it was awarded a Michelin star for the first time in 2010. In 2017, Artur Martínez decided to close the Capritx restaurant in order to open Aürt in Barcelona two years later. The new restaurant has been awarded a Michelin star since the 2020 edition.

Els Casals

Located in Sagàs (Barcelona), the restaurant Els Casals was opened in 2000 by the Rovira family. Its head chef is Oriol Rovira and in 2008 it was awarded a Michelin star for the first time. In 2021, the restaurant obtained the green star by Michelin.

Casamar

Located in Llafranc (Girona), Casamar began operating as a hotel in 1955 under the management of the Casellas family. In 2011 and thanks to its chef Quim Casellas, the restaurant received its first Michelin star for the first time. At the end of 2021, the restaurant lost the distinction.

Cinc Sentits

Cinc Sentits opened its doors in 2004 on Aribau street in Barcelona. Under the direction of the Artal brothers, Jordi and Amèlia Artal, the restaurant achieved its first Michelin star in 2009. The restaurant is currently located on Entença street and has two Michelin stars, the second achieved in 2021.

La Cuina de Can Simon

The restaurant La Cuina de Can Simon was founded in 1988 in Tossa de Mar (Girona). The restaurant was first awarded a Michelin star in 2001, under the management of the Lorés-Gelpí family.

Disfrutar

Located on Villarroel street in Barcelona, Disfrutar restaurant opened its doors in 2014, under the direction of Eduard Xatruch, Oriol Castro and Mateu Casañas. The restaurant currently has two Michelin stars (the first was awarded in 2015 and the second in 2017). In the last edition of the 50 Best Restaurants of the World (June 2022), Disfrutar was recognised as the 3rd best restaurant in the world.

Dos Cielos

Dos Cielos restaurant opened in 2008 in Barcelona. Under the direction of brothers Javier and Sergio Torres, the restaurant achieved two Michelin stars (the first in 2011 and the second in 2018). The restaurant closed its doors in 2018 and they opened a new restaurant named "Cocina Hermanos Torres". They also achieved a green star by Michelin in 2021.

Dos Palillos

Dos Palillos restaurant is located in the Raval district of Barcelona and was opened in 2008 by Albert Raurich. It has been awarded a Michelin star since 2012.

Empòrium

Empòrium is located in the hotel of the same name in Castelló d'Empúries (Girona). Run by the Jordà family since 1965, the restaurant was awarded a Michelin star for the first time in 2016.

L'Estany Clar

Located in Cercs (Barcelona), the restaurant L'Estany Clar opened in 1987. Under the direction of its owner and chef, Josep Xandri, the restaurant was awarded a Michelin star for the first time in 2004.

Fogony

Fogony opened its doors in 1991 in Sort (Lleida) by Zaraida Cotonat and her husband, José Rodríguez. It was first awarded a Michelin star in 2006.

La Fonda Xesc

Fonda Xesc is part of a historic house dating back to 1730 in Gombrèn (Girona). Its chef is Francesc Rovira and the restaurant was awarded a Michelin star for the first time in 2009.

Gaig

Located on Còrsega street in Barcelona, the new Gaig restaurant opened its doors in 2008. Under the direction of Carles Gaig, the restaurant first received the Michelin star in 1993, a distinction it held until the end of 2019.

Hisop

Located at the Passatge de Marimon in Barcelona, the Hisop restaurant was opened in 2001 by its owner Oriol Ivern. In 2010 the restaurant was awarded a Michelin star for the first time.

Koy Shunka

Located in Barcelona, Koy Shunka opened in 2008. Its chef is Hideki Matsuhisa and it was first awarded a Michelin star in 2013.

La Llar

La Llar restaurant was opened in 1975 by Joan Viñas on the outskirts of Roses (Girona). It was first awarded a Michelin star in 1983. The restaurant closed in 2015.

Lluerna

Lluerna opened its doors in 2001 in Santa Coloma de Gramenet (Barcelona). Under the direction of Víctor Quintillà in the kitchen and Mar Gómez in the dining room, the restaurant was awarded its first Michelin star in 2013. In 2021 they were also recognized with the green star by Michelin.

Les Magnòlies

Les Magnòlies is located in Arbúcies (Girona) and was opened in 1996 under the direction of Isidre Fradera and Roser Gumà. It was awarded a Michelin star for the first time in 2012.

Malena

Located in Gimenells (Lleida), Malena opened in 2008. Under the direction of Josep Maria Castaño the restaurant was awarded the Michelin star for the first time in 2000. It lost the star in 2004 but regained it and has held it since 2014.

Manairó

Located on Diputació street in Barcelona, Manairó opened its doors in 2003. Its chef is Jordi Herrera and was first awarded a Michelin star in 2008. It lost it in 2015.

Mas Pau

The hotel-restaurant Mas Pau was opened in 1976 in Avinyonet de Puigventós (Girona). In 1982 it was awarded a Michelin star for the first time and Xavier Sagristà and Toni Gerez joined in 1994. The restaurant closed in 2015 and in 2018 the same team received the first star for the restaurant Castell Peralada. Currently the restaurant's chef is Javier Martínez.

Massana

Located in Girona, Massana was opened in 1986 by its owner and chef, Pere Massana and his wife, Ana Roger. It was awarded a Michelin star for the first time in 2007.

Les Moles

Located in Ulldecona (Tarragona), Les Moles restaurant opened in 1992. Under the direction of Jeroni Castell in the kitchen, the restaurant was awarded a Michelin star for the first time in 2014.

Nectari

Located in Barcelona, the restaurant Nectari opened its doors in 2008 under the direction of Jordi Esteve. It was awarded a Michelin star from 2012 to 2018.

Neichel

Neichel was opened in 1981 in Barcelona under the direction of Jean Louis Neichel. Neichel, who had already won a Michelin star for the restaurant El

Bulli in 1976, also won it for the first time for the restaurant Neichel in 1983. The restaurant closed in 2015.

L'Ó

L'Ó restaurant is located in the Món Sant Benet complex in Sant Fruitós de Bages (Barcelona). In 2013 the chef Jordi Llobet was awarded the Michelin star for the first time for the restaurant. Currently the kitchen is directed by the chef Ivan Margalef, who has maintained the star.

Rincón de Diego

Rincón de Diego was opened in 1983 by its owner and chef Diego Campos in Cambrils (Tarragona). It was first awarded a Michelin star in 2005.

Roca Moo

Roca Moo restaurant was a restaurant located in the Omm hotel in Barcelona. It was opened in 2003 under the guidance of the Roca brothers. The restaurant was first run by Felip Llufriu, then by Juan Petrel and finally by Rafa Panatieri. It was first awarded a Michelin star in 2006 and closed its doors in 2018.

Sala

Located in Olost (Barcelona), Fonda Sala is an establishment that has belonged to the Sala family since 1959. Since the 1980s, Antoni Sala has been its chef and manager. The restaurant was awarded a Michelin star for the first time in 1992. Today it is still run by Toni Sala with the collaboration of his sons, Toni Sala (junior) in the kitchen and Sergi Sala in the dining room.

Saüc

Saüc was initially opened in Passatge Lluis Pellicer in Barcelona in 2002 but moved to the Ohla hotel in 2011. Under the direction of Xavier Franco, it was awarded the Michelin star for the first time in 2007. The restaurant closed in 2016.

Tickets

Tickets restaurant opened in Barcelona in 2011 under the direction of Albert Adrià and Iglesias Brothers and Fran Agudo as the chef. It first received a Michelin star in 2013 and kept it until its closure in 2021.

Els Tinars

Located in Llagostera (Girona), the origins of Els Tinars date back to 1918. Currently run by the Gascons brothers, Marc Gascons in the kitchen and Elena Gascons in the dining room, the restaurant has held a Michelin star since 1986.

Torreó de l'Indià / Villa Retiro

Located in Villa Retiro resort of Xerta (Tarragona), Villa Retiro restaurant (formerly Torreó de l'Indià) is run by chef Francesc López. The restaurant was first awarded a Michelin star in 2010. In 2017, the same chef was awarded another star for his Xerta restaurant located in Barcelona.

Tresmacarrons

Located in El Masnou (Barcelona), the Tresmacarrons restaurant was opened by Miquel Aldana in 2009. It was awarded its first Michelin star in 2015.

Via Veneto

Via Veneto was opened in 1967 in Barcelona. Under the direction of Josep and Pere Monje (father and son), the restaurant has a Michelin star, achieved for the first time in 1975.

41º

41º restaurant opened its doors in Barcelona in 2011 under the direction of Albert Adrià and Iglesias Brothers and Oliver Peña as the chef. In 2013 it was awarded a Michelin star for the first time. The restaurant closed in 2015.

Other participants without stars at that moment

Albert Adrià

Albert Adrià has co-directed several restaurants in Barcelona. Five of them were awarded a Michelin star: Tickets, Enigma, Hoja Santa, Pakta and 41º. Most of them are now closed and the establishments have changed names and owners. Tickets is now called Teatro, Hoja Santa, Come and Pakta,

Alapar. The only one still under the tutelage of Albert Adrià is Enigma, which was announced to reopen in 2022.

Ferran Adrià

Ferran Adrià was chef and co-owner of the restaurant El Bulli until 2011. Under Ferran Adrià's direction, El Bulli restaurant regained its second star in 1990 and achieved its third star in 1997. It was also named best restaurant in the world five times by Restaurant Magazine (2002, 2006, 2007, 2008 and 2009).

Toni Massanés

Toni Massanés is a chef and journalist by profession and is currently the director of the Fundació Alícia.

Xavier Pellicer

Xavier Pellicer has worked as a chef in several restaurants, including Can Fabes, Àbac and Céleri, with three, two and one star respectively.

Antonio Sáez

Antonio Sáez has recently opened Xuba in Barcelona. Previously he had managed the kitchens of the Lasarte and Hotel Arts restaurants, among others.

Table 5. List of participating restaurants and chefs (at the moment of the study)

Restaurant	Chef interviewed
El Celler de Can Roca	Joan Roca
Sant Pau, Moments	Carme Ruscalleda
Les Cols	Fina Puigdevall
Enoteca	Javier Méndez
Lasarte	Paolo Casagrande
Miramar	Paco Pérez
Alkimia	Jordi Vilà
L'Aliança d'Anglès	Lluís Feliu
L'Antic Molí	Vicent Guimerà
Els Brancs	Javier Cabrera
La Boscana	Joel Castanyé
Bo.Tic	Albert Sastregener
Ca l'Arpa	Pere Arpa

Restaurant	Chef interviewed
Ca l'Enric	Jordi Juncà
Caelis	Romain Fornell
Can Bosch	Joan Bosch
Can Jubany	Nandu Jubany
Capritx	Artur Martínez
Els Casals	Oriol Rovira
Casamar	Quim Casellas
Cinc Sentits	Jordi Artal
La Cuina de Can Simon	Xavier Lorés
Disfrutar	Eduard Xatruch, Oriol Castro i Mateu Casañas
Dos Cielos	Javier Torres i Sergio Torres
Dos Palillos	Albert Raurich
Empòrium	Salvador Jordà (Joan Jordà i Màrius Jordà)
L'Estany Clar	Josep Xandri
Fogony	Zaraida Cotonat
La Fonda Xesc	Francesc Rovira
Gaig	Carles Gaig
Hisop	Oriol Ivern
Koy Shunka	Hideki Matsuhisa
La Llar	Joan Viñas
Lluerna	Víctor Quintillà
Les Magnòlies	Víctor Trochi
Malena	Josep Maria Castaño
Manairó	Jordi Herrera
Mas Pau	Xavier Sagristà
Massana	Pere Massana
Les Moles	Jeroni Castell
Nectari	Jordi Esteve
Neichel	Jean Louis Neichel
L'Ó	Jordi Llobet
Rincón de Diego	Diego Campos
Roca Moo	Felip Llufriu
Sala	Antoni Sala
Saüc	Xavier Franco
Tickets	Fran Agudo
Els Tinars	Marc Gascons
Torreó de l'Indià	Francesc López
Tresmacarrons	Miquel Aldana
Via Veneto	Pere Monje
41°	Oliver Peña

Restaurant	Chef interviewed
	Albert Adrià
	Ferran Adrià
	Toni Massanés
	Xavier Pellicer
	Antonio Sáez

Source: Own elaboration.

1.3. Covid-19 impact

The Covid-19 crisis has had a serious impact on economies around the world. Measures taken by governments to curb the spread of the virus and reduce travel and tourism, as well as restrictions on bars and restaurants, have significantly affected the hospitality industry. The pandemic has disrupted individual routines and affected people's quality of life (Kartari *et al.*, 2021). For example, the restrictions resulting from lockdowns have increased home-cooked food and take-away distribution, reducing social contact among the population and altering restaurant business models (Gavilan *et al.*, 2021).

Thus, beyond its importance, the sector is also affected by economic crises and pandemics. In fact, according to a study conducted jointly by Bain & Company and the professional services company Ernst & Young (EY), this is a particularly fragile industry and vulnerable to economic shocks and crisis (Table 6). Despite the uncertainty about the specific duration and severity of the crisis, this study also details the four phases of the evolution of the Covid-19 crisis.

Table 6. Causes and impact evolution of the COVID-19.

Vulnerability of the sector to crises	
Causes	**Brief explanation**
High fragmentation and high number of small businesses	The total hospitality sector has more than 315 thousand businesses, 70% with less than 3 employees.
Small profit margin	Margin around 6% compared to the margins of 13% of the average of all sectors.
Low level of capitalization	Capitalization levels are low, with a net worth of 34% compared to an average of 50% at the national aggregate level.
Low liquidity	Little liquidity. 50% of businesses could bear only about a month of fixed operating expenses without recourse to financing (either external or through savings).

Evolution of the impact on the sector	
Stages	**Brief explanation**
Lockdown	An almost total cessation of activity and income generation, with the exception of home deliveries.
Restricted opening	Slow recovery of activity with gradual lifting of restrictions.
Demand in transition	Opening without restrictions, but with an initial demand limited by the fear of contagion and the decrease of tourism.
Structural change	Recovery of a level of activty close to the pre-crisis period but with lower demand and a change in habits.

Source: Bain and Ernst & Young (2020).

The effects of pandemic are very perceptible, to the extent that one of the sectors most affected by Covid-19 was the tourism and hospitality industry (Zhang *et al*., 2021). One of the first activities affected in the hospitality industry was the restaurant sector. As the virus was transmitted through the air, people started to avoid large gatherings, especially in closed establishments, which consequently damaged the restaurant business (Sardar *et al*., 2022). Among the effects caused by Covid-19, Sardar *et al*. (2022), highlight four groups of factors: economic, social, technological and political (Figure 3). From the restaurant owner's point of view, the most damaging effect is the economic one since in many cases they have been forced to reduce the number of employees and ensure social distancing and proper sanitation, which increased costs and even resulted in business closures.

Figure 3. Effects of Covid-19 on the restaurant business
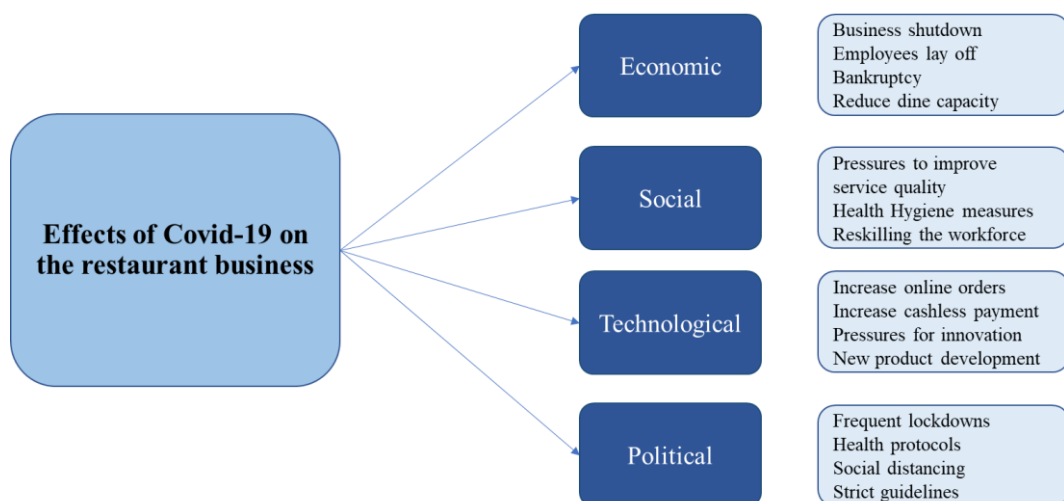
Source: Sardar *et al*. (2022).

It is worth mentioning that this thesis does not cover the effects of the pandemic as the data collection and analysis were carried out before the outbreak of Covid-19. However, future lines of research that take into account this new situation are proposed in the Conclusions section.

1.4. Research overview

This section presents the objectives of the thesis and the structure of the main chapters. The main objective of this thesis is to analyse specific factors that explain the high concentration of Michelin-starred restaurants in Catalonia. In order to achieve this objective, four specific objectives and five research questions (RQs) are set out.

1.4.1. Objectives

As has been shown in the previous sections, the hospitality and the gastronomy sectors are very important for society both economically and socially. It is not surprising that, according to the literature, it is one of the most analysed sectors, due to its level of standardisation at all levels (Casadesús *et al.*, 2010; Alonso-Almeida *et al.*, 2013), also shown currently with the pandemics. There are a variety of management system standards that are applicable to the gastronomic sector, including ISO 9001, ISO 22000, the Spanish "Q" for tourism quality and the Michelin star system. Taking this into consideration, the first specific objective is described below:

(1) Specific objective 1: to analyse and compare the existing management system standards (MMSs) in an area of the hospitality sector that has grown in importance in recent years: the gastronomic sector. Specifically, the most important management system standards in this sector are ISO 9001, ISO 22000, the Spanish "Q" and the Michelin star system and their comparison aims to identify what similarities and differences exist among them in terms of content and the diffusion process.

After analysing the management system standards of the gastronomic sector, it can be seen that the Michelin star system has its own characteristics that differentiate it from the rest of the quality standards. It is therefore decided to analyse the Michelin star system in depth in the context of the restaurant sector. In order to do so, the success factors of this sector are first identified and classified, according to the existing literature. After that, the factors that might explain the high concentration of Michelin-starred restaurants in a

region are proposed. The selection of Catalonia as the territory to be analysed is due to the large number of gastronomic restaurants and the fact that it is the region of the Iberian Peninsula with the highest number of Michelin stars. Hence, the second specific objective of the thesis is the following:

(2) Specific objective 2: to analyse specific success factors in the restaurant sector in order to propose which factors explain the high concentration of Michelin-starred restaurants in a given territory. Based on the identification of these factors, the aim is to analyse two factors: (1) the education and (2) the network creation, to explain the success of haute cuisine in Catalonia.

After identifying and proposing explanatory factors for the high concentration of restaurants in a given territory, it was decided to analyse the education and training of chefs in depth. This analysis will allow the identification of the most important aspects of the training of chefs in gastronomic restaurants and detect if there is a common pattern of training or the characteristics of their training can be grouped. Thus, the third objective is described as follows:

(3) Specific objective 3: To analyse in depth one of the factors proposed as explanatory of the high concentration of Michelin-starred restaurants in Catalonia, the education and training of their chefs. The aim is to identify a common pattern of training and to explain the most important elements of chefs' education.

Another of the factors detected is the creation of networks based on the relationships between chefs. According to the existing literature, relationships allow the exchange of information and the creation of knowledge. Therefore, the relationships between chefs and their most important aspects will be analysed. Thus, the fourth objective of this thesis is:

(4) Specific objective 4: To analyse the other factor proposed as explanatory of the high concentration of Michelin-starred restaurants: the network creation. Through the analysis of the elements and implications of the relationships among chefs, it seeks to identify the most important aspects that enhance the generation of ideas and the exchange of knowledge in haute cuisine.

The research questions derived from the specific objectives are the following:

RQ1: What are the similarities and differences in terms of content and diffusion process of the existing management system standards in the gastronomy sector?

RQ2: What factors explain the concentration of Michelin-starred restaurants in a territory?

RQ3: What education and training do haute cuisine chefs receive and what are the most important aspects?

RQ4: Are there clusters of haute cuisine chefs with a specific training pattern?

RQ5: What elements of the relationship between chefs favour knowledge transfer and what effects do they have?

1.4.2. Structure of the main-body chapters

The main chapters (2-5) are written in the format of four independent but interrelated academic articles in the sense that all four contribute to the main objective. Each chapter is associated with one of the specific objectives described. Table 7 shows the relationship between the chapters and the specific objectives and research questions. In addition, the research model is shown in Figure 4. It summarizes all the objectives of this thesis and facilitates the interpretation and understanding of the relationships between them.

All four chapters are empirical research studies. Due to the importance of the restaurant sector in developed economies, it was decided to analyse in Chapter 2 the main management system standards in the gastronomic sector. This analysis aims to compare the content and difussion process of the ISO 9001, ISO 22000, the Spanish "Q" and the Michelin star system. This study shows that the Michelin star system has similarities with the other management system standards but also significant differences. The specificities of the Michelin star system require a deeper analysis in order to identify what special aspects characterise the Michelin star system. Therefore, Chapter 3 analyses the restaurant sector from the point of view of haute cuisine. First, the success factors in the restaurant sector are analysed and classified through a content analysis. Following this classification and analysing a sample containing almost all Michelin-starred chefs in Catalonia in 2014, two factors are proposed. These two factors are the education of chefs and the creation of networks, both little analysed in the literature of

haute cuisine restaurants and are proposed as explanatory factors for high concentration of fine dining restaurants in a given territory. The following two chapters deal with these two factors separately and in depth.

Chapter 4 expands the sample to reflect the changes in the list of Michelin-starred restaurants in Catalonia between 2014 and 2017. As mentioned above, the objective of this chapter is to analyse the education and training of haute cuisine chefs in order to identify the most important aspects of chefs' education and to see if there is a common pattern of training. Chapter 5 also has the extended sample and aims to analyse the relationships among the chefs. This analysis shows the most outstanding aspects of the relationships between the members of the sample and the role that the relationships among the chefs play in the creation and transfer of knowledge in the haute cuisine sector.

Thus, the structure of the four central chapters of this thesis (Figure 4) starts from a more general topic, the comparison of standards in the gastronomy sector, and leads to a more concrete one which is the analysis of two specific factors that explain the concentration of Michelin-starred restaurants in a territory.

Figure 4. Thesis research model
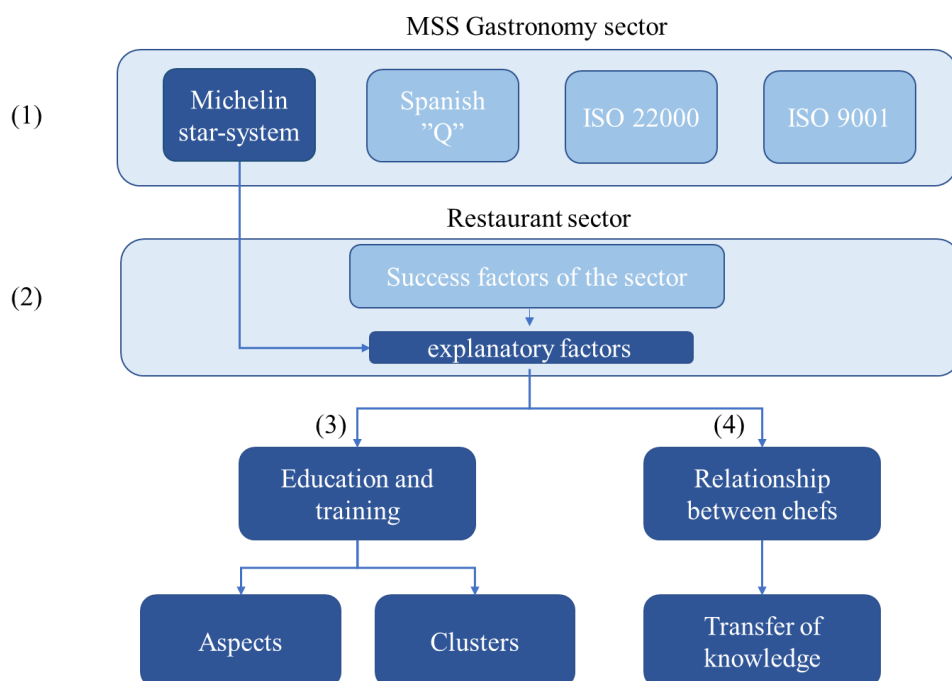
Specific objectives (1) – (4) indicated in parentheses.

Source: Own elaboration.

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Table 7. Relationship between chapters and objectives

Chapter	Title	Specific objective	Research questions
Chapter 2	Gastronomy management: A comparative analysis of the existing management system standards	(1) To analyse and compare the existing MMSs in the gastronomy sector.	RQ1: What are the similarities and differences in terms of content and diffusion process of the existing management system standards in the gastronomy sector?
Chapter 3	Analysis of the Catalan Haute Cuisine Success: The Role of Education and Network Creation	(2) To analyse specific success factors in the restaurant sector and propose explanatory factors for the high concentration of Michelin-starred restaurants in Catalonia	RQ2: What factors explain the concentration of Michelin-starred restaurants in a territory?
Chapter 4	Analysis of the education and training of Haute Cuisine chefs: Is there a common pattern?	(3) To analyse the education and training of chefs	RQ3: What education and training do haute cuisine chefs receive and what are the most important aspects? RQ4: Are there clusters of haute cuisine chefs with a specific training pattern?
Chapter 5	Knowledge transfer in haute cuisine: the relationship between chefs as an enabler factor	(4) To analyse the relationship between cooks as a facilitating factor for knowledge transfer in haute cuisine	RQ5: What elements of the relationship between chefs favour knowledge transfer and what effects do they have?

Source: Own elaboration.

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1.5. Contributions derived from this thesis

The contributions derived from the completion of this thesis are listed in Table 8. This table also shows the relationship of the contributions with the chapters of the thesis. As mentioned above, this thesis merges four articles corresponding to its main chapters. However, two already published books are also included as contributions derived from the thesis.

Table 8. Contributions derived from this thesis

Authors	Title	Type	Status	Publication details	Relationship with this thesis
Bernardo, M., Arbussà, A. and **Escalante, R.**	Cuina de relacions. Anàlisi de la concentració geogràfica de restaurants amb estrelles Michelin a Catalunya	Book	Published (Bernardo *et al.*, 2016).	Edicions de la Universitat de Barcelona, Barcelona; Servei de Publicacions de la Universitat de Girona, Girona.	Derived contribution
Bernardo, M., **Escalante, R.,** Roca, J. and Arbussà, A.	Gastronomy management: A comparative analysis of the existing management system standards	Academic article	Published (Bernardo *et al.*, 2017).	*International Journal of Quality & Reliability Management,* Vol. 34 No. 2 (Special Issue), pp. 163-175. DOI: 10.1108/IJQRM-05-2015-0068	Chapter 2
Escalante, R., Bernardo, M., Roca, J. and Arbussà, A.	Gastronomy management: a comparative analysis of the existing quality standards	Conference	Published (Escalante *et al.*, 2014).	*Proceedings book of the 1st International Conference on Quality Engineering and Management,* pp. 211-220	Previous version of Chapter 2
Bernardo, M., **Escalante, R.** and Arbussà, A.	Analysis of the Catalan Haute Cuisine Success: The Role of Education and Network Creation	Academic article	Published (Bernardo *et al.*, 2018).	*Journal of Evolutionary Studies in Business,* Vol. 3 No. 1, pp. 84-111. DOI: 10.1344/jesb2018.1.j038	Chapter 3
Bernardo, M., **Escalante, R.** and Arbussà, A.	El éxito internacional de la cocina catalana. Más allá de la creatividad y la innovación	Book	Published (Bernardo *et al.*, 2019).	Edicions de la Universitat de Barcelona, Barcelona	Derived contribution

Authors	Title	Type	Status	Publication details	Relationship with this thesis
Escalante, R., Bernardo, M. and Arbussà, A.	Analysis of the education and training of Haute Cuisine chefs: Is there a common pattern?	Academic article	Submitted (under review, R1)	*Creative Industries Journal*	Chapter 4
Escalante, R., Bernardo, M. and Arbussà, A.	Knowledge transfer in haute cuisine: the relationship between chefs as an enabler factor	Academic article	Published (Escalante *et al.*, 2022)	*Journal of Culinary Science & Technology* DOI: 10.1080/15428052.2022.2087578	Chapter 5

Source: Own elaboration.

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CHAPTER 2. GASTRONOMY MANAGEMENT: A COMPARATIVE ANALYSIS OF THE EXISTING QUALITY STANDARDS [2]

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[2] This chapter has been adapted from Bernardo *et al*. (2017).

Abstract

Purpose: The aim of this paper is to analyse and compare the existing management system standards in the gastronomy sector.

Design/methodology/approach: Based on secondary data, the most implemented management system standards within this sector are analysed, namely the ISO 9001 focusing on the sector of 'hotels and restaurants', the ISO 22000, the "Q" Spanish tourism-specific standard, and the Michelin stars system.

Findings: The results, although descriptive, show differences among them. Regarding the content, the main difference between the documented management system standards and the Michelin stars system is in the evaluation and certification process, as it is known and planned in the former group but not in the latter. The scope is also different, as the former group refers mainly to the process and the latter to results. The diffusion results confirm the increase in sectoral management system standards.

Originality/value: Although studies analysing the importance of sectoral standards have been published, this study is one of the first focusing on four different management system standards in the gastronomy sector. Implications for both practitioners and academia are also discussed.

Keywords: Michelin stars system, ISO 9001, "Q" Spanish standard, management system standards, gastronomy sector

2.1. Introduction

The standardization of management systems (MSs) phenomenon has grown in recent years (ISO, 2014a). According to the available data, the most widespread MS standards are those published by the International Organization for Standardization (ISO): more than a million certificates for ISO 9001 (ISO, 2014a), the quality management system (QMS) and more than 250,000 organizations certified against ISO 14001 (ISO, 2014a), the environmental management system (EMS). Other management system standards (MSSs) have also been implemented and certified within organizations, such as those for occupational health and safety (OHSAS 18001), social responsibility (SA 8000), food safety (ISO 22000), and energy (ISO 50000), among others.

One of the topics that has risen in interest regarding the future of these MSSs is analysing their diffusion. It could be analysed from three main points of view (Llach *et al.*, 2011; Marimon *et al.*, 2011, Alonso-Almeida *et al.*, 2013): factors (i.e., the reasons of the widespread of MSSs within and outside organizations and countries), model (i.e., the different stages of diffusion and evolution forecasting), and scope (i.e., to what extend is the analysis done, at the world level, country level or sectoral level).

The interest for this last aspect of diffusion is increasing both in the academia and in the practitioner field as it can condition the strategy of both normalization bodies and organizations. The existing literature forecasts that sectoral MSSs will take the place of the generic MSSs such as ISO 9001 and ISO 14001. In this line, one of the most analysed sectors, because of its normalization level at all degrees, has been the hospitality sector in general and some studies focused on hotels (Casadesús *et al.*, 2010; Alonso-Almeida *et al.*, 2013).

Taking this into consideration, the aim of this paper is to analyse and compare the existing management system standards regarding content and diffusion in another area of the hospitality sector that has increased in importance in recent years: the gastronomy sector.

The remaining of the paper is structured as follows. Next to this section, the literature review is posed considering both the content and diffusion of management system standards within the gastronomy sector. Then, the

methodology and results are presented and finally the main conclusions are discussed.

2.2. Literature review

The literature review is divided into two subsections. The first is presenting the analysis of the different management system standards, based on their content. The second presents the review of the MSSs diffusion.

2.2.1. Content of management system standards

The management system standards analysed in this paper include general standards, i.e.: quality management system (QMS) based on the generic ISO 9001 and sectoral standards, i.e.: ISO 22000 for food safety, the "Q" Spanish standard and the Michelin stars system. Following a brief description of each MSS analysed is presented and then the comparison among them.

MSSs description

The ISO 9001 is an international standard that "*specifies requirements for a quality management system where an organization: a) needs to demonstrate its ability to consistently provide products that meets customer and applicable regulatory requirements, and b) aims to enhance customer satisfaction through the effective application of the system, including processes for continual improvement of the system and the assurance of conformity to customer and applicable regulatory requirements*" (ISO, 2008). It can be implemented in all organizations "*regardless of type, size and product provided*" (ISO, 2008). According to the standard general requirements, "*the organization shall establish, document, implement and maintain a quality management system and continually improve its effectiveness in accordance with the requirements of this International Standard*" (ISO, 2008).

The ISO 22000 is an international standard that "*specifies the requirements for a food safety management system where an organization in the food chain needs to demonstrate its ability to control food safety hazards in order to ensure that food is safe at the time of human consumption*" (ISO, 2005a). It can be implemented in all organizations, "*regardless of size, which are involved in any aspect of the food chain and want to implement systems that consistently provide safe products*" (ISO, 2005a). As reported in the standard, "*the organization shall establish, document, implement and maintain an*

effective food safety management system and update it when necessary in accordance with the requirements of this International Standard" (ISO, 2005a). According to the standard, the normative reference is the ISO 9000 (ISO, 2005a), the same as for the ISO 9001 (ISO, 2008).

The Spanish tourism-specific "Q" standard, from now on the "Q" Spanish standard, has two aims. The first is "*to provide the Spanish touristic organizations with a MSs and the improvement of the quality of their products and services, which allow them to create an adequate competitive advantage to face the new challenges that the market is posing*" (ICTE, 2014). The second is "*to achieve the recognition of Spain as a destination with quality. The system emphases the concept of Spanish Touristic Quality as an aspect of differentiation in the international markets and the will to collaborate with all the agents involved*" (ICTE, 2014). According to the MS, it is compatible with the QMS that could be implemented within the organization (ICTE, 2014).

The Michelin start system has not published any document with the requirements neither the specific criteria of evaluation. The only information about the system is that it is objective and the most important aspects are the quality of products, creativity and presentation, the cook and the taste (Apicius, 2013). But it is also important the regularity of the team and the relationship quality/price (Ottenbacher and Harrington, 2007a). Differently from the management systems explained above, there are three levels of award: one star is for good restaurants in its own category, two stars for "excellent cooking which worth a detour" and three stars for an "exceptional cuisine, worth a special trip" (Michelin, 2013). Every year the Guide is published with the information of the starred restaurants in each country or region evaluated. No other information is provided.

MSSs comparison

The main aspect among them is that the ISO 9001, ISO 22000 as well as the "Q" Spanish standard are documented management system standards, affecting the process, while the Michelin stars system focuses more on the result than in the process, thus, the scope is different. Table 9 shows the common dimensions of these four management system standards in the sector following Heras (2006)'s proposed classification: geographic dimension, promulgating body, sector, organizational extend, certificability and content.

According to Heras (2006), the geographical dimension refers to where the standard is applicable, i.e., if it is international (for example ISO 9001) or national ("Q" Spanish standard). The promulgating body dimension refers to the standardizing body which is publishing the standard that could be an experienced one (as ISO), a body created to publish a specific standard or a consortia. The sector dimension classifies the standards between generic standards (as ISO 9001) or sector specific standards (as ISO 22000). The fourth dimension is labeled as organizational extend and refers to the organizational scope of the standard, i.e., if it can affect the whole organization (as ISO 9001) or specific processes (as ISO 10002 for customers' complaints). The fifth dimension divides the standards depending on their certificability (ISO 9001 is certifiable and ISO 10002 is not). Finally, the last dimension classifies the standards depending on their content: standards establishing the implementation and documentation of a MS (as ISO 9001, ISO 22000 and "Q" Spanish standard), standards for guidelines or definitions to implement MSs (as ISO 9000), standards for performance and indicators (as the Michelin stars system).

Table 9. Management system standards common elements

	ISO 9001	ISO 22000	Spanish "Q"	Michelin stars system
Geographical dimension	International	International	National	International
Promulgating body	ISO	ISO	ICTE	Michelin
Sector	General	Food chain sector	Tourism sector	Gastronomy sector
Organizational extend	Entire organization	Entire organization	Entire organization	Entire organization
Certifiability	Certifiable	Certifiable	Certifiable	Certifiable
Content	Implement. and document.	Implement. and document.	Implement. and document.	Performance (results)

Source: Based on Heras (2006), ISO (2005a, 2008), ICTE (2014), Michelin (2013)

Considering the six dimensions in Table 9, the main differences are found regarding the sector, the geographical scope and the content. Only ISO 9001 is a generic standard than can be implemented in any organization regardless

sector and size (ISO, 2008), while the rest are related to the food and hospitality sector and at the same time, only the "Q" Spanish standard is national (ICTE, 2014). On the other hand, the content (as pointed before) is different among the management systems and the Michelin stars system. The management system standards aim is to specify the requirements to implement, document, maintain and improve a management system (ISO, 2005a, 2008; ICTE, 2014), while the Michelin stars system aims to recognize the fine dining restaurants (Michelin, 2013).

Regarding the content, the most important differences are in the implementation and certification processes. For the first aspect, the documented management systems follow a similar implementation process that can be summarized into (ISO, 2005a, 2008; Biasini, 2012; ICTE, 2014): analysis of the initial situation, development (identification of processes and their interrelation, documentation creation and resources allocation), and implementation (training, internal auditing and improvement). A consultant can help in the implementation. In the case of the Michelin stars system, the restaurant has not a specific guideline or document to implement a specific process in order to achieve the award so the restaurants have to do their best because the inspectors will evaluate only the final result (Michelin, 2013).

Regarding the certification process, although voluntary in all cases, it is active in the case of documented management systems but passive in the Michelin stars system. For the MSSs (Casadesús *et al.*, 2005; Claver *et al.*, 2011) those organizations willing to obtain the certificate need to be evaluated by a certification body (third-party audit) complying with the principle of independence, i.e., the auditor or auditor team that will perfom the audit have no relationship with the organization that will be audited. The organizations apply for the certification audit and after choosing the certification body both organizations schedule and plan the audit, thus, this is an active process, the organization starts and is involved in the evaluation process. During the audit both parties collaborate and communicate, the organization audited knows the content of the audit and the criteria applied. After the audit, the third-party auditors deliver the final report to the organization and discuss the results, there is a feedback process. In the case of a positive evaluation, the organization achieves the certificate and is registered. A follow-up audit is done the year after, and the certificate should be renewed in 3-years' time. In the case of a negative evaluation, the

organization needs to implement corrective actions and, if it is the case, be audited again to evaluate if the system is complying with the MSSs requirements.

The Michelin stars system could be labeled as a single-side or passive process, as the restaurants do not know the day of the audit neither the evaluation criteria no the final report. The restaurants evaluated are those registered in the guide and some of them are evaluated to be considered for the award. The evaluation is anonymous as the inspector visits the restaurant and acts as a client, paying the bill. The restaurant is then evaluated and, in some occasions, the inspector presents itself to the restaurant and comments on some aspects of the service (Apicius, 2013) but this feedback is not the general practice. No final report or any other feedback is provided to restaurants and they only know the final result when the guide announces the restaurants awarded. In the case of the Michelin stars system, each year the restaurants are evaluated and can renew the award, achieving a higher or lower recognition or not renewing it. Thus, the organizations cannot implement corrective actions in order to improve and pass the evaluation because in the great majority of times, the restaurants do not know that they are evaluated.

These certificates could be considered also as an indicator of success. Some authors have proposed models to measure its success. Parsa *et al.* (2005) used the length of time a restaurant has been operating as an indicator of success and Camillo *et al.* (2008) classified the success factors into five groups of variables including: (1) strategic decisions, (2) competitive factors, (3) marketing, (4) resources and capabilities, and (5) owner-manager traits.

Thus, although these differences should be taken into consideration when comparing these management system standards, all of them are devoted to improve the organization's processes and results to satisfy and delight their customers.

2.2.2. *Diffusion of management system standards*

The diffusion of MSSs has been widely analysed, mainly for ISO 9001 and ISO 14001, as it allows forecasting their future and planning the best strategy for normalization bodies, organizations and academia.

Three are the main points of view to study this phenomenon: diffusion factors, model of diffusion and scope of analysis. Regarding the first point, it refers to those aspects that explain and help in the diffusion of MSSs, e.g., because of commercial exchange activities (Corbett and Kirsch, 2004), direct foreign investment, institutional support (Delmas, 2002), cultural affinity, experience with previous standards (Delmas and Montiel, 2008), supply chain (Corbett, 2006), stakeholders' pressure (Xia *et al.*, 2008), and organizational characteristics (Hashem and Tann, 2007), among others, have been discussed as enablers to expand these MSSs, based on the contagion effect, across organizations, sectors and countries.

The second refers to the model that this diffusion follows. There is consensus that the S-curve is the model that fits better regardless the scope of diffusion (Marimon *et al.*, 2006; Casadesús *et al.*, 2008). This model also allows determining different stages across the pattern: starting, taking-off, saturation and retrocessive (Marimon *et al.*, 2009; Franchescini *et al.*, 2010). The first stage refers to the starting point of the process, when only a few organizations are certifying these MSSs (beginners) and ends when a critical mass of certificates is achieved. The second stage starts when the number of certificates increases fast and exponentially, their growth takes-off, and ends when the great majority of organizations has implemented and certified the MSSs. The next phase is the last of positive growth, as it considers those organizations that does not have the certification, a littler amount, and those certifying in the last place (laggards). Once this situation is achieved, the last stage, retrocessive, contains those organizations that are not renewing, for whatever the reason, the certificate of the MSS, in other words, the decertification process begins (ISO, 2014a).

The last aspect of diffusion is the scope. It refers to the level of analysis, i.e., considering the diffusion process at the international level, country level or sectoral level, for example. Studies analising the diffusion of MSSs, specifically ISO 9001 and ISO 14001, at the international level are the most common: these studies allow introducing the model and its stages and analysing and comparing the diffusion among countries, such as in Franceschini *et al.* (2004, 2006, 2010), Marimon *et al.* (2006, 2009), Casadesús *et al.* (2008) and Heras-Saizarbitoria *et al.* (2013, 2015). At the national level, e.g., Franceschini *et al.* (2008) analysed the diffusion in Italy, and Casadesús *et al.* (2010) and Alonso-Almeida *et al.* (2013) analysed it in

Spain. The latter studies are also focusing in a specific sector, the hospitality sector. In Llach *et al.* (2011) and Marimon *et al.* (2011), the international diffusion model of ISO 9001 and ISO 14001 is analysed considering sectors of activities.

As it is understood from the previous words, all diffusion aspects are correlated and evidence of that are the possible scenarios once the saturation point has been achieved (Bernardo *et al.*, 2013). The new S-curve could be based on:

a) The renewal of an updated version of the already implemented MSSs. This scenario means increasing the internalization of the known standards to take profit of the experience in its management (Heras-Saizarbitoria, 2011)

b) The certification of an existing sector-specific standard that fits better to the organizations' activities, for example ISO 22000 or BRC for food safety (Gotzamani and Kafetzopoulos, 2012; Teixeira and Sampaio, 2012), "Q" Spanish standard for tourism (Casadesús *et al.*, 2008; Alonso-Almeida *et al.*, 2013), among others

c) The implementation of a new standard for the organization that makes it more efficient, e.g., a social responsibility MS (Castka and Balzarova, 2008), an innovation MS (Coelho and Matias, 2010), an energy MS (Coelho *et al.*, 2003), among other possibilities.

According to the existing studies, the tendency seems to be the decertification (not renewing the certificate) of the generic MSSs such as ISO 9001 and ISO 14001 (Marimon *et al.*, 2009, 2011; Franchescini *et al.*, 2010), to invest the effort and money to implement and certify sectoral MSSs, more in line and adapted to each sector requirements (Llach *et al.*, 2011, Alonso-Almeida *et al.*, 2013).

2.3. Methodology

The methodology of this paper could be labeled as hybrid as both qualitative and quantitative data have been used. Secondary data was used in both methodologies.

In order to analyse and compare the content of the management system standards, an analysis of the norms and complementary information has been done (Alonso-Almeida *et al.*, 2013). The comparison is based on the different phases of implementation and evaluation processes.

To analyse and compare the diffusion of these management system standards, quantitative data from the available resources has been used, i.e., ISO survey data (as in previous studies about diffusion of MSSs such as Marimon *et al.*, 2009, 2011; Alonso-Almeida *et al.*, 2013) and the Michelin data about starred restaurants. Although the data for the "Q" Spanish was demanded, no answer was received. The use of these data is limited as not all the years are provided (ISO 9001 for hotels and restaurants certificates for 2003 and 2005 are missing data) and the period of time is not the same for the three standards (from 2007 on, when ISO 22000 was published, all data is available). Thus, the conclusions extracted from this comparison should be taken with caution.

The study is focusing on Spain and the gastronomy sector. The former because it has a long experience in quality MSSs implementation (ISO, 2014a) and the latter, because it has grown in importance both in recognition and as economic contributor (INE, 2014). Specifically for Spain, the number of certificates and recognitions of management system standards in this sector has increase and it is considered the leading country in terms of gastronomy and awards.

2.4. Results

The results are presented separately for the content analysis and diffusion.

2.4.1. Management system standards content

The results, although descriptive, show differences in the implementation of these standards. The implementation of ISO 9001, ISO 22000 and "Q" Spanish standard are similar, as they are published documents that organizations can follow to implement and certify a management system. The Michelin stars system is different as the requirements to be met to obtain the star are not specifically published. Thus, the ISO 9001, ISO 22000 and the "Q" Spanish standard are process MSSs, while the Michelin stars system refers to the results. However, all of them are compatible and a restaurant can have the three management systems implemented and certified and be awarded with one-two-three Michelin stars.

The most important difference is in the external evaluation stage. While the management systems certification audits are planned and both the auditee and auditor know all the aspects to be analyse, in the Michelin stars system only the inspector knows this information, as the evaluation in each restaurant is anonymous, so, the restaurants do not know in advance that they will be evaluated.

This last aspect is important as the internalization and compliance with requirements could be different. Internalization phenomenon has been analysed in the literature (Heras-Saizarbitoria, 2011) as the implementation and management of these quality practices can become a routine or be superficial. Although it is obvious that a good implementation and internalization is better to get benefits this could be independent of passing the certification audit (Dogui *et al.*, 2014). Thus, in the case of management system standards the certificate can be obtained if the documentation is prepared before the audit that is known but it is not the case of the Michelin stars system, as the restaurant does not know when the audit will be done and the quality performance and compliance should be of high level always (Figure 5).

Another aspect to consider is that for the management systems, those organizations with a negative evaluation have the chance to recover and implement corrective actions and be evaluated again and obtain the certificate after these corrections. The Michelin stars system does not give this opportunity to those restaurants not awarded and they will need to improve without having any feedback of non-compliance (Figure 5).

To sum up, the Michelin stars system is a recognition based on the result and the management systems are implemented to improve the process that if it is well implemented, will lead to more satisfied customers. In addition, an important difference is that Michelin does not publish the evaluation criteria or guideline understood as a standard as ISO is defining it: "document established by consensus and approved by a recognized institution that provides requirements, specifications, guidelines or characteristics that can be used consistently to ensure that materials, products, processes and services are fit for their purpose specific criteria to follow" (ISO, 2014b), but these criteria are objective enough to be used as indicators to measure the result. Nevertheless, all of them, management systems or recognitions, share some commonalities and are giving evidence of the quality level of the

organization, in this case, of the restaurant with the aim of satisfying all customers.

Figure 5. Management system standards external assessment comparison

ISO 9001/ISO 22000	'Q' Spanish	Michelin star system

| Internal assessment | Internal audit | Self-assessment | - |

| External assessment | | |

External assessment column (ISO 9001/ISO 22000 and 'Q' Spanish):
- Accredited certification body (choose)
- Application for the certification audit
- Audit planning (both auditee and auditors)
- Audit realization (collaboration auditee and auditors)
- Audit report and result
- Positive evaluation → Certificate → 3 years → Renewal audit
- Negative evaluation → Corrective actions → Positive evaluation / Negative evaluation

Michelin star system column:
- Restaurant registers the Guide
- Guide's inspector plans the audit anonymously
- Audit realization (anonymously)
- Report and result (anonymously)
- Positive evaluation → Star awarded → 1 year
- Negative evaluation → No recognition or different level
- New evaluation

Source: Own elaboration based on ISO (2005, 2008), Michelin (2013) and ICTE (2014).

2.4.2. *Management system standards diffusion*

The three MSSs with available data are analysed and compared in this section. First, all data is referring to Spanish certificates and Michelin stars system. For ISO 9001 and ISO 22000 all certificates were considered, although it could mean that the same organization has more than one certificate. The same was considered regarding the Michelin stars system, as the data used refers to the total amount of stars awarded, and not the restaurants awarded. These results are the first step of the analysis as more data are needed to conclude the study.

Figure 6 shows the evolution of the three MSSs. Considerations about the figure should be posed. The scales are different to make the comparison possible. Thus, ISO certificates are scaled in the main axis, while Michelin stars system are scaled in a secondary axis.

Regarding the ISO certificates by sectors, the first aspect to be considered is that none of them is referring specifically to restaurants and thus makes this

analysis to be taken with caution. Knowing this limitation, the growth rate of ISO 9001 certificates was high until 2008 when the growth seems to stabilize. It seems that this standard could be reaching the saturation point (in line with previous studies on diffusion of management systems, such as in Llach *et al.*, 2011; Marimon *et al.*, 2011).

Figure 6. Evolution of management system standards
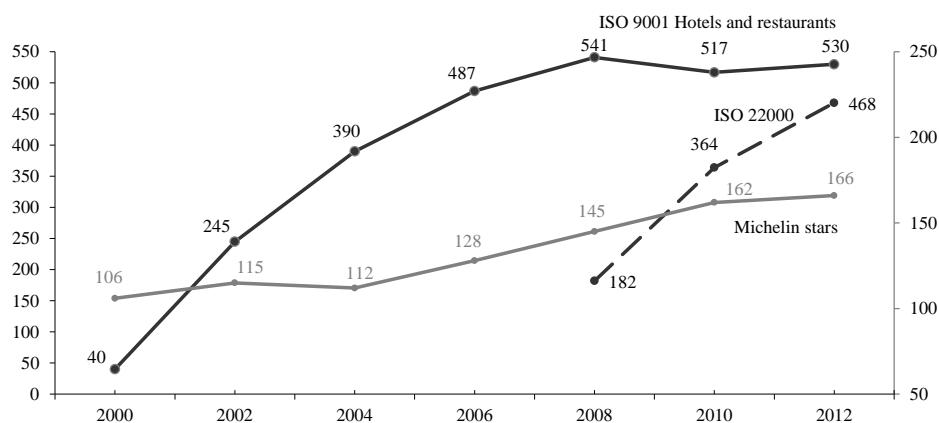
Source: ISO (2001, 2003, 2005b, 2007, 2009, 2011, 2013), Michelin (2013).

The evolution of ISO 22000 certificates is shorter (it was first published in 2005) but it seems clear that the growth rate is higher than for the ISO 9001. This is in accordance with the tendency in those sectors with a specific standard in which organizations prefer to implement and certify sectoral standards because they fit better with their activities and those more generic as is ISO 9001 (Casadesús *et al.*, 2010; Alonso-Almeida *et al.*, 2013). Also, the experience of having ISO 9001 or another management system implemented before the implementation of ISO 22000, published later, can explain the fast growth of the certifications (Corbett and Kirsch, 2001, 2004; Vastag, 2003). It can be extracted from the figure that in a short period of time, it looks like the ISO 22000 certificates will overpass the ISO 9001 certificates in this sector.

The evolution of the Michelin stars system in Spain has been smoother. From the beginning of the period analysed until 2004, the growth rate was almost constant, but from 2005 on the number of stars has grown significantly although not at the same level as for ISO certificates. The growth rate for the last years analysed seem to be stable but the available data for 2013 and 2014 show an increase in the stars awarded (178 for 2013 and 192 for 2014). Considering not the total of stars but the restaurants, in 1998, 90 restaurants

were awarded (79 restaurants with one star, 9 restaurants with two stars and 2 restaurants with three stars) and the number increases until 139 in 2012 (117 restaurants with one star, 17 restaurants with two stars and 5 restaurants with three stars). This evolution shows a tendency of the gastronomic restaurants to be awarded but also exemplifies the methodology of the institution as restaurants are passive in the process.

To sum up and comparing the evolution of the three MSSs, it seems that both sectoral standards, although different in objectives and methodology, are growing and the more generic standard, i.e., ISO 9001, is achieving the saturation point. These results contribute to the existing literature defending that a sector-specific standard is preferred by the organizations as they allow a better fit with the organization's activities as well as giving them the opportunity to differentiate from competitors and gaining competitive advantage (Llach *et al.*, 2011; Marimon *et al.*, 2011; Alonso-Almeida *et al.*, 2013).

2.5. Conclusions

The aim of this paper is to analyse and compare the existing management system standards in the gastronomy sector. Based on a hybrid methodology combining qualitative and quantitative data, the following conclusions could be extracted.

First, there are multiple management system standards in the gastronomy sector that are compatible, i.e., they can be implemented and managed together. Although each standard is different, all of them have the same objective: to satisfy customers' requirements.

Second, in terms of content, points in common are the assurance of quality in both processes and results. Main differences are in terms of scope, implementation and certification.

The ISO 9001, ISO 22000 and "Q" Spanish standard management systems specify the requirements for the implementation, documentation, maintenance and improvement of a management system, its implementation and certification are voluntary, and all parties are involved in the certification process. The certificate, renewed every three years, assures compliance with the standard requirements. Third-party audits are planned and all participants know the evaluation requirements. Michelin stars system refers to the results

as there are no guidelines for the implementation of the requirements analysed. The external evaluation by the Michelin's inspector is anonymous and the only information the restaurants know is if they are awarded or not. The award it renewed annually. Both methodologies, although the MSSs aims are different, have positive and negative aspects. For organizations is better to know the criteria and have feedback to improve but knowing when they are going to be evaluated could develop a negative behavior and only maintain the system to pass the audit. The need to keep up-to-date the MSS requirements could be the best assurance for improving clients' satisfaction.

In terms of diffusion, although the results obtained should be taken with caution, the evolution of the management system standards evidences the tendency of an increasing implementation of sectoral management system standards rather than generic like ISO 9001. In relation to the previous comment, the need to be certifiable standards should be analysed in future research. Future research is needed to evaluate the extent to which these standards are adding redundancy in the management, i.e., if ISO 9001 and the "Q" Spanish standard for example, are similar enough to consider duplication of efforts. As the diffusion of ISO 9001 shows that it has achieved the saturation point and studies in this regard are showing an increasing tendency for the sectoral MSs (Llach *et al*., 2011; Marimon *et al*., 2011), more time is needed to evaluate if this redundancy really exists.

Implications for the standardization institutions are based on the evaluation process. The gastronomy sector could be a pilot test to implement a hybrid methodology to assure the compliance of management system standards requirements and improve clients' satisfaction. Another aspect that has been discussed in the literature is the auditors' independence and competence that could be improved by a better evaluation process. Managers should consider the possibility of decertify generic standards such as ISO 9001, which is achieving the saturation point (as reported in Marimon *et al*., 2009), and invest in those sector-specific standards that fit better with their activity and allow them to satisfy customers' requirements (as proposed also in Llach *et al*., 2011; Alonso-Almeida *et al*., 2013). In addition, the sectoral standards give the opportunity to differentiate from competitors leading to the gain of competitive advantage (as pointed also in *Casadesús et al*., 2010, Alonso-Almeida *et al*., 2013). The main problem for them is also the proliferation of

many management system standards with different criteria that are considered more as image than excellence.

One of the limitations of this study is the available data, as the evolution of all the management system standards could not be analysed. In addition, there are not enough Michelin information about criteria, process and evaluation, so it is difficult to compare the Michelin star system with the MSs. Also, Spain is the only country analysed.

Finally, future research is based on analysing in-depth the Michelin stars system in order to be able to compare the criteria and propose hybrid evaluation criteria.

CHAPTER 3. ANALYSIS OF THE CATALAN HAUTE CUISINE SUCCESS: THE ROLE OF EDUCATION AND NETWORK CREATION [3]

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[3] This chapter has been adapted from Bernardo *et al*. (2018).

Abstract

This paper analyses two of the success factors of the Catalan haute cuisine: education and network creation. Fifty-four interviews with Michelin-starred restaurant chefs were done, using two questionnaires, one for each factor studied. Cross-case studies were analysed. Results show that both factors are important and mutually correlated. Education is important to have the bases to understand and enrich the current cuisine, and also act as a pool of relationships creation. Regarding the second factor, the majority of chefs started their relationships at a professional level and some became personal. A framework of collaboration, respect, admiration and joint objectives are the most highlighted key results. The future of this sector, according to the interviewees, is ensured by the new generations of chefs but also because of the society interest. Additional aspects explaining the success of the cuisine are presented. To the best of the authors' knowledge, this is one of the first works presenting the success of this cuisine studying these two factors in-depth.

Keywords: Haute Cuisine; Michelin Stars; Education; Network Creation; Success Factors

3.1. Introduction

In recent years, the hospitality sector and specifically the gastronomy sector have experienced a great success. Several classifications, awards and quality standards have appeared to proof the success this sector is experiencing (Michelin, 2015; The Restaurant Magazine, 2015; Bernardo *et al.*, 2017).

All the evaluations of culinary experiences have an important subjective component, however, one of the most internationally accepted classifications in the haute cuisine sector is the Michelin star system. The Michelin Guide, which began as a directory listing garages and petrol stations, evolved into a gourmet guide that is published in eight European country editions (Aubke, 2014). Nowadays, the Michelin star rating can be considered synonymous of quality gastronomy (Johnson *et al.*, 2005) and is accepted by the entire gastronomy sector and consumers (Winkler, 2008). The inspectors of the Guide award a restaurant into three levels with a maximum of three stars, which means:

- One Michelin star: "a very good restaurant in its category"

- Two Michelin stars: "excellent cuisine, it is worth a detour"

- Three Michelin stars: "exceptional cuisine, it is worth a special trip"

As already mentioned, all the guides have a subjective component; however, the evaluation criteria and the methodology used by Michelin are objective. The most important aspects are quality of the products, mastery of flavour and cooking techniques, the "personality" of the cook in his/her cuisine, value for money and consistency (Gastroeconomy, 2015). The inspectors of the guide visit annually the restaurants of the guide and evaluate them acting as anonymous clients. No report or feedback is provided to restaurants, and they only know the results in a ceremony that the Guide holds once a year. Each year the restaurants are evaluated and can (or cannot) renew the award or achieve a higher recognition (Bernardo *et al.*, 2017).

The edition of the Guide for Spain and Portugal began in 1910 and since then the number of restaurants with Michelin stars has not ceased to grow. Internationally, with data from 2015, France leads the world ranking with 603 starred establishments, followed by Japan with 516, Italy with 330 and

Germany with 283. In Catalonia, the total number of starred restaurants in 2016 was 50 or equivalently, 29% of 174 restaurants in Spain. In addition, about 88% of all the Catalan restaurants awarded in Catalonia are located in the provinces of Girona and Barcelona.This fact is an evidence of a certain geographical concentration of top restaurants in a specific territory, as also noticed in the media, even more since 2013, when *El Celler de Can Roca* was awarded for the first time as the best restaurant in the world according to the recognised and popular list of "The World's Best 50 Restaurants" (The Restaurant Magazine, 2015), the proliferation of culinary news on press, radio and television was overwhelming. The success of the Roca brothers and the rest of starred chefs in Catalonia has contributed to the social role of chefs and spread the wealth and value of the Catalan cuisine (Svejenova *et al.*, 2007). The haute cuisine restaurants have become tools to promote a territory and attract tourists for whom gastronomy plays an important role in their trips (Apicius, 2013). Today, the haute cuisine restaurants act as showcases of creativity, design and taste of the culture of a region (Svejenova *et al.*, 2010).

The renowned gastronomic excellence of the current Catalan cuisine is probably the result of several factors, which has mainly been analysed from the perspective of the innovation and creativity process of these chefs (Svejenova *et al.*, 2007, 2010).

Thus, the aim of this study is to analyse two additional factors not analysed in-depth before for the concentration phenomenon and their impact on the success of the Catalan haute cuisine: education and network creation. These factors together with other aspects such as the society interest, culture, products and territory could explain the geographic concentration of Michelin-starred restaurants in Catalonia (an in-depth analysis could be found in Bernardo *et al.*, 2016).

3.2.   Success Factors in Restaurants

Engle (2008) defines success factors as: "*the most efficient and effective methods of accomplishing a task or achieving a goal, based on repeatable procedures that have proven themselves over time for large number of organizations*" (Engle, 2008, 20). Nonetheless, as pointed by Cameron (1986), deciding how to measure business success is always problematic because of the difficulties in defining success.

Several classifications have been proposed for the success factors. Dickinson *et al.* (1984) classified them into internal and external factors. External factors are those that are beyond the control of the business manager such as economic climate, market conditions and competition (Boardman and Vining, 1996; Brotherton and Shaw, 1996). In contrast, internal factors involve company's competencies that could be modified and have influence in the likelihood of survival of the business, for example product quality, staff and processes and procedures (Berry *et al.*, 1997).

Taking into account the challenges and difficulties to start a business, and given that a high ratio of start-ups fails, some researchers view survival as the key factor of business success (Van de Ven *et al.*, 1984; Barney, 1997; Haber and Reichel, 2005). As noted by Van de Ven (1993), entrepreneurship studies should not focus only on behaviours of individuals but also should examine external environment. Under this view, some studies have analysed the relationship between external environment and business creation (Reynolds *et al.*, 1994) and bankruptcy (Keeble and Walker, 1994), using business survival as a success factor.

In the hospitality sector some researchers have carried out studies and proposed models about specific hospitality success factors. Geller (1985) and Goldman and Eyster (1992) identify and use some of them to the negotiations of hotel, food and beverages leases. Croston (1995) applied success factors theories to define the strengths of a successful hospitality businessman/businesswoman and make succeed hotels.

Most of the studies have focused on hotels but Parsa *et al.* (2005, 2011) and Camillo *et al.* (2008) have proposed specific models for the restaurant sector. Parsa *et al.* (2005, 2011) designed a model to improve the likelihood of success in American restaurants and Camillo *et al.* (2008) added emotional factors to Parsa *et al.* (2005, 2011)'s models for independent restaurants in San Francisco. Karim *et al.* (2011) identified the success factors of the little Malaysian restaurant sector in order to help owners focusing on their specific problems.

Camillo *et al.* (2008) suggested a classification of success and failure factors for independent restaurants in Northern California. According to it, restaurant success or failure hinges on five groups: (1) strategic decisions, (2) competitive factors, (3) marketing, (4) resources and capabilities, and (5)

owner-manager or chef traits. All the success factors obtained from the review are classified in Table 10 according to the dimensions proposed by Camillo *et al.* (2008). All of them are described below.

The first dimension*, strategic decisions*, refers to those involving a substantial amount of resources and/or generating subsequent decisions. They are complex and difficult to structure and are not a routine, as they are taken occasionally, even once. Strategic decisions are normally top management responsibility and are usually taken after thoroughly studied. Decisions such as the location (Kotler *et al.*, 1996; Parsa *et al.*, 2005, 2011; Wang *et al.*, 2011) or the business plan (Perry, 2001; Parsa *et al.*, 2005; Camillo *et al.*, 2008; Cabrera, 2015) cannot be changed in the short time. These factors, such as location, are important indicators because constitutes a means of attracting many costumers (Yang *et al.*, 2013). Nevertheless, a strategic location is insufficient to guarantee success if other factors, such as management, are inefficient or poor (Rey-Martí *et al.*, 2016).

The second dimension, *competitive factors*, joins together all factors that influence the competitive position of a restaurant in the sector. The relationships with competitors (Kotler *et al.*, 1996) as well as the performance (Ottenbacher, 2007) are key elements to succeed in the restaurant sector. Mandabach *et al.* (2011) classified the factors between external environment (general for all the companies of an economy and specific for the restaurant sector) and internal environment (operational factors of a particular restaurant), similarly to Dickinson *et al.* (1984)'s classification.

The third dimension is *marketing* and involves all activities and procedures related to customer satisfaction. In the restaurant sector the two most important variables are price (Parsa *et al.*, 2005; Gupta *et al.*, 2012; Agarwal and Dahm, 2015) and loyalty (Kotler *et al.* 1996; Agarwal and Dahm, 2015). In some cases a strong brand is also important but often depends on the parent company, which is out of the scope of this study (Itthiopassagul *et al.*, 2009; Vazifehdust *et al.*, 2011). Some of the success factors proposed, such as customer satisfaction (Brown *et al.*, 2014; Jacob *et al.*, 2014) and quality standards (Bernardo *et al.*, 2017) are currently analysed in the literature but more research is needed as well as for innovation (Ottenbacher, 2007) and creativity (Balazs, 2002; Stierand, 2012).

The fourth group of factors is labelled as *resources and capabilities*. It aims to identify the factors that differentiate the restaurants from the rest and can provide a competitive advantage. Resources are all the assets that the restaurant has to carry out its actions. These can be physical, technological, human and organizational (Détrie, 1995). The restaurant facilities (Mamalis, 2009) and the physical environment (Gupta *et al.*, 2012) are examples of key resources for the restaurant. Capabilities are skills (individual or collective) that allow a restaurant to perform specific activities and organizational routines (Détrie, 1995). Cost controls (Schmidgall *et al.*, 2002; Agarwal and Dahm, 2015), food quality (Parsa *et al.*, 2005; Gupta *et al.*, 2012) and service quality (Enz, 2004; Gupta, 2012; Chin and Tsai, 2013) are necessary capabilities in the restaurant sector.

The last dimension proposed by Camillo *et al.* (2008) is *owner-manager or chef features*. Originally this construct did not include chef traits but in most of restaurants the kitchen staff has an important role for the success of the establishment, as a matter of fact they are responsible for the service. Both business experience (Lee, 1987; Haswell and Holmes, 1989; Sharlit, 1990; Camillo *et al.*, 2008; Agarwal and Dahm, 2015) and culinary experience (Agarwal and Dahm, 2015) are basic characteristics for a successful manager. An honest, dedicated and determined leadership (Camillo *et al.*, 2008) is also commonly pointed out by successful restaurateurs.

3.3.   Haute Cuisine as a Proposed Dimension

It has been detected that, according to the existing literature, Camillo *et al.* (2008)'s classification is not covering all the success factors and, therefore, it has been decided to add an extra dimension named *haute cuisine* (see also Table 10). It refers to the specific success factors of the high-quality restaurants. Johnson *et al.* (2005) identified four success factors of thirty-six restaurants having two or three Michelin stars over a period of ten years in Europe. The key factors attributed to the haute cuisine restaurants are: (1) investment and investment types, (2) sources of financing, (3) pursuit of excellence and (4) culinary craftsmanship involved. The first two refer to the financial success of the restaurant while the pursuit of excellence and the culinary craftsmanship are related to qualitative goals.

Although the restaurant location has been analysed in the literature (Parsa *et al.*, 2005, 2011; Wang *et al.*, 2011; Tzeng *et al.*, 2002), most of the studies

are focused on the term location as a precise place in a city. Therefore, one research line to be developed is to analyse the role of a restaurant location in a broadly meaning. Each location has specific factors that are difficult to imitate in other places that are related to sociocultural and economic characteristics of its inhabitants, networking and resources availability, among others. Identifying these specific factors and characteristics of a region may help to understand the influence of location in the success of restaurants. Related to this, another factor that could be studied is association (Parsa *et al.*, 2011), weather it is formal or informal.

Related also with location is the geographical concentration. Several factors can explain the geographic concentration of restaurants in a specific territory; hence it can be divided into two groups of factors. On the one hand, the internal factors, related to the circumstances of the chef, such as his/her education (Lee, 1987; Haswell and Holmes, 1989; Sharlit, 1990; Agarwal and Dahm, 2015) or his/her personality (Kouzes and Posner, 2006; Camillo *et al.*, 2008). On the other hand, the external factors, those that are beyond chef's control. The specific culture and the economic environment of where the restaurant is located (Kotler *et al.*, 1996; Parsa *et al.*, 2005, 2011; Wang *et al.*, 2011) and the social networks created among chefs (Parsa *et al.*, 2011) and their impact on the sector and restaurants are examples of research gaps in this dimension.

Related to the social networks factor, some authors have pointed out the relationship between cooks and how this relationship makes better sharing of knowledge and also contributes to the success of the sector (Aubke, 2014; Aldamiz-Echevarría *et al.*, 2014), but more research and analysis is needed in order to explain the concentration phenomenon.

Finally, it should be mentioned that all these factors are not independent. For instance, continuous improvement is closely related to both internal and external factors. It means that restaurant location and its environment may influence the networks created with other restaurants and chefs and vice versa. Therefore, the professional and personal relationships among chefs can be an enabler for the emergence of successful restaurants in a region or country, as well as how education on culinary arts, governmental support, etc.

Table 10. Success factors in the restaurant sector proposal and their dimensions

Dimensions	Brief description	Supporting Literature
Strategic decisions		
Location	Place of the restaurant	Kotler *et al*. (1996); Parsa *et al*. (2005,2011); Wang *et al*. (2011)
Marketing and Business plan	Long-term plans that fix restaurant objectives	Perry (2001); Parsa *et al*. (2005); Camillo *et al*. (2008); Cabrera (2015)
Size	Physical dimensions, capacity	Gaskill *et al*. (1993); Parsa *et al*. (2011)
Affiliation	Belonging to a group or association	Parsa *et al*. (2011)
Quality and environmental standards	Management systems implemented	Llach *et al*. (2013)
Differentiation strategy or Theme	Specifications or type of restaurant	Kotler *et al*. (1996); Camillo *et al*. (2008); Gupta *et al*. (2012)
Competitive factors		
Competence	Adequacy in the restaurant sector	Kotler *et al*. (1996)
External environment (general and specific)	Variable outside the control of the restaurant owner: economicclimate, market conditions and competitors	Mandabach *et al*. (2011)
Internal environment (operational and personal)	Controllable variables that influence the restaurant likelihood of survival	Mandabach *et al*. (2011)
Customers	Typology of people who come to the restaurant, economic status	Mandabach *et al*. (2011)
Management of restaurant	How the restaurant is directed	Mandabach *et al*. (2011)
Positive goals	Favourable and optimistic objectives	Mandabach *et al*. (2011)
Philosophies	Principles and values applied to the restaurant	Parsa *et al*. (2005); Mandabach *et al*. (2011)
Market performance	Behaviour of the restaurant in the marketplace	Ottenbacher (2007)
Financial performance	Results of the restaurant operations in monetary terms	Ottenbacher (2007)
Employee performance	Results in workers activities and the way they were executed	Ottenbacher (2007)
Transportation	Availability of raw materials and its displacement	Tzeng *et al*. (2002)
Commercial area	Location in an area with commercial activity	Tzeng *et al*. (2002)

Dimensions	Brief description	Supporting Literature
Marketing		
Market driving pricing	Ability to influence in the prices of the market	Parsa *et al*. (2005); Gupta *et al*. (2012); Agarwal and Dahm (2015)
Loyal patrons	Ability to build customer loyalty	Kotler *et al*. (1996); Agarwal and Dahm (2015)
Marketing strategies	Methodologies to achieve marketing goals	Balazs (2002); Brown *et al*. (2014)
Market oriented strategy	Focus the marketing activities on the customer	Brown *et al*. (2014)
Development of a strong brand	Creating a well-known restaurant brand	Itthiopassagul *et al*. (2009); Vazifehdust *et al*.(2011)
Resources and capabilities		
Cost controls	Active application of procedures to limit costs	Schmidgall *et al*. (2002); Agarwal and Dahm(2015)
Positive customer relationships	Having affinity with the customer	Kotler *et al*. (1996); Camillo *et al*. (2008); Jacob *etal*. (2014)
Service quality	Staff treatment	Enz (2004); Gupta *et al*. (2012); Chin and Tsai (2013)
Family support	Family involvement	Parsa *et al*. (2005); Ghiselli *et al*. (2001); Strickland (2013)
Physical ambience	Restaurant atmosphere and cleanliness	Gupta *et al*. (2012)
Food quality	Characteristics and gastronomic level of the food served	Parsa *et al*. (2005); Gupta *et al*. (2012)
Adaptation to locality	Adjust restaurant features to local requirements	Williams (1997); Mamalis (2009)
Interaction with service staff	Communication and relationship with employees	Gupta *et al*. (2012)
Interaction with other customers	Communication and relationship with clients	Gupta *et al*. (2012)
Product served	Quality of the raw materials and processing	Mandabach *et al*. (2011)
Facilities	Characteristics of the restaurant	Mamalis (2009)
Owner-manager/chef features		
Leadership	Ability to achieve support of the staff in the accomplishment of restaurant tasks	Kouzes and Posner (2006); Camillo *et al*. (2008)
Emotional traits	Personal motivations	Camillo *et al*. (2008)
Competent management	Appropriate way to run the restaurant	Lee (1987); Haswell and Holmes (1989); Sharlit(1990); Agarwal and Dahm (2015)

Dimensions	Brief description	Supporting Literature
Prior business experience	Previous business opportunities	Lee (1987); Haswell and Holmes (1989); Sharlit (1990); Camillo *et al*. (2008); Agarwal and Dahm(2015)
Culinary experience	Accumulated gastronomic knowledge, especially of practicalmatters	Agarwal and Dahm (2015)
Business acumen	Astuteness and sharpness for restaurant business	Lee (1987); Haswell and Holmes (1989); Sharlit(1990)
Family life cycle	Specific family conditions	Parsa *et al*. (2005); Mandabach *et al*. (2011)
Personal values	Includes ethical, ideological, social and aesthetic beliefs	Brown *et al*. (2014)
Reliability	Ability to be trusted	Chin and Tsai (2013)
Empathy	Ability to identify another's (customers, employees) feelings andthoughts	Chin and Tsai (2013)
Haute cuisine		
Investment and investment types	Use of funds in gastronomic activities	Johnson *et al*. (2005)
Sources of financing	How the restaurant obtains economic resources for its activities	Johnson *et al*. (2005)
Pursuit of excellence	Philosophy of perfection	Johnson *et al*. (2005)
Culinary craftsmanship involved	Availability culinary artisans	Johnson *et al*. (2005)

Source*:* Own elaboration based on Camillo *et al*. (2008).

Thus, the aim of this study is to analyse two additional factors not analysed in-depth before for the concentration phenomenon and their impact on the success of the Catalan haute cuisine: education and network creation. These two factors come from the literature review and have been already analysed by some authors. Nevertheless, to the best of the authors' knowledge, none of them have used these factors to explain the geographic concentration of haute cuisine in a specific territory. The methodology used to test these two factors is presented in the next section.

3.4. Methodology

In this section both the participants' selection and data collection are explained.

Participants' selection

In order to achieve the research objective, the participants' selection was based on an existing and accepted sample of restaurants, which is the Michelin-starred restaurants list 2013 in Catalonia (Michelin, 2015). As explained previously, this region was selected because of its high number of awarded restaurants but also because two of them, el Bulli and El Celler de Can Roca, have been ranked in the top five positions of the World's 50 Bests Restaurants in recent years.

A pilot test with the most awarded restaurants was performed and additional chefs were added, those who did not have a Michelin star in 2013 but had had in the past and contributed to the success of the sector. The final sample was built up with 54 participants: 49 interviewees belonged to Michelin-starred restaurants in 2013 (50 chefs), three chefs with no star in 2013, but whose restaurants had, and the director of the Alicia Foundation, because of its key role in the sector.

Although some changes in the list occurred during the study (some restaurants lost the star or some chefs changed the restaurant), it was decided not to change it to avoid losing data validity.

Interviews

Data were collected by interviews, thus, applying a qualitative methodology (Denzin and Lincoln, 2011). Interviews allow collecting more in-depth information about the phenomenon analysed (Creswell, 2013).

Two different semi-structured questionnaires (Yin, 2009) were used to collect data for each of the analysed factors (see Annex 1). The advice of experts in the field was requested to review both questionnaires. The first questionnaire is about the education of each participant and the aspects asked were five:

- Courses longer than 6 months, in which, for example, the cooking vocational and education training courses were mainly classified.

- Shorter courses more focused on specialising some aspects of the cooking process, such as deserts, chocolate, etc.

- Practicum in restaurants

- Working experience in restaurants

- Conferences and seminars participation

In addition, at the end of the questionnaire, participants were asked to rate these aspects based on the importance they give to them when analysing the education portfolio of a chef. Also, an open question asked for other aspects not considered in the questionnaire that could be important to be highlighted.

For the second factor analysed, network creation, another questionnaire was applied and consisted of two main blocks: relationship among two and three Michelin-starred restaurants and relationship among one Michelin-starred restaurants. This differentiation was done because it was considered that the first group of chefs was the spill over of the sector and more information about their relationship was collected. The length of the relationship was also asked. The aspects analysed in this questionnaire were:

- Relationship with chefs of restaurants with two and three Michelin stars (personal and professional)

- Relationship with chefs of restaurants with one or none Michelin stars (personal and professional)

- Geographic concentration (interviewee's opinion on the reasons of this concentration)

- Future

The protocol applied in the interview has followed the steps shown in Figure 7. All restaurants awarded with Michelin stars in 2013 were contacted by e-mail with the presentation of the project (see Annex 2 for an example). The following step was contacting each restaurant by telephone to arrange the appointment. A pilot test was performed in July 2013 in one of the restaurants to validate the content of the questions and measure the time needed to perform both questionnaires.

The mean duration of each interview was 60 minutes to complete both questionnaires. In the restaurants with two and three Michelin stars, the interviewing team was built up with two members and in the restaurants with one or none Michelin star the interviewer was one researcher (Yin, 2009). All the interviews were recorded and only one chef asked for not being recorded. The field work started in July 2013 and finished in December 2014.

Fifty-one interviews were done face-to-face, two were self-reported and one was done through Skype.

As shown in Figure 7, a case study was built for each restaurant and then e-mailed to the chef in order to validate the content (Satolo *et al.*, 2013; Yin, 2009).

Figure 7. Protocol of data collection and validation
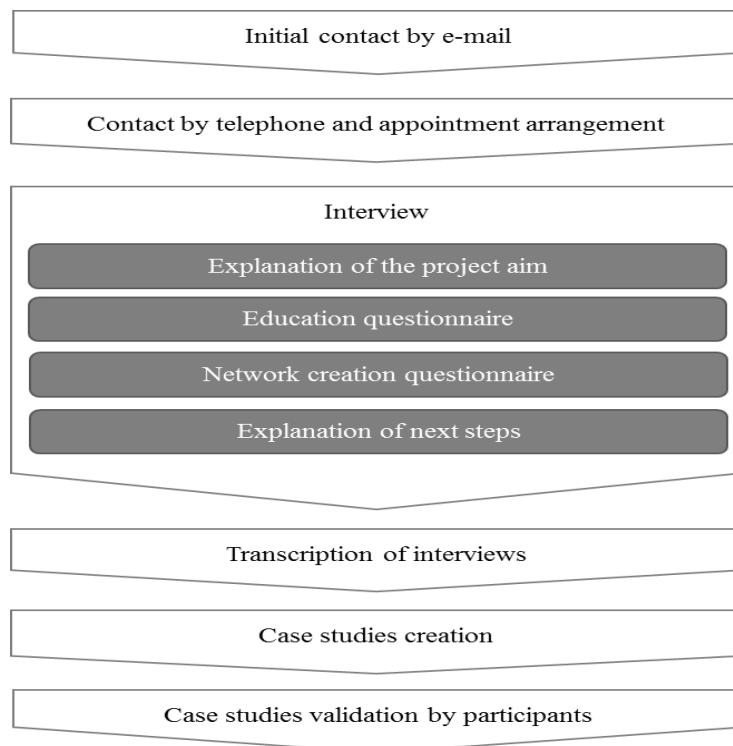
Source: adapted from Satolo *et al.* (2013).

3.5. Results

The results of the 54 interviews are summarised below. A more in-depth and wider presentation of the results can be found in Bernardo *et al.* (2016).

In this section, the results are presented by topic analysed, i.e., first the results regarding the education questionnaire and then the results related to the network creation (relationships, geographical concentration and future of the sector).

Education results

The majority of the chefs in the sample has attended vocational and education training courses related to cook combined with specialisation courses in a long-life learning. The practicum in other restaurants has been highlighted by the majority of participants as well as the labour experience in other restaurants. The difference in this case is with whom these chefs have worked. In other words, the more experienced chefs worked mainly with French chefs while the younger Catalan chefs have worked with other Catalan chefs, thus, the scope of best practices has changed.

The conferences have become one of the most important aspects in the openness of the sector. It should be taken into account that in this sector there are not patent neither intellectual property rights and thus, presenting their creations both new recipes and techniques in conferences has allowed them to register their originality and to share knowledge. Nowadays, all the participants attend and participate as speakers in the most important conferences presenting not only their creations but also explaining their experiences in managing and other practices beyond cuisine. Conferences are also a meeting point for the chefs and sometimes they are the starting point for collaborating.

Related to this aspect, ethics have been also highlighted, as it is important to reference to the creator of a technique or to whom is the dish based on when presenting. This practice makes the creator receiving the recognition deserved as well as showing the respect that these chefs have one for each other. In addition, it helps in measuring the impact of their creations, i.e., as more chefs use other chef techniques and dishes, more impact has this chef on the sector.

Finally, the chefs were also asked to rate these factors by importance level. In general terms, courses taken in the vocational and education training programs and labour experience have been the most highlighted. The practicum is also important as well as the conferences.

In addition, these chefs mentioned as important to complement the education the fact of visiting other restaurants as clients which allow them sharing knowledge with other chefs and to read gastronomic magazines and online blogs.

Network creation

Relationships

The relationships among the sampled chefs could be summarized as good, based on respect and admiration, and where each of them knows their role within the network.

As mentioned previously, the great majority of relationships start because of professional reasons and some of them become personal. The relationship has been analysed more in-depth for those chefs of two and three Michelin-starred restaurants among them and with the rest of the sample.

For these chefs, the relationship among them is close and last for more than 10 years. They meet in conferences very often and are also invited to the same initiatives and events, such as workshops or co-authors of cooking books. They also share members of their teams who want to do a practicum in one of the other restaurants. The relationship with the youngest members of this subsample is a bit different because they have not shared the same experiences and because these young chefs are working with other more experienced chefs with whom the relationship is closer.

Regarding the recipes, they can co-create for special events, but they do not do it for their own restaurants. The reason is because recipes are the key element of a restaurant and is what shows the personality and image of the restaurant and thus, this is kept private. Afterwards they would share them in conferences but not during the creation. However, if during the process of creation they have questions, they can ask for recommendations or advice to other chefs and vice versa. The relationship among these chefs and chefs with one or no Michelin star is heterogeneous. The number of participants in this subsample explains this diversity. This means that in some cases, they are close friends because they studied or worked together and, in some others, they have only met once in a conference. Another highlighted practice among these chefs is visiting their restaurants as clients which give them the opportunity of knowing each other but also share knowledge.

In addition, the chefs of the two and three Michelin-starred restaurants act as promoters of the rest of the restaurants, recommending them and making diffusion of their advances. Finally, the chefs of one or no Michelin-starred restaurants declare they follow the evolution and career of the rest of the

chefs. The more experienced and awarded chefs are the example to be followed for the sample and they have accepted this role.

The heterogeneity explained in the previous relationship could also be applied to the relationship among chefs of restaurants with one or none Michelin start. In this case, the main reason to start the relationship is because the geographic proximity, as those closer establishes first the relation. The second reason is partnership, i.e., those chefs that met in the practicum or working in a restaurant, have maintained the relationship, and also meeting in conferences or other events. The last point of relationship is belonging to specific associations such as Slow Food. These chefs highlighted that they do see each other as friends rather than as competence.

Other aspects have been also analysed, such as the chefs' opinion regarding the geographic concentration or success of the sector and the future they forecast for the sector. They are summarised below.

Geographic concentration

The participant chefs classified the success of the sector in seven main factors and they are explained below. All the factors have been considered with the same level of importance:

 1) Great chefs' contribution

The great majority of the sample highlighted that the tipping point on the evolution has been Ferran Adrià, one of the most outstanding Catalan chefs. He had been able to experiment with different products and techniques, he has created the novelty and shared it and this has given the rest the opportunity to open and to try new things.

Other chefs continued with this behaviour, such as Santi Santamaria, Carme Ruscalleda or Joan Roca, working hard and contributing positively to the sector during a long period of time, mainly in two different ways: opening the Catalan cuisine to the world and acting as knowledge transfer catalysers among the sector trough their transparency.

 2) Gastronomic culture, interest for gastronomy and socioeconomic level

Catalan society has always been very open to new experiences in gastronomy and interested in knowing these restaurants. This has also been possible for

the socioeconomic level of this society which has been able to afford this type of cuisine.

In addition, the culture and tradition are closely related to cuisine as all the celebrations are around the table.

3) Products and territory

The territory provides a huge array of different products from the sea, mountains, orchards, etc., and these products are of a high quality. There is collaboration with the local farmers to have the best products possible.

All this variety gives the possibility to cook many different dishes with local products although they are also open to introduce new products from other cultures.

4) The influence of the French cuisine

The proximity of Catalonia with France has been important as some chefs have made the practicum or worked in French restaurants.

5) Education

The role of cooking schools or vocational and education training programs, courses and practicums are also crucial to explain the success. Each generation is better trained and prepared on cooking and this is ensuring a good future too.

6) The new generation of chefs

This is related to the previous factor, as the younger chefs have learnt from Catalan chefs and have followed their steps. This generation tries to improve their former generation but looking also to the past to enrich the future.

7) The socialization of the cuisine

This means putting the haute cuisine closer to the society. Nowadays, some of these restaurants have prepared more affordable menus to arrive to other clients but also, the role of the media has made these restaurants more known. This makes people from different levels of socioeconomic characteristics to visit these restaurants to celebrate events.

Figure 8 relates the factors analysed which contribute to the success of the sector.

Figure 8. Analysed success factors of the Catalan haute cuisine
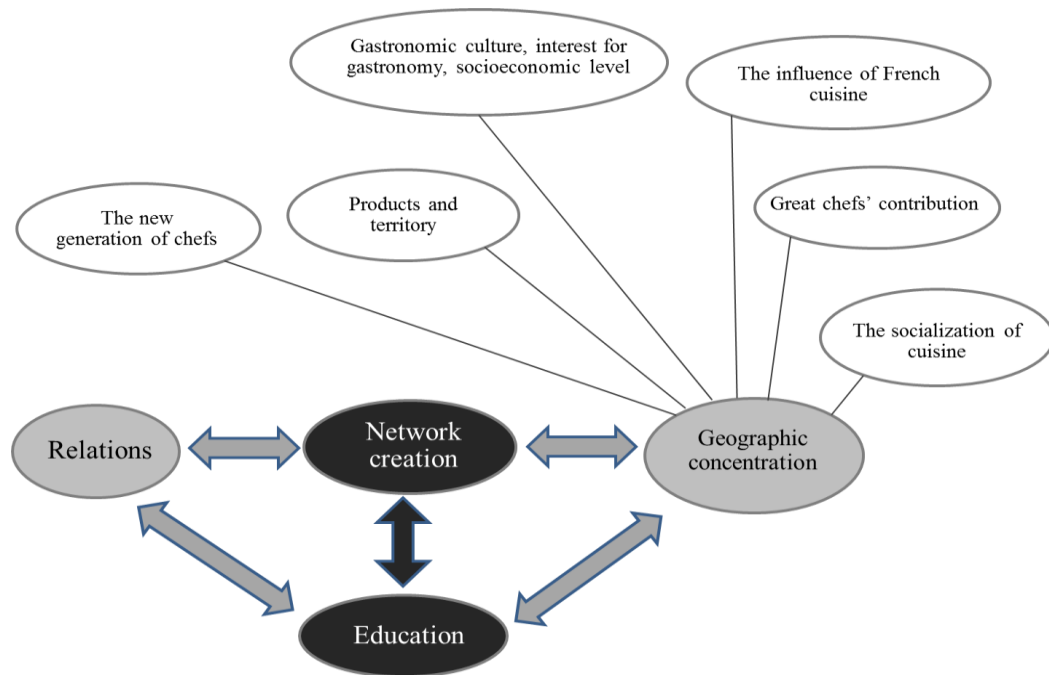
Source: Own elaboration.

The expected future

One of the most highlighted aspects has been the importance of acting with responsibility. The other, is to take profit from the role of the media in the impact of this cuisine on the society. Media have been very important to make this sector well-known for the society and professionals and this should be maintained and improved. More and more specialized magazines and periodical publications on gastronomy and haute cuisine are available not only for professionals but also for the society in general and managing this relationship is also important for the sustainable success of the sector.

Related to the sustainability but from the economic point of view, is another aspect to be improved in the future. Make these restaurants achieving good economic results to be able to concentrate in the core business will be important. A great number of chefs have diversified their businesses in order to increase their incomes such as consultancy, opening new related business, etc.

New generations of chefs are also ensuring the continuity of the sector, who have learnt from the best and are following their steps.

The touristic framework as well as the participation and interest of the society will be needed to ensure this positive and promising future.

3.6. Conclusions

This paper aimed to analyse two factors which could explain the success of the Catalan haute cuisine shown by the high geographical concentration of Michelin-starred restaurants in this territory: education and network creation. Based on a qualitative methodology in which 54 participants were interviewed and case studies built, the following conclusions could be extracted.

First, the education factor is important itself for the knowledge transfer and creation in the sector but also as a starting point for the network creation. Education on vocational and education training programs have been highlighted as important but also the working experience in other restaurants. These two factors are crucial for a chef's curricula. Another important aspect in education is conferences. These events are giving the chefs the possibility of sharing knowledge among peers, to register their creations, to gain recognition and also to establish new connections to enrich the network.

Regarding the relationship among chefs, it has been confirmed that the two and three Michelin- starred restaurants chefs are acting as spill overs for the rest of the sector. They are who represent the sector in different events and platforms but also who promote the sector. Their importance and contribution have been also mentioned by all the participants.

The relationship is based on respect, admiration, recognition, effort, dedication, hard work and collaboration. Each chef contributes to the success of the sector with their possibilities, but all are important to explain this phenomenon.

Different subnetworks could be drawn based on geographic proximity, experience, age, education, etc. Regardless these differences, the transparency, collaboration and openness of all the chefs have been mentioned as important aspects. The only aspect not covered by all these characteristics is the creation of recipes. As highlighted, the recipes for their own restaurants are not co-created as they are the sign of their personality and differentiation.

According to these chefs, the geographic concentration could be explained by several factors, such as the products and territory, the interest and culture of society, the influence of great chefs and French chefs, the new generations, the education, and the socialization of gastronomy. All these factors are related among them and transferred to new generations.

The future of the sector is clear for them: positive. A set of aspects will contribute positively to this future: responsibility, society acceptance, education and relationship with the media.

Implications of this project are for the academia, for chefs and also for the government. For the academia because this is one of the first studies, to the best of the authors' knowledge, to analyse the success of haute cuisine based on education and network creation. This opens a new research line on this topic to be analysed from different perspectives. Implications for chefs, because this study reinforces their behaviour and encourages them to continue collaborating and maintaining these relationships. Governments now have evidences that promoting collaboration within the sector is a source to create value for the economy and culture of the country. It is worthy to invest on it as it will have impact on complementary sectors such as tourism, which is very important in Spain.

The main limitation of this paper is geographical. Only one territory, with specific characteristics, was analysed not allowing the generalization of the results.

Future research will be based on widening the territories analysed and also analysing more factors conditioning the success of the sector.

CHAPTER 4. ANALYSIS OF THE EDUCATION AND TRAINING OF HAUTE CUISINE CHEFS: IS THERE A COMMON PATTERN?[4]

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[4] This chapter is a version of an article that is being reviewed in *Creative Industries Journal*

Abstract

This study examines the haute cuisine chefs' education and training in order to identify a common pattern of training. Specifically, this study investigates the education and training received during the careers of a sample of 60 Michelin-starred chefs in Catalonia, a Spanish region recognized for its gastronomy. To conduct the study, a qualitative methodology was adopted and a semi-structured questionnaire was used to interview the professionals. The results show that the studies in hospitality schools are important to cement the basis of knowledge, but internships and work experience are also relevant ways to acquire explicit and tacit knowledge to succeed in this sector. These findings have allowed the identification of three different clusters of haute cuisine chefs also considering age and experience. This paper contributes to the research by analysing the education of a group of professionals and identifying a common pattern of training in a growing sector that contributes significantly to national economies.

Keywords: Haute Cuisine; Michelin Stars; Education; Training; Restaurants; Lifelong learning

4.1. Introduction

The restaurant sector is a key contributor in developed economies, employing millions of people worldwide and playing an important role in the tourism industry. In the United States (US) for example, the restaurant industry employs more than 15 million people and generates about the 4% of the US Gross Domestic Product (GDP) (National Restaurant Association, 2019). In the same way, the restaurant sector has become a pillar of the European economies. In Spain, for instance, it is one of the most active sectors in the country and one of the engines of its economy. It employs more than 1.3 million workers and represents 4.7% of the Spanish GDP (INE, 2019). Nevertheless, it should be mentioned that these figures are prior to the global pandemic situation caused by the disease COVID-19 and, as a result of this pandemic, the current economic model will be deeply affected. So far, the restaurateurs have had to redirect their business, even traditional restaurants have had to offer take-away and home delivery and rely on digital tools for capacity management and contactless payment. Likewise, due to the importance of the sector for the economies, the restaurateurs and chefs will look for more formulas to recover the clients lost during the pandemic (Madeira *et al.*, 2021).

To date, the importance of this industry worldwide has generated a growing body of research on restaurants, particularly on its practices and on their success and failure factors. Regarding the key factors of this sector, Parsa *et al.* (2005, 2011) and Camillo *et al.* (2008) proposed specific models suggesting a classification of success and failure factors for the restaurant sector. According to them, the success of a restaurant depends on five groups of success factors: strategic decisions, competitive factors, marketing, resources and capabilities, and owner-manager traits. One of the most important success factors proposed by Camillo *et al.* (2008)'s model is prior experience and it includes both business experience and culinary experience (Lee, 1987; Haswell and Holmes, 1989; Sharlit, 1990; Agarwal and Dahm, 2015).

Some studies have also analysed the relationship of experience with education and job-related learning and have determined that their combination is an intangible resource in the restaurant sector (Unger *et al.*, 2011; Lee *et al.*, 2016). This is because in the restaurant industry, the firm

performance depends mostly on the owner's or restaurateur's skills and knowledge (Cooper, *et al.*, 1994; Jogaratnam, 2017).

Thus, the literature has mostly analysed the successful situations of restaurants focusing on restaurant performance such as organizational and marketing strategies (Chathoth and Olsen, 2007; Ham and Lee, 2011), customer satisfaction (Gupta *et al.*, 2007), service quality (Gazzoli *et al.*, 2010; DiPietro *et al.*, 2011) and corporate social responsibility (Kim and Kim, 2014; Lee *et al.*, 2013). Studies have also focused on gastronomic investment (Johnson *et al.*, 2005), restaurateur's entrepreneurship (Davidsson and Honing, 2003; Ganotakis 2012; Lee *et al.* 2016; Lee and Hallak, 2018), and innovation in restaurants (Ottenbacher and Harrington, 2007a; Stierand *et al.*, 2014). However, to the best of authors' knowledge, the researchers' tendency has led to a lack of consideration for knowing how to achieve success, that is how chefs and cooks are trained and what is their training path (Allen and Mac Con Iomaire, 2017; Cooper *et al.*, 2017).

Hence the aim of this paper is to analyse the role of education and training in the careers of chefs in the restaurant sector. It has been considered to focus on haute cuisine chefs since it is a specific relevant group in the restaurant sector whose education has been scarcely analysed (Allen and Mac Con Iomaire, 2017; Cooper *et al.*, 2017).

In particular, this study addresses the following research questions:

(1) What kind of education and training do haute cuisine chefs receive and what are the most important aspects?

(2) Are there clusters of haute cuisine chefs with a specific training pattern?

This study contributes to the literature by analysing how a particular group in the restaurant industry is trained and investigating whether there is a common pattern of training. In addition, the study adds new empirical insights on the role of education and training.

4.2. Literature review

Both academics and managers have recognized that knowledge is a key source of competitive advantage (Grant, 1997, Roy *et al.*, 2017). It is considered as a potentially significant resource for companies, since it may

possess valuable, rare, inimitable and non-substitutable characteristics (Polanyi, 1966; Hall and Sapsed, 2005).

There are several ways to classify the different types of existing knowledge, depending on the type of information or the way it is acquired or processed. One of these classifications is the differentiation between tacit knowledge and explicit knowledge (Polanyi, 1966). Tacit (or implicit) knowledge is usually described as "know-how" and in the field of management refers to a knowledge which is not fully codified. It means that is a kind of knowledge that is completely or partially inexplicable, hence it is difficult to transfer verbally or visually (Chugh, 2015). For example, cooking apprentices acquired tacit knowledge by sharing space (kitchen) with their mentors (chefs) that means, by observation, imitation, internalization and practice (Slavich and Castellucci, 2016). Unlike explicit knowledge, tacit knowledge requires the interaction between individuals or groups to transfer it. Consequently, the key to acquiring tacit knowledge is to share practical experiences in an appropriate context (Lam, 2000).

On the other hand, explicit knowledge refers to a type of knowledge that can be codified, stored and easily transmitted to others (Nonaka and Tekeuchi, 1995; Rutten *et al.*, 2016). The most common examples of this knowledge are procedures, processes, manuals, formal written documents and educational institutions, among others.

In practice, tacit and explicit knowledge are not separated and the interaction between them is crucial for solving complex problems, making business decisions and creating new knowledge (Davidsson and Honing, 2003). Thus, investing in developing human knowledge or building "human capital", increases the productivity and improve the performance of the workforce (Nafukho *et al.*, 2004).

4.2.1. *Lifelong learning and formal, nonformal and informal education*

The process of acquiring knowledge, or skills, is defined as learning (Eraut, 2000). It is a process carried out by individuals or groups with the aim of acquiring an ability to do something that previously could not be done or a new understanding of the world (Crick *et al.*, 2004).

When learning takes place throughout a person's life it is called lifelong education (Smith and Spurling, 1999; Blossfeld & von Maurice, 2011). There

is no single definition of lifelong learning as it is used extensively in educational discourses and has several meanings (Crick *et al.*, 2004), however there are two aspects that are common in most definitions. The first, as mentioned, is that it is a learning that occurs throughout the life cycle, i.e., it is a continuous process from childhood to old age (Smith and Spurling, 1999; Crick *et al.*, 2004). And secondly, it includes the three main types of learning: formal, nonformal and informal education (La Belle, 1982), what has been known as the trilogy of education.

Historically, the trilogy of education has its origins in the International Conference on the World Crisis in Education in 1967 in Williamsburg, USA (Coombs, 1968). Its diffusion took place between the late 1960s and the early 1970s, however in the mid-1970s, some authors began to identify some weaknesses of this first version of the trilogy (Sirvent *et al.*, 2006) and attempted a more complex approach by considering variations in educational experiences, taking into account different aspects or dimensions (Coombs, 1985).

Following the pioneering works of La Belle (1982), Eraut (2000) and Eshach (2007), and framed within the guidelines of the European Centre for the Development of Vocational Training (Cedefop) of the European Union (2014), a proposal of the definitions of types of education is presented in Table 11.

This table classifies the three most common types of education. However, within each type of education there are several cases and examples. Analysing the types of education that chefs receive, of interest in this paper, will enable the understanding of the most important aspects of their education and training and to identify the common elements in the haute cuisine sector.

Table 11. Types of education

Type of education	Definition	Examples
Formal education	Regulated, intentional and planned type of education. It occurs in an organized and structured environment, such as universities or education institutions, and it typically leads to certification.	Primary, secondary, higher and university education
Nonformal education	Intentional education embedded in planned activities not explicitly designated as learning (in terms of objectives, time or support). It takes place outside the structure of the education and training system, but its outcomes may be validated and lead to certification.	Specific courses, workshops and seminars
Informal education	Unintentional education resulting from daily activities related to work, family or leisure. It is not organized or structured in terms of objectives, time or resources and no certification proving the knowledge acquired is obtained.	Mentoring in the workplace, socializacion learning, trial and error and casual conversations

Source: Own elaboration based on La Belle (1982), Eraut (2000), Eshach (2007) and Cedefop (2014).

4.2.2. *The role of education in the restaurant sector*

Education, professional experience and job-related learning are three of the most important intangible resources for restaurants (Unger *et al.* 2011; Lee *et al.*, 2016; Jogaratnam 2017). Their combination facilitates the achievement of competitive advantage because of its embeddedness in organizational routines and therefore, its difficulty to be imitated (Hitt *et al.*, 2001; Jogaratnam, 2017). In independent restaurant ventures for example, the performance depends mostly on the restaurant owner (Cooper, *et al.*, 1994; Jogaratnam, 2017) and therefore, he or she becomes the main resource to generate sustainable competitive advantage in front of competitors (Hitt *et al.*, 2001; Davidsson and Honing, 2003; Kraaijenbrink, 2011) and improve firm performance (Lee *et al.*, 2016; Lee and Hallak, 2018). Hence, his or her knowledge, experience and qualifications represent important assets to consider succeeding in the restaurant industry.

This fact has been studied in the literature and after analysing the success and failure in restaurants, some studies consider that education and training of restaurant professionals are success factors in this sector (Allen and Mac Con Iomaire, 2017; Bernardo *et al.*, 2018). For example, Parsa *et al.* (2005, 2011) proposed a model to increase the likelihood of success in restaurants, and Camillo *et al.* (2008) added emotional and leadership factors to Parsa *et al.* (2005, 2011)'s model. In both, education, training and prior experience are identified as factors to avoid the failure of a restaurant venture (Agarwal and Dahm, 2015; Lee and Hallak, 2018).

The last dimension proposed by Camillo *et al.* (2008)'s model, was *Owner-manager/chef features* and it includes factors related to the characteristics of restaurateurs or chefs that enable the success of restaurants (Bernardo *et al.* 2018). One of them is prior experience and it can refer to business experience (Lee 1987; Haswell and Holmes 1989; Sharlit 1990; Camillo *et al.* 2008; Agarwal and Dahm 2015) or culinary experience (Agarwal and Dahm 2015) both crucial characteristics for a successful restaurant manager.

4.2.3. Education and training of chefs

Researchers have tended to consider the restaurant sector as a whole (Cooper *et al.*, 2017), mostly analysing the impact of education and training on restaurants' owners. Nevertheless, recently the haute cuisine sector has attracted the attention of academics and a few studies have investigated some aspects of chef training. Slavich and Castellucci (2016), for example, explore the relationship between apprentice's and master's products, and critics' evaluations. In this article the authors highlight the importance of apprenticeships or internships as mechanisms not only to transfer knowledge and skills but also to affiliate with celebrity chefs. Gray and Farrell (2021) also investigates chef internships but in this case, they tackle the lack of uptake of apprenticeships among industry representatives and second-level students in Ireland.

The training of professional chefs has also been analysed by Pang (2017), differentiating between professional training with famous exponents of cuisine and vocational culinary training. Additionally, Herdenstam *et al.* (2020) has also analysed other aspects related to training in haute cuisine. In this case, the authors study how analogical training and the reading of classical books affect the communication skills of chefs and sommeliers.

On the contrary, other studies have not focused on a specific element of the training of chefs but for example, Suhairom *et al.* (2019) identifies 6 culinary competencies that need to be emphasized in the training and education of gastronomic chefs in order to develop a sustainable career in this sector. That competencies can be divided into two categories. The first consists of visible competencies, including the technical and non-technical capabilities and the second consists of invisible competencies that include self-concepts, personal qualities, physicial state and motives. Finally, Steno and Friche (2015) have also been interested in the perspective and expectations of students about the chefs' trade and how the popularity of male chefs seems attract more male students to cooking programs.

However, although the body of knowledge about the education and training in haute cuisine has increased, the interest is still scarce. To the best of authors' knowledge, the existing literature suggests that the role of education and training in chefs and, specifically in haute cuisine, has remained little investigated (Allen and Mac Con Iomaire, 2017; Cooper *et al.*, 2017). So far, the studies have focused on specific aspects of training but have not fully analysed the education and training of haute cuisine chefs. Hence, this study aims to focus on the education and training received by haute cuisine chefs in order to identify what kind of education they receive and how important is each type of education – formal, nonformal and informal- in their careers (first RQ). With this information it would be possible to determine whether or not there is a common training pattern in this sector (second RQ).

4.3.   Data and methods

This study is part of a larger research with the overall aim to analyse the main reasons for the high concentration of haute cuisine restaurants in Catalonia (Bernardo *et al.*, 2019). In particular, in this current study, the researchers focus and deeply analyse the education and training of the chefs to explain the phenomenon (Figure 9).

In order to achieve the study objective, a qualitative methodology was adopted (Denzin and Lincoln, 2011). This is because this methodology provides a wealth of detailed information facilitating the understanding of the topic analysed (Patton, 2002; Saunders *et al.*, 2003).

Figure 9. Education and training of chefs
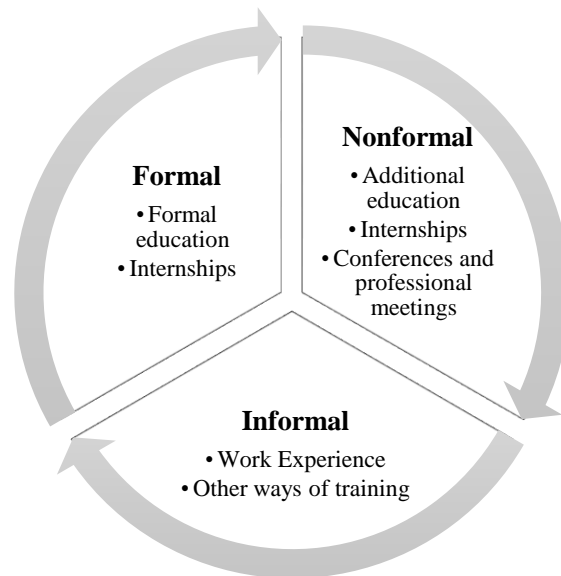
Source: Own elaboration based on Bernardo *et al.* (2018).

4.3.1. Sample

The participant's selection was based on an existing and recognized sample of restaurants, which is the Michelin-starred restaurant list for Spain and Portugal. Specifically, the latest editions of the Michelin Guide for these countries show a geographical concentration of starred restaurants in Catalonia (Michelin, 2021). For example, in the last edition of the Guide, Catalonia has 61 Michelin stars distributed among 55 restaurants, which means a 25% of the total starred restaurants in Spain (the most awarded region of Spain, followed by the Basque Country and Madrid).

In order to achieve the objective of the project, it was decided to use the Michelin-starred restaurants list in 2013. During that year and the following year, most of the interviews were conducted. However, some changes in the list occurred during the study and it was decided to add the new awarded restaurants until 2017. Hence, the study has the majority of Michelin star restaurants in Catalonia today. Finally, to complete the sample, it was decided to include four more personalities, three chefs without a star at the time of the study but who had had it in the past and the director of the Alícia Foundation, a private non-profit foundation with the aim of studying Catalan cuisine and generating knowledge.

The final sample was built up with 60 participants. Table 12 summarizes and classifies it.

Table 12. Sample

Periods of time	1. First period: July 2013 - December 2014		
	2. Second period: February - April 2017		
Interviewees	5 chefs of restaurants with 2 and 3 Michelin stars		
	51 chefs of restaurants with 1 Michelin star		
	3 chefs with no star in 2013 but whose restaurants had		
	Director of the Alícia Foundation		
Interviewees' information	**Type**	**Number**	**%**
Gender	Male	57	95%
	Female	3	5%
Age groups	20-30 years	3	5%
	31-40 years	24	40%
	41-50 years	18	30%
	>51 years	15	25%
Years of experience groups	10-20 years	21	35%
	21-30 years	24	40%
	31-40 years	9	15%
	>40 years	6	10%
Restaurant's information	**Type**	**Number**	**%**
Number of Michelin stars	3 Michelin stars	2	3%
	2 Michelin stars	3	5%
	1 Michelin star	51	85%
	No stars	4	7%
Type of restaurant	Family restaurant	21	35%
	Nonfamily restaurant	35	58%
	N/A	4	7%

Restaurant's information	Type	Number	%
Property	Owner	46	77%
	No owner	10	17%
	N/A	4	7%

Source: Own elaboration.

4.3.2. Data collection

Following a qualitative methodology, data was collected by in-depth, inductive, semi-structured interviews (Yin, 2009). The researchers sought to build-up trust and rapport with every interviewee in order to create a relaxed atmosphere facilitating the obtaining of details and the emerging of new topics. In addition, the respondents were assured that the study would be anonymous to guarantee their confidentiality. Whenever possible, the protocol applied in the interviews followed the steps shown in Figure 10.

All restaurants were first contacted by e-mail, explaining the project and asking about the possibility of conducting an interview (see Annex 2). Afterwards, the researchers contacted each restaurant by telephone to arrange the appointment at the workplace of the respondents. In July 2013, a pilot test was conducted in one of the 3-Michelin stars restaurants to pre-test questions and to measure the time needed to perform the interview.

Figure 10. Protocol of data collection, validation and analysis

Initial contact by mail
Submission of the
project summary and
questionnaire

Telephone contact
to arrange a visit

Interview

Explanation of the
project's objective

Questionnaire

Explanation of the
following steps

Transcription
of the
interview and
writing of the
case

Review of case
by participants

Qualitative
analysis

Identification of
themes

Identification of
clusters

Source: adapted from Satolo *et al.* (2013) and Bernardo *et al.* (2018).

A semi-structured questionnaire (Yin, 2009) was used for all the interviews conducted (see Annex 1). This questionnaire contains information on six different aspects (see Table 13).

Table 13. Aspects analysed

Aspect	Name in the questionnaire	Description
Formal education	Training courses of more than six months	Regulated training courses, such as studies in hospitality schools or universities.
Additional education	Training courses of less than six months	Shorter courses that help to improve a technique and / or to specialize, with a duration that can be several days.
Internships	Stays or apprenticeship in other restaurants	Training periods in other restaurants to learn working methods, techniques or to increase experience. Currently they are part of the study plans and are mandatory.
Work experience	Professional experience	Restaurants where the participants have worked, with an employment contract.
Conferences and professional meetings	Congresses and fairs	Congresses, fairs or meetings of the sector in which they participate either as attendees or as speakers.
Other ways of training	Other ways of education and training	Reading gastronomic magazines, consulting blogs or travelling to discover new products

Source: Own elaboration based on Bernardo *et al.* (2018).

At the end of the questionnaire, the respondents were also asked to rate from most to least important (from 1 to 6) these aspects in order to know the importance they have in the career of a chef. In addition, the researcher was free to ask for further details or clarifications during the interview while ensuring that the main topics were covered (Lofland and Lofland, 1995).

The average interview time was sixty minutes and included the education and training questionnaire and another questionnaire on the relationships between chefs. All the interviews began by explaining the objective of the project and asking for permission to record them. Later, the interviews were transcribed verbatim in order to facilitate analysis (Jennings, 2005). Finally, a case study was written for each restaurant and then sent to each chef in order to verify and validate the content (Yin 2009). It should be mentioned that fifty-seven interviews were conducted face-to-face, two were self-reported and one was done via Skype. In addition, information of the restaurant websites and press news were also used to write the cases.

4.3.3. Data analysis

In order to achieve the purposes of the study, it was decided to carry out a '*thematic analysis*', what means identifying clusters and themes in the data using a process of coding (Cooper *et al.*, 2017). Hence, the data from the 60 interviews were codified according to the types of knowledge (i.e., tacit or explicit) and the types of education (i.e., formal, nonformal and informal) found in the literature review. Then categories were developed from groups of codes, in turn generating themes and clusters from these categories. Once the themes and clusters were generated, the authors managed to group the chefs based on their common characteristics and assign them to one of the three identified clusters. The final sample of the clusters was 53 chefs since 7 of them were considered outliers (not assigned in any cluster) because they did not meet all the characteristics of any of the groups.

It should be noted that the authors immerse directly in the data without the aid of specialized software (i.e., NVivo) since their intention was to engage with the data allowing a deeper understanding of the themes. Nevertheless, in order to guarantee the highest levels of rigor, some measures of validity and reliability were taken during the research process (Ryan *et al.*, 2015). A teamwork approach was maintained throughout the project (Morse, 1994) and adequacy was achieved by ensuring that sufficient data were collected

(Glaser and Strauss, 1967; Morse, 1994). Moreover, the expressions and vocabulary used by the participants was maintained in order to ensure the highest level of understandability (Glaser and Strauss, 1967).

4.4. Findings

The results of the 60 interviews and their analysis are presented below. In this section, the results are shown in two blocks, on the one hand the issues and topics that emerged in the thematic analysis and on the other the clusters identified to classify the participants.

4.4.1. Thematic results

Following the work of La Belle (1982) and Eraut (2000), the aspects analysed in the interviews have been classified according to the types of education and the types of knowledge that can be acquired (Table 14).

Table 14. Types of education and knowledge

Aspect	Type of education	Type of knowledge acquired	% of chefs
Work experience	Informal	Tacit	100%
Conferences and professional meetings	Nonformal	Explicit and tacit	90%
Other ways of training	Informal	Explicit and tacit	86%
Formal education	Formal	Explicit and tacit	72%
Internships	Formal and Nonformal	Explicit and tacit	71%
Additional education	Nonformal	Explicit and tacit	43%

Source: Own elaboration based on La Belle (1982) and Eraut (2000).

In addition, as mentioned in the previous section, participants were asked to rate each aspect of their training according to the importance they had in their

professional careers. This rating allows to establish a ranking of what aspects are considered a priority to become successful chefs (Table 15).

Table 15. Aspect rating

Percentage of times rated	% of times rated 1st	% of times rated 2nd	% of times rated 3rd
Work experience	40%	9%	14%
Formal education	24%	44%	14%
Internships	21%	19%	36%
Other ways of training	7%	6%	7%
Conferences and professional meetings	6%	16%	7%
Conferences and professional meetings	3%	6%	21%

Source: Own elaboration.

As shown in Table 15, 40% of the study participants consider that *Work experience* is the most important element in the training of haute cuisine chefs, followed by *Formal education* (24%) and *Internships* in other restaurants (21%). These rankings are confirmed in the second and third place, *Formal education* is considered the second most relevant element by 44% of chefs while 36% of them classify *Internships* in third place. Out of the top 3 there are *Other ways of training*, *Conferences and professional meetings* and *Additional education*, which although they have an impact on their training, are not considered the most significant for their careers.

Below are the most important issues ordered according to the ranking that emerged from the analysis of the interviews with the participants. Note that regardless of the number of stars, all chefs follow a similar itinerary. Apart from formal education, no other differences are identified.

Work experience

As previously defined, work experience consists of professional experiences in other restaurants with an employment contract and as Table 14 points out, they are a type of informal education in which chefs mainly acquire tacit knowledge through their daily work life.

Regarding the rating, work experience can be considered as the most important element in the professional careers of the chefs analysed (Table

15). Although it can be acquired in different ways, most of interviewees see work experience as a cornerstone for their future. As some chefs commented, the fact of coinciding with a great chef has been a tipping point in their career:

"*He gave me the approach to the cuisine that I currently do, the way to see the job, the business and the restoration*".

"[Regarding the different stages of my career] *I started with a type of cuisine, then I evolved towards another and now I run towards another. Start with the typical: salad, grilled meat, if you're on the mountain, and little by little you are interested in another type of cuisine.*"

Two different groups can be identified based on the professional experience of the chefs:

1) Own restaurant: chefs who acquired their professional experience entirely in their own restaurant or in the family business are in this group. The members of this group began helping their relatives and some years later they took over the family restaurant. Working in their restaurant has helped them to assume responsibilities and learn to manage teams, among other aspects. Regarding the role of the family, one chef comments:

"*When I was a kid, I used to help in the family restaurant and now my family helps me in my restaurant. This is very good, this is what makes it easy for me, I can be in the kitchen and they can be in the dining room attending all the clients of the events. I am very calm because I know that if you come here to celebrate your mother's birthday, I know that the owner will attend you. We are all very involved, and I am doing very well because I do not have to worry about management or customer service. We are a great team. I am lucky to have them, if not, it would be unthinkable to do what we do.*"

2) Other chef's restaurant: chefs who have worked in other restaurants both national and international. Working in various restaurants has enabled meeting other chefs and share concerns about cooking:

"*For me all the places where I have worked have been important, because I have learned from everyone.*"

"*Since I was 15 years old, I have been traveling and working. I've been in England, in France, etc. Since I was 18 years old I am in restaurants with [Michelin] stars.*"

Formal education

As shown in Table 14, Formal education is a type of formal training in which individuals acquire explicit and tacit knowledge such as process, procedures and techniques in a regulated, intentional and planned way (Eshach, 2007). In this case, Formal education corresponds to training courses longer than 6 months (usually and depending on the time, between 4 and 5 years) in professional schools or other educational institutions (Table 13).

Regarding the chefs of the sample, 72% of them have attended education training courses related to cook in hospitality and catering schools (Table 16). They consider that culinary training is one of the most important elements in the development of the cook's career (Table 15) as it provides the basis of knowledge:

"*Technically it is very good, they teach you many things, such as rigor, what are the schedules, etc. They do not teach you how to cook because, from my point of view, it is very difficult to learn to cook, they teach you how 'to be a cook'*".

In this case it should be noted the difference between the chefs with 2 or 3 stars from the chefs with 1 or no stars. While in the first group of chefs, four out of five chefs have studied formal cooking courses in hospitality schools, in the second group there are also self-taught chefs and chefs with other formal education. The three groups are explained below.

Table 16. Formal education

Aspect	Groups	% of chefs
	Formal cooking education	72%
Formal education	Self-taught	23%
	Other formal education	5%

Source: Own elaboration.

1) Formal cooking education: they are chefs who have attended formal cooking courses in hospitality during their professional career. In some cases, studying in these schools opened the door to meet great chefs and thus begin in the world of gastronomy:

"*I went to the hospitality school. I was lucky to have two teachers who made me see and think a little about the things in the kitchen. This made me begin to be passionate about the essence and tradition of our cuisine, for the traditional recipe book.*"

2) Self-taught training: they are chefs with no professional schooling and therefore with a self-taught training. In this group, the seniors did not attend cooking courses because of the limited availability of cooking programs when they started their careers, and the youngers trained themselves in the family restaurant or with other chefs:

"[…] *when I started working, there were no hospitality schools here* [in Spain]. *So, my parents came to this town and I started working at a friends' bar and four days after I realized that I had chosen what I really liked. I have always worked with great chefs who have been my teachers.*"

"*I didn't study anything because I wasn't sure about it. I spent 2 or 3 years without a definite place, helping my mother at the bar, in the restaurant, until I started in the kitchen.*"

3) Other formal education: in this group there are chefs without cooking education but with other studies (i.e., Commerce, Management or Microbiology), who have learned cooking with great chefs or in the family business:

"*Surprisingly I don't have cooking studies, I studied microbiology. My mother and my grandmother taught me cooking when I was a child.*"

Internships

The internships or *stages* are periods of training in other restaurants. They are quite common (71%) and are considered the third most important element for chefs as it is a practical way of transmitting explicit and tacit knowledge from mentors to students.

As mentioned in Table 13, internships are currently an obligatory part of cooking studies. However, many of the participants studied previous cooking courses in which internships were not mandatory. For this reason, two types of internships can be distinguished: the compulsory *stages* that are part of the current study plans and therefore they are considered as a type of Formal education, and those voluntary. The main objective of the first type of

internship is to put into practice the theory and knowledge acquired in hospitality school. The other type of internships are the stays that many chefs do to start in the cooking world (i.e., Other formal education and Self-taught training groups of *Formal education*), learn techniques or increase experience. In this case it is considered as a type of nonformal education since is not carried out within education institutions (Table 14).

Regarding the chefs with 2 or 3 stars, not all of them did an internship (formerly, they were not compulsory in formal cooking studies) but those who did, used them to complete and perfect their expertise. The practicum of this group can be divided into trips to French restaurants to learn with great chefs (i.e., Michel Guérard and Georges Blanc), and internships in important Catalan restaurants such as Can Fabes, El Celler de Can Roca and El Bulli. This last one was frequently visited by the chefs when it was open and they stayed for some days training with other chefs:

"*Internships have been really useful for my training. In my case I have been in France with Michel Guérard, in El Bulli and in El Celler de Can Roca. In France I spent four months, in El Bulli I made five stays (three months) and in El Celler de Can Roca one month.*"

"*They consisted of being there all day, cooking and eating and talking with Ferran* [Adrià]. *The first time I did it is when he cooked white rice, curry chicken, etc., at the beginning, when I saw it, I thought: what is it? but then it captivates you so much that you want to continue going.*"

Unlike the previous group, most of the chefs with 1 or no star have done internships at other restaurants. The current generation of chefs, who most of them have formal cooking studies, have done placements to continue their training:

"*I have always worked in my business but I have done some internships in other restaurants. I did placements for two months in two restaurants when I was in the third and fourth year of my studies.*"

Whereas the earlier generations and chefs without cooking studies have used them to start working or to increase their experience:

"*I went to stays, during the holidays, I spent some days in some friends' restaurants because I wanted to see what they did, I needed it to be inspired.*"

Some chefs of the earlier generation also made trips to France with the chefs with 2 or 3 stars to learn how to organize large teams in the kitchen:

"*I went to France, five days in Paris and five more days around France to see their teams. I had never seen a large human brigade and I wanted to design my kitchen according to our needs.*"

Both of them highlight renowned and traditional Catalan, Basque and French restaurants as the best places chefs could visit to improve and evolve in their cooking.

Other ways of training

The interviewees were also asked about other ways to complement their training. These ways can be considered as type of informal education since individuals acquire unintentionally knowledge through their leisure time or daily routines (Table 14).

As stated by both groups of chefs, there are several ways that provide a continuous training but the following stand out above the rest. The first one is to read gastronomic magazines and books, and also follow Internet blogs and websites:

"*I follow some blogs, and read books and magazines specialized in gastronomy. For me it is very important to keep up to date with the most innovative thing that is done in Spain and everywhere, because my obligation is to introduce elements of reflection, to see if there are things that can be applied to us at some point, if there are lines that allow us to evolve within our style and our cuisine, etc.*"

"*We read a lot, we buy the latest books, the chefs are very curious and we know what is being cooked in Chicago and what is being cooked in Hong Kong and what is being cooked here. Today we have the information on hand, Internet, YouTube, etc. What happens today is known tomorrow in the rest of the world.*"

Another usual practice to complete their training is to travel to meet new products, tastes and cultures and as far as possible apply them to their cuisine:

"*Another very important issue in our sector is to visit other restaurants and travel. If I hear about a place on the other side of the world, as far as possible, I will go.*"

Eventually, another way is to know what other chefs are doing by visiting their restaurants like a typical costumer:

"*For me the biggest learning is to eat at other restaurants. I mean go to all kind of restaurants but especially gastronomic, which can be both creative and traditional cuisine restaurants.*"

"*I think it is very important that cooks eat. A chef who does not have taste is like an opera singer who is off pitch, that is, he can be technically great, but not having taste. With having taste I mean appreciate what is really good from what is not. Having taste is very important, so going to eat at restaurants is very important to know not only what others do, but also to train your palate.*"

Conferences and professional meetings

The following aspect is Conferences and professional meetings. It includes culinary congresses, fairs, meetings, workshops and seminars where the chefs of the study have participated either as attendees or as guest speakers (Table 14).

In this study, conferences and professional meetings are classified as nonformal ways to obtain explicit and tacit knowledge: they are not performed by any educational institution so they are not explicitly designed as learning (in terms of objectives, time and support).

First, it should be commented that conferences and professional meetings have a double function. On the one hand, as the gastronomy sector has no patents or intellectual property rights, presenting new creations and techniques in these meetings allow the chefs to register their originality in front of the sector as well as recognizing others:

"*For example, if in a congress, in a part of a dish, we have applied a technique from another chef, we say it and the chef appreciates it. I think it is a necessary exercise of honesty. The more important you are, the more responsibility you should have with these things and the more you have to do them. They are details, because you could ignore it and nothing would happen, but if you do it is a turning point that is very important at the collective level, to generate a good relationship and gain the respect of your colleagues. This is an exercise that many of us try to do because we think it is very important to do it.*"

On the other hand, conferences are also a meeting point for professionals of the restaurant sector and frequently they are the starting point for transfer knowledge and collaborate:

"*Above all, the first congress I attended left a mark on me. It was in Madrid, I was very young, and it was a congress where there was only Adrià, Arzak and Le Cordon Bleu.*"

All the chefs with 2 or 3 stars declare that they participate or have participated in these professional meetings, first as attendees and then as speakers. They present their new culinary creations and techniques but also, they talk about their managerial experiences and other practices beyond cuisine:

"*We all participate in congresses, we are all there, because all of us here* [in the survey]*, coincide as speakers, when you already have 3 and 2 stars, sooner or later, you have to do your presentation in a congress. Now we not only have to cook in the kitchen, but also we have to take part in congresses and we have to develop communication skills, which is something that has never happened before.*"

The theme of conferences and professional meetings in the group of chefs with 1 or no star is slightly different from the previous group. In this case, there are chefs who also participate in the conferences, even some of them are promoters and organize their own meetings:

"*I realized that there were no gastronomic conferences here at that time. They were hold in France, and I decided to create these gastronomic conferences to introduce my cuisine.*"

However, there are also chefs who prefer not to attend rather than closing the restaurant every time they want to attend an event:

"[Congresses] *are worth a lot of money, a lot, because you have to consider the trip, the accommodation, the congress fee, all the meals you make outside of the congress, etc., it is quite expensive. And there is the main handicap for me: I have to close the restaurant to do anything, I don't have a big staff who takes over the business.*"

Both groups highlight national congresses taught by cooking schools or great chefs but also congresses held internationally:

"I have been to small chefs' congresses: Mesef which is in Switzerland, Capri which is in Italy and Courmayeur which is in Montblanc. These three have been fantastic, with very interesting experiences because they are very small congresses, where you have a very direct contact with great chefs, of whom I have books and who I would never have thought to talk to."

In addition, some chefs of both groups are members of associations (i.e., Euro-Toques or Slow Food km0) where they can meet other chefs and learn about the proximity product and the cuisine of their area:

"In the association we are friends, cooks that we have our own restaurant and we really like to eat. We have dinner together and talk for hours, we exchange opinions, ideas, etc., we complement each other."

Additional education

Finally, the last aspect rated by the participants is Additional Education. This kind of education is classified as a type of nonformal education to obtain explicit and tacit knowledge outside the traditional education system (Table 14). Specialization and complementary courses to formal education with an average duration of less than 6 months are the most typical in this category.

The realization of these specialization courses is less common among the professionals of the sample (43%). Only two of the group of five chefs with 2 or 3 Michelin stars, have attended this kind of courses. Similarly, 41% of chefs with 1 or no stars, have attended schools or workshops to specialize in specific disciplines such as pastry, vacuum cooking, sushi, or bread and chocolate, among others. This fact shows that a significant number of chefs are interested in continuous training:

"I did a specialization course in Mediterranean cuisine, which was about the history of Mediterranean food in general. They gave you a lot of information about the reasons. It was two hours a week for some months."

The most important were the courses held in the restaurant El Bulli with Ferran Adrià until 1999. Each course lasts three days and was aimed at professionals from the restaurant sector:

"I think Ferran Adrià helps you to dream, to see new things. This breakthrough is because someone did something that had never been done, he did not know what the consequences would be and what he wanted to say

was to get out of the way. And this is unique, but someone had to do it, and it has been Adrià."

To sum up, the education and training of haute cuisine chefs is detailed in 6 aspects. The most important according to the chefs in the sample is professional experience, whether in their own restaurant or in other chefs' restaurant. Next, formal education and internships come second and third. These two aspects are in more than 70% of the sample. Finally, with less incidence but still important, other ways of training, conferences and professional meetings and additional education.

4.4.2. Clusters

As has been mentioned, there are several items that take part in the education and training process of the chefs of the sample and obviously, the training and the career of each one of them is different and particular. Nevertheless, three different clusters with their own training pattern can be extracted from the analysis of the interviews (Table 17). Note that not all chefs of the study can be assigned to a specific cluster and therefore 7 of them are considered outliers since they do not meet all the characteristics of any of the groups identified. Thus, the clustering sample is made of 53 participants.

Table 17. Clusters description

	Former studies **cluster**	*New generation* **cluster**	*Self-taught* **cluster**
Total number of chefs	10	33	10
2-3 Michelin stars chefs	3	1	1
1-0 Michelin star chefs	7	32	9
% of chefs of the sample	16.7%	55%	16.7%
% of males	80%	100%	100%
% of females	20%	0%	0%
Average age	52 years	38 years	54 years
Average years experience	32 years	22 years	33 years
Formal education	Formal studies	Formal studies	No formal cooking studies

	Former studies cluster	*New generation* cluster	*Self-taught* cluster
Internships	French and national restaurants	Mostly in national restaurants	French and national restaurants
Work experience	Family restaurant	International and national restaurants	Family, international and national restaurants
Conferences + other ways of training	Regularly	Regularly	Regularly

Source: Own elaboration.

The explanation of the three clusters is presented below.

1. Former studies cluster

The first cluster is formed by 10 chefs, 3 of them belongs to 2-3 Michelin stars group and 7 to 1-0 Michelin stars group. This fact is significant, since it concentrates the majority of 2-3 stars chefs and it is also the only cluster that has female chefs. The age ranges from 37 to 66 years old with an average of 52 years old (Table 17).

The chefs of this cluster have received formal education in cooking schools (Figure 11) and it has been complemented with training internships in French restaurants with Alain Chapel and Georges Blanc, and with visits to El Bulli, Arzak and Martín Berasategui restaurants. As has been commented, the trips and visits to French Michelin-starred restaurants were useful to acquire organizational knowledge and management skills to distribute and organize large teams in the kitchen. Complementarily, visits to El Bulli were a meeting point with Ferran Adrià and other professionals of the sector to learn about new techniques and recipes in an open and transparent way:

"*When I was 20 years old I took a trip with all these people* [*Former studies* cluster]. *We went to Lyon, France, to visit the best chefs in the world and every year we toured the kitchens of the best chefs in the world.*"

Regarding their professional experience, it focuses on the family restaurant (Figure 11). They have been able to transform their business into a gastronomic restaurant recognized by critics and culinary specialists. Also, it

must be said that they regularly attend congresses and professional meetings as attendees and as speakers and consult blogs and visit other restaurants to complement their training.

Considering the average age (52 years) and experience (32 years), this cluster can be attributed to the great chefs who have been the benchmark for the younger generations of chefs. All these chefs are responsible for the current culinary transformation since they have been pioneers of haute cuisine not only in the territory analysed but also worldwide. In addition, they have somehow been entrepreneurs and had to start a business and turn it into reference restaurants for the entire sector:

"*In fact, I become the chef because of a personal, labor and professional growth of a shop that had already became a delicatessen. When I got married, we came into this shop and we turned it around.*"

"*We have a pioneer of all this, of all this cuisine, who was Ferran Adrià and we all go after him. I think he is the one who opened the doors for all of us, and after him has come El Celler de Can Roca, Sant Pau, and at the time, Can Fabes.*"

2. New generation cluster

The second cluster applies to most of chefs in the sample (55%), that is 32 chefs with 1 or no stars and 1 chef with 2 or 3 stars. From the analysis of this cluster, it can be extracted that despite being the most numerous it does not contain any female chefs and also includes a chef from the group of 2 or 3 Michelin stars. This case is particular since it is a young chef who does not work in his own restaurant but in a business with a long history and with the advice of a prestigious chef (Table 17).

This cluster includes professionals with a regulated education in cooking (Figure 11) who have also made internships but in this case mostly in Catalan (El Bulli, El Celler de Can Roca, El Racó de Can Fabes, Neichel and Jean Luc Figueras) and Basque restaurants (Akelarre and Martín Berasategui). It should be noted that the average age of this cluster is 38 years therefore the Formal education received by these chefs is based on current study programs, which means that internships are mandatory to complete their training. For them, internships have a specific importance because they can put into

practice and transfer the knowledge acquired in cooking schools while learning from the most experienced chefs:

"*I think that in our profession, if you want to be trained in a positive, real, authentic way that allows you to move alone, you have to go to other houses. But I mean go one year and a half or two years once the studies are finished. At least one year, because we work a lot with the seasons. There is not the same product in summer than in winter, so in the same house, with the same philosophy, with the same cook and with the same techniques, in July you are doing some things and in December others totally different. Therefore, to understand how that cook thinks, how that house works, etc., you have to do a complete cycle of 365 days, turn around and go back to the beginning. If you see that you are doing new things, it may be convenient not to move from that house because you have been working for some time, you are part of the team, if you are competent, you will have responsibilities, while if you go to another place you will start from scratch.*"

Their extensive work but relatively short experience (22 years) has led them through several international and national kitchens before finishing at the restaurant where they currently work and, as in the previous cluster, they regularly attend professional meetings, consult Internet and visit colleagues to improve their training.

This cluster corresponds to the most common haute cuisine chef model: young chefs with exceptional culinary training (educatively and practically) and with extensive experience in gastronomic restaurants. Besides, these chefs have had as reference the great chefs (*Former studies* cluster) who in some cases were teachers in the cooking school or chefs in charge of the kitchen where they worked. In addition, it should be noted that the chefs of this cluster have a very relevant role in the socialization and dissemination of the cuisine throughout the territory, as they have been responsible for bringing haute cuisine closer to society:

"*My generation is the first professional generation, I mean, we are the best trained generation, because we have been fortunate to be able to study and have worked with the greats* [chefs]. *The greats have not been able to study, mostly because there were no schools. We have had that luck. We have taken this boom and we have been able to work with who we wanted.*"

3. Self-taught cluster

The third cluster includes 10 chefs, 1 of them belongs to 2-3 Michelin stars group and 9 to 1-0 Michelin stars group. As the previous cluster it does not contain any woman and also includes a chef with 2 or 3 Michelin stars (Table 17). In this case, it is a chef with 2 or 3 stars without formal cooking studies but with extensive professional experience. He has also carried out numerous *stages* in France and Catalan restaurants.

The main difference of the third cluster is that chefs have not received formal education in cooking (Figure 11). The 10 chefs of this cluster are, for different reasons, self-taught and in some cases, they have received other formal education not related to cook that have been useful and complementary (Management, Economics, etc.). To fill the lack of culinary education, internships and work experience take even more relevance for their training as they need to learn through nonformal and informal ways. Thus, they have learned the job directly in the family business and/or with great chefs of the moment. This includes Catalan (Santi Santamaria, Joan Roca and Ferran Adrià), Basque (Juan Mari Arzak and Pedro Subijana) and French (Michel Guérard) chefs.

"*I always worked with good teachers, the best professionals. In that moment, I didn't care about the salary but if I wanted to be a good chef, I had to be with the good chefs. I worked with 2 and 1 Michelin stars chefs and I can say that I am a self-made cook. I have not had the opportunity to attend a hospitality school but I have read many books and attended several events in Madrid and in the Basque Country.*"

Eventually, they also visit other restaurants and Internet websites to improve their knowledge and participate in congresses with the rest of their professional colleagues.

Although its relatively high average age (54 years) and years of experience (33 years), this cluster includes both chefs of the current and previous generations who have learned from the rest of chefs and have collaborated in the success of the sector through their self-taught training:

"[Regarding his culinary training] *I have been quite self-taught and the professional meetings are very interesting because they provide you with original and fresh elements.*"

"*It has served me as an entrepreneur to know what is a price tag, a ledger, the suppliers, the clients, etc. Studying management and administration helped me a lot.*"

In summary, three different clusters have been identified (Figure 11). The first one, the *Former studies* cluster, is characterized because all of its members have studied formal cooking studies and also are considered the driving force of the sector. The *Next generation* cluster also has formal cooking studies but they have worked in several national and international restaurants. Finally, the *Self-taught* cluster, has not received formal cooking education but they have learned the profession through professional experience.

Figure 11. Clusters

	WORK EXPERIENCE		FORMAL EDUCATION			INTERNSHIPS	
	Family restaurant	Other chefs' restaurant	Formal cooking studies	Self-taught	Other formal studies	Part of formal studies	Increase experience
Former studies cluster	✓	○	✓	○	○	○	✓
New generation cluster	○	✓	✓	○	○	✓	✓
Self-taught cluster	✓	✓	○	✓	✓	○	✓

Source: Own elaboration.

4.5. Conclusion

This research provides useful insights about haute cuisine chefs by interviewing almost all Michelin-starred chefs' population in Catalonia, the region of Spain with more Michelin-starred restaurants (Michelin, 2021). The research findings presented in this study analyse the education and training of a group of professionals within the haute cuisine sector, a growing sector in the restaurant industry. This is one of the main contributions of this paper.

Specifically, the authors try to fill the gap in the literature regarding the lack of studies that analyse the education and training of chefs. Although there are studies that have analysed apprenticeship and internships (Gray and Farrell, 2021; Slavich and Castellucci, 2016), professional training (Pang, 2017) or even the necessary gastronomic competencies that must be developed during training (Suhairom *et al.*, 2019), none of them analyse the entire education and training of haute cuisine chefs or identify patterns of training.

Two research questions were posed at the beginning of this article. The first question addresses the aspects of the education and training of haute cuisine chefs and how important they are to their careers. The identified aspects were 6: work experience, formal education, internships, other ways of training, conferences and professional meetings and additional education. From the study of these 6 types, it can be extracted that education in hospitality schools is very important because it provides the basis of knowledge to achieve success in this sector, although it should be noted that some chefs have not received any formal cooking training and therefore have had to self-taught. Likewise, the internships and/or work experiences are essential, not only to consolidate knowledge learned in formal education, but also to acquire more explicit and tacit knowledge. Many chefs have used internships to start in the world of gastronomy or to increase their experience. In reference to work experience, which differs from internships due to the existence of an employment contract, there are two typologies: professional experience in their own restaurant (or in the family business) and working in other restaurants, with stars or without them. Regarding conferences and professional meetings, most chefs highlight the importance of congresses as they enable the presentation and identification of culinary innovations in front of the sector and also, they are the best place to meet other chefs and start sharing knowledge and collaborating. Finally, three sources have been highlighted by participants as Other ways of training: reading books, magazines and gastronomic blogs, then traveling to other cultures and countries and visiting, as costumers, other restaurants.

Considering the results of the analysis of the education and training of the chefs in the sample, it can be concluded that the education acquired in the cooking schools is one of the factors that foster the success of these chefs. However, practical learning such as professional experience, which has been

rated as the most important aspect by the participants, and internships have also an important impact on the training of chefs.

Regarding the determination of a common pattern (second RQ), three different clusters with their own training pattern are identified from the analysis of the interviews: *Former studies* cluster, *New generation* cluster and *Self-taught* cluster.

Among the main characteristics of the *Former studies* cluster, it stands out that it contains the majority of 2-3 stars chefs and it is also the only cluster that has female chefs. This fact shows that although the number of women in this sector is limited, some of them also reach the highest positions and are benchmarks for the entire sector. The average age of the cluster (52 years) and the average years of experience (32 years) indicate that they are chefs with a long career and that they have been trained with the former cooking study plans.

The *New generation* cluster is the most numerous (33 chefs) and the one with the lowest average age (38 years) and experience (22 years). It does not include any female chef, following the hypothesis of Steno and Friche (2015) that currently male students are more attracted to cooking studies. The chefs of this cluster have also received Formal education but with current study plans, which means that internships are mandatory.

Eventually, the *Self-taught* cluster is characterized by not having received any formal cooking education. This means that chefs have had to self-taught and leverage both internships and professional experiences in other restaurants to acquire knowledge. Likewise, the *Former studies* cluster, the average age (54 years) and years of experience (33 years) of this cluster are high.

Another important point drawn from the cluster analysis is the fact that great chefs (*Former studies* and *Self-taught* clusters) used to have French chefs and their cuisine as references for their education. However, the following generations (*New generation* cluster) have used the great Catalan chefs as references, changing the paradigm and increasing the influence of Catalan cuisine.

It has also been demonstrated that chefs take advantage of the education and training of other chefs to increase their contacts. This is clearly seen in the

fact that younger chefs (*New generation* cluster) and chefs without formal cooking education (*Self-taught* cluster) try to share professional experiences with as many other chefs as possible in order to learn more and better.

4.6.   Contribution, implications and limitations and future research

This study contributes to the literature of restaurants by analysing the most important aspects of the education in the haute cuisine sector and classifying most Michelin star chefs in a territory according to variables such as age, experience and training. Although the education of the haute cuisine chefs analysed is very similar, this research has enabled the identification of three group of chefs with a different training pattern. The differentiating element between the three patterns is mainly formal cooking education. While in the first two groups it is present, in the third group the members are self-taught. Thus, lifelong learning becomes even more important as chefs in this sector acquire knowledge not only through formal education but also from the other elements of their career, including nonformal and informal education. In addition, it is worth highlighting the diffusion of knowledge that takes place through universities and cooking schools. As previously mentioned, in some cases the current teachers in cooking schools are chefs from previous generations, facilitating the exchange of knowledge from one generation to the next.

In terms of research implications, this study fills the gap in the literature on how chefs and cooks are trained and what is their training path. Specifically, a particular group from a specific region, the Michelin-starred chefs in Catalonia, is analysed. Until now, most studies have focused on analysing the creativity and innovation carried out in these restaurants. Regarding the practical implications for the restaurant industry, this study highlights the importance of the current cooking programs and the professional experience as catalysts for knowledge transfer between mentors and also between peers. Therefore, chefs and cooking students should focus on increasing their theoretical and practical knowledge through formal education but without neglecting their nonformal and informal education. In addition, governments and industry bodies should promote all types of education and support training programs to attract young people and also raise more women to

positions of responsibility in haute cuisine, a benchmark sector in the restaurant industry.

In terms of limitations, the sample is based on chefs from one geographical location, Catalonia, with specific characteristics. Also, it focuses in only one segment of the industry, the haute cuisine sector. This means that the results cannot be generalized or extrapolated. For this reason, future research should also analyse different samples, new locations and other characteristics not discussed in this study.

Additionally, the challenge that the sector must face is the post-pandemic reality. Many professionals have had to adapt their establishments and reinvent their business in order to survive in the new conditions. The reduction of activity in the tourism sector together with the measures that restaurants should take to avoid contagion, mean that professionals in the sector must seek new ways to attract customers, i.e., diversifying the business or adjusting prices even more. Future research lines could address whether education and training play a role in the survival and reinvention of restaurants during the pandemic and the impact of it on the sector, for example, whether the clusters would be different if the data were collected in this situation and which cluster the pandemic will affect the most.

CHAPTER 5. KNOWLEDGE TRANSFER IN HAUTE CUISINE: THE RELATIONSHIP BETWEEN CHEFS AS AN ENABLER FACTOR [5]

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[5] This chapter has been adapted from Escalante *et al*. (2022).

Abstract

The aim of this article is to analyse the relationships between haute cuisine chefs and to identify which elements of these relationships enhance the generation of ideas and the exchange of knowledge. A qualitative methodology is applied based on the analysis of in-depth interviews with almost the entire population of Michelin-starred chefs of Catalonia, Spain, an outstanding case in this sector. The findings show the most important elements of the relationships that drive the creation and transfer of knowledge. These elements can be differentiated between professional and personal aspects and classified as face-to-face or non-face-to-face. Admiration, recognition and collaboration are some of the examples of the effects derived from these relationships. The identified elements are important not only as sources of inspiration in creativity and innovation processes but also to create a professional and personal environment to collaborate and achieve common objectives of the sector.

5.1. Introduction and literature review

Over the past decades, the restaurant industry has become an important sector for developed economies. As an example, prior to the coronavirus outbreak (COVID-19), more than one million restaurants were operating in the United States (US) providing jobs for 15.6 million people, 10% of the overall US workforce (National Restaurant Association, 2020). In Spain, the restaurant business generated a turnover of 98,060 million euros, which represents 4.7% of its Gross Domestic Product (GDP) and employed 1.3 million people (Hostelería de España, 2020).

These figures are prior to the COVID-19 crisis, which has had a severe impact on the global economy. The measures taken by governments to curb the pandemic and the reduction of travel, tourism and restaurant services worldwide have significantly affected the restaurant sector. As Kartari *et al.* (2021) points out, the pandemic has altered individual routines and their quality of life. As an example, the lockdown restrictions have significantly increased home cooking and online food delivery (Rodríguez-Pérez *et al.*, 2020; Gavilan *et al.*, 2021), reducing social contact among consumers (Ahmed *et al.*, 2020) and altering restaurants business models (Gavilan *et al.*, 2021).

Fortunately, this situation is being left behind and meeting people around a table to eat is returning to normal. In fact, eating is an experience that transcends food (Gavilan *et al.*, 2021). It is an action that acquires a social dimension since it allows sharing moments and generates feelings and experiences in people (Hurtado Justiniano *et al.*, 2017). In this context, the gastronomic or haute cuisine sector stands out as a sector that offers a different gastronomy experience in order to attract increasingly discerning customers (Johnson *et al.*, 2005). The so-called fine-dining restaurants stand out for the high quality of their food, decor and customer service, and, as Surlemont and Johnson (2005) pointed out, they play a key role in trend setting, image building and in setting standard for the industry as a whole. In fact, haute cuisine restaurants are considered pioneers in innovation and benchmarks for the rest of the sector (Presenza and Messeni Petruzzelli, 2020).

As haute cuisine is an industry that requires creativity and innovation to achieve sustainable competitive advantage (Feuls, 2018; Stierand *et al.*,

2014; Svejenova *et al.*, 2010), some studies have focused on the creativity and the innovation that take place in these restaurants. For example, Petruzelli and Savino (2014) investigate the impact of recombining old component to develop successful innovations and Albors-Garrigós *et al.* (2018) analyse the innovation process and patterns to identify the drivers of haute cuisine innovation.

Regarding this point, Ottenbacher and Harrington (2007a, 2007b, 2008) compared the innovation process of haute cuisine restaurants with exiting theoretical innovation process models and, as Svejenova *et al.* (2007) and Stierand *et al.* (2014) acknowledge, innovation do not occur in isolation, rather it is needed a network or social system that allows the transfer of knowledge and information and enable the transformation of creations into innovations. In fact, according to Albors-Garrigós *et al.* (2013), some of the most relevant sources for innovation are the restaurant personnel and the cooperation with other chefs. This fact was also pointed out by Bouty and Gomez (2013) which show that creativity in gourmet restaurants is multifaceted and includes a creative teamwork besides chef's idea work and naming.

5.1.1. *Transfer of knowledge*

Transfer of knowledge is considered fundamental for the development of societies (Di Stefano *et al.*, 2017). Among the positive effects, some studies highlight an increase of turnover, higher profit rates and expansion of the product range (Batterink *et al.*, 2010; De Jong & Vermeulen, 2006; van Gils & Zwart, 2004). However, when knowledge becomes a public good, many agents may reduce their incentives to share their findings with potential competitors (Anton & Yao, 1994). To solve this problem, authorities create legal tools to protect the creation and transfer of knowledge, such as patents or copyrights.

Nevertheless, these mechanisms are not available in all sectors and the haute cuisine field is a clear example. The literature indicates that, in these situations, different strategies can be applied. For example, Presenza *et al.* (2017) proposes the creation of barriers against imitation by competitors. According to this study, the most important barrier is the capacity of a chef to develop a systematic approach to creativity and to accumulate professional skills. Other authors concluded that the protection of knowledge is resolved

through social networks and social norms (Di Stefano *et al.*, 2017; Vargas-Sánchez & López-Guzmán, 2018). A social network is a durable network in which its members have relationships of mutual recognition (Bourdieu, 1986) and adopt informal rules – social norms – to regulate themselves (Feldman, 1984). For example, in haute cuisine it is not allowed to make exact copies of techniques or creations and if a chef makes a derivative creation, the source is usually publicly acknowledged (Di Stefano *et al.*, 2017).

Social networks tend to occur when there is geographical proximity. Proximity and geographic concentration create a safe environment that enhance frequency of exchange, that is, improve the transfer of information and the development of trust and reciprocity (Uzzi, 1997). Hence, it can be considered that social networks and physical proximity are also mechanisms that promote knowledge transfer (Di Stefano *et al.*, 2017).

5.1.2. *Collaborative networks*

Literature have related social networks and geographic concentration with the concepts of clusters and "coopetition". As Porter (1998) defines, cluster is a "geographic concentration of interconnected companies, specialized suppliers, services providers, firms in related industries, training institutions and support organizations that compete but also cooperate within a local area or region". Specifically, when collaboration occurs between competitors, it is called "coopetition" and as Romero *et al.* (2019) pointed out, it can stimulate innovation, improve the efficiency of resources use and in the restaurant industry, create a more attractive destination marketplace for clients.

One of the most important aspects of coopetition is the transfer and exchange of knowledge that may occur between companies. Normally, companies do not have all the necessary resources to carry out all their innovation process and therefore it is necessary to create collaboration networks to access the knowledge of other organizations (see for example, Phelps *et al.,* 2012 for a review). Among the factors that boost the exchange of knowledge, some authors have highlighted face-to-face relationships and frequent communications. Following the pioneering work of Marshall (1890), which studied the impact of geographical concentration of companies, it emphasized the importance of "face-to-face relations" between managers

embedded in localized systems (Chiffoleau & Touzard, 2014). Years later, Epstein (2000) found that individuals who were friends and maintain face-to-face communications were more likely to share personal and complex knowledge (Roy *et al.*, 2017). Regarding frequent communications, relationships are usually established through repeated contacts, which favors long-term commitment, trust and cooperation between agents (Gulati & Sytch, 2008; Becerra & Gupta, 2003). In the restaurant industry for example, the communication and exchange of ideas between chefs can stimulate the innovation process (Romero *et al.*, 2019; Stierand *et al.*, 2014; Svejenova *et al.*, 2007).

According to that and focusing on the haute cuisine, some authors have analysed the interaction and collaboration of chefs. Fooladi *et al.* (2019) studied the interaction and the collaboration between chefs and researchers. Their findings indicate that cooperation is beneficial for both chefs and researchers and exemplify collaboration through workshops, co-authoring, cooking competitions, networking, teaching and knowledge exchange (answering questions), among others. Likewise, Garcia-Segovia *et al.* (2014) analyses the collaborative network, INDAGA, an initiative with the aim of facing the challenges and needs in gastronomy. The interactions generated as a result of this network have allowed the international dissemination of knowledge and techniques between companies, cooking schools, chefs and research teams.

Baldwin (2018) shows that chefs use a wide variety of elements to get inspiration and acquire new knowledge. In particular, traveling to other countries and having relationships with other chefs to learn, what can be defined as culinary tourism. Culinary creativity can also be achieved through the imitation of competitors' creations and by analysing customer reviews and comments (Vargas-Sánchez & López-Guzmán, 2020; Lee *et al.*, 2019).

Regarding social network analysis, Aubke (2014) studies the professional career of 262 German Michelin-starred chefs in order to find their "hot spots of creativity". The results show that the relationships between chefs with a number of similar stars occur less frequently than between chefs with a number of different stars. In this last case is when there is a greater transmission of knowledge. One of the conclusions of that article is that although creativity is understood as an individualized process, the social

environment plays a role as an external validator, accepting and adapting the creative output.

At the same time, Aldamiz-Echevarría *et al.* (2014) use a qualitative methodology to analyse the origins, factors and outcomes of the haute cuisine cluster in the Basque Country, a region in Spain famed for its gastronomy and one of the geographical places of the world with more Michelin stars per square kilometer. Through seven interviews with founder chefs of The Basque Culinary Center, the authors analyse the relationship between these chefs and their environment, identifying a cluster which has generated important benefits to the region, to the sector and to its members.

As mentioned, the creativity and innovation processes that are carried out in haute cuisine restaurants require the participation and collaboration between chefs and other actors, especially with other chefs, in order to promote the generation and transfer of ideas. However, further research is needed to understand these relationships as an enabler for the creation and transfer of knowledge.

Thus, to analyse the relationships, it is necessary to focus on their details and examine their elements and their implications. For this reason, the following research question proposed is:

What elements of the relationship between chefs boost knowledge transfer and what effects do they have?

Developing this question will lead to know to what extent these relationships are important, if they are positive or negative and their contribution. This analysis seeks to shed light to the geographical concentration of starred restaurants phenomenon in a determined territory.

5.2. Methodology

This study is a part of a larger project with the aim to analyse the main reasons for the geographical concentration of haute cuisine restaurants in Catalonia, the Spanish region with the highest number of Michelin-starred restaurants and one of the most internationally awarded (Bernardo *et al.*, 2019). Specifically, in the current study, the authors focus and deeply analyse the relationships between chefs as an explanatory factor.

The need to adopt an explanatory approach led the authors to opt for qualitative techniques as they would allow greater flexibility and adaptability (Carson *et al.*, 2001) and, in addition, facilitate in-depth understanding of the phenomenon (Patton, 2002). This methodology complements previous studies (Aldamiz-Echevarría *et al.*, 2014, Aubke, 2014).

5.2.1. Sample

In order to achieve the study objective, the participant's selection was based on an existing and accepted sample of restaurants, which is the Michelin-starred restaurant list for Spain and Portugal, specifically the list for Catalonia, which, as mentioned, is historically the most awarded region in Spain.

The final sample was built with 60 participants (Table 18). Initially, it was decided to use the Michelin-starred restaurants list in 2013 and throughout 2013 and 2014, much of the fieldwork was carried out. Nevertheless, during the project there were some changes to the list of awarded restaurants, and it was decided to add the new awarded restaurants until 2017 and thus considering most of the population of Michelin-starred chefs in Catalonia. It was also considered to have an important role in the sector, one specific institution named Alicia Foundation (Alicia means Alimentation and Science in the Catalan and Spanish version). It was founded in 2003, which and it is a private, non-profit foundation, created with the aim of generating knowledge in all of the technological aspects of cuisine. It works to promote healthy eating by improving eating habits and tries to find culinary solutions to certain illness. In addition, they also study gastronomy from a historical point of view with the collaboration of the best chefs and leading scientists in order to add value to Catalonia and its cultural heritage.

Table 18. Sample

Periods of time	1. First period: July 2013 - December 2014
	2. Second period: February - April 2017
Interviewees	5 chefs of restaurants with 2 and 3 Michelin stars
	51 chefs of restaurants with 1 Michelin star
	3 chefs with no star in 2013 but whose restaurants had
	Director of the Alícia Foundation

Interviewees' information	Type	Number	%
Gender	Male	57	95%
	Female	3	5%
Age	20-30 years	3	5%
	31-40 years	24	40%
	41-50 years	18	30%
	>51 years	15	25%
Experience in the restaurant industry	10-20 years	21	35%
	21-30 years	24	40%
	31-40 years	9	15%
	>40 years	6	10%
Nationality	Spanish (Catalan)	51	85%
	Spanish (No Catalan)	4	7%
	French	2	3%
	Italian	1	2%
	Argentinian	1	2%
	Japanese	1	2%

Source: Own elaboration.

5.2.2. *Data collection*

Data was collected by in-depth and inductive interviews with the help of a semi-structured questionnaire (Yin, 2009). The main aspects analysed in this questionnaire were (see Annex 1):

-Personal aspects of the relationships

-Professional aspects of the relationships

-Length of the relationships

-Motives to initiate the relationships

In addition, relationships with two and three Michelin-starred chefs were differentiated from relationships with one or without Michelin-starred chefs in order to analyse the role of this group in the sector. In some cases, where possible, it was also asked about the impact that the relationship with the members of this group had had on the interviewee's career.

The same protocol was followed in the interviews whenever possible. A pilot test was conducted in July 2013 to verify the validity of the questions and to determine the approximate duration of the interview with the chef and the most efficient way of collecting the data. After this pilot test, the restaurants were first contacted by mail and a summary of the project and the questionnaire were sent to the interviewees (see Annex 2). Then the contacted them by telephone to arrange the visit.

Fifty-seven interviews were done face-to-face, two were self-reported due to scheduling problems and one was conducted by Skype. All the face-to-face and the Skype interviews were tape-recorded except one by explicit request of the interviewee The interview began by explaining the purpose of the project and asking for permission to record it. The mean duration of the interview was sixty minutes. In two and three starred restaurants, the team of interviewers was two people, while for most restaurants with one or no Michelin star was one person. The interviews were fully transcribed and their corresponding case was written. In order to verify and validate that the information was correct, a triangulation was carried out, sending the drafted cases to all participating chefs for their review and receiving their feedback (Satolo *et al.*, 2013). Other sources were also used to write the cases, such as restaurant websites and press news.

5.2.3. *Data analysis and validity*

After the fieldwork, the verbatim transcriptions were examined using a Computer Assisted Qualitative Analysis Software (CAQDAS), NVivo (version 10). The decision to use the CAQDAS NVivo to aid the analysis of the field material was because it facilitates a range of complex operations which would be very difficult to perform by hand (Bourdon, 2002).

It was decided to carry out a "thematic analysis" in order to identify themes in the data through a process of coding (Cooper *et al.*, 2017). To obtain exploratory results, the analysis was performed incrementally and iteratively (Feuls, 2018). First, in the open coding phase, the data was analysed line-by-

line (Strauss, 1987) in order to identify the emergent themes (see Annex 3). In this first analytical step, a large number of open codes were created (158 codes). While doing this, the authors were able to describe the different types of relationships and how they started, and their implications. Then, the authors focused on the relations of the codes and organize them into 12 subcategories (see Figure 12). In the axial coding stage, the relationships between the subcategories were explored and developed (Gibbs, 2002) and were grouped into 6 categories. The last stage of the iterative process was the selective coding which consisted on establishing the "core" category that represents the central phenomenon of the study (Corbin and Strauss, 1990). It should be noted that all categories were compared constantly with the interviews and the literature throughout the codification process (Glaser, 2001).

Once the themes were generated, the authors managed to classify them into elements according to the literature: a) face-to-face and b) non-face-to-face.

Figure 12. Codes and categories
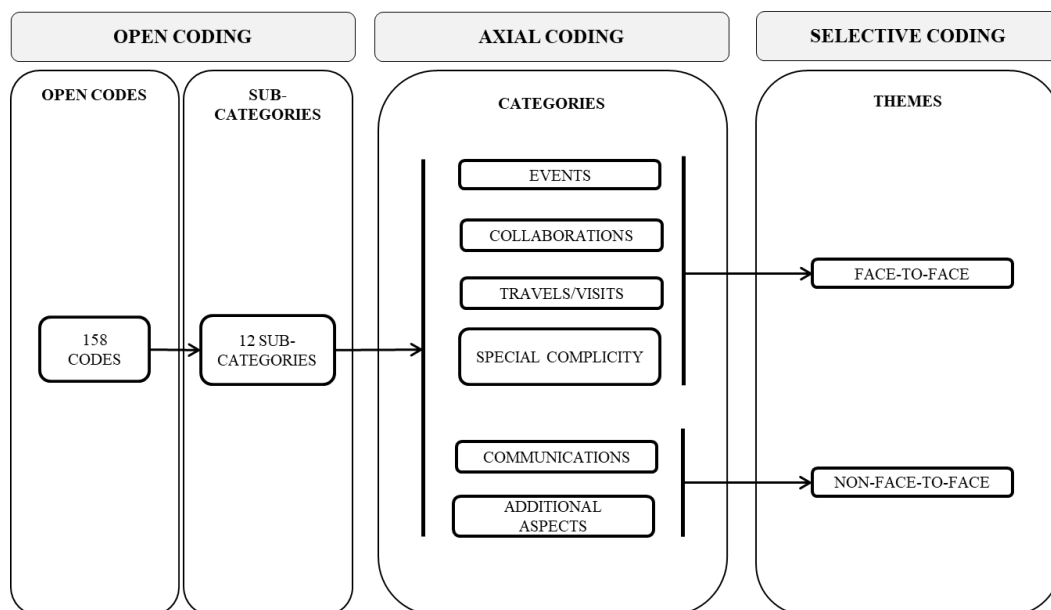
Source: Own elaboration

The iterative approach of comparing the field material and interweaving empirical evidence with theory gave, from the authors' point of view, excellent basis to the quality of the study (Feuls, 2018). Nevertheless, more measures of validity were taken through the research process in order to guarantee the highest levels of rigor (Ryan *et al.*, 2015). An audit trail and a

teamwork approach (Morse, 1994) were maintained throughout the research project. Moreover, adequacy (Glaser and Strauss, 1967; Morse, 1994) was achieved by ensuring that sufficient data were collected on a sufficient number of chefs' point of view. Fit (Glaser and Strauss, 1967) was ensured by seeking the chefs' perspective of the phenomenon, through the method of semi-structured interviews, with sufficient detail in order to allow the merging theory to "fit" the phenomenon. Finally, the language used by the respondents was maintained in the construction of the theory in order to ensure a high degree of understandability (Glaser and Strauss, 1967).

5.3. Results

The findings of the analysis of the interview transcriptions are presented below. The presentation of the findings is based on the treatment and processing of the data made in the data analysis stage.

The different elements of the relationships that boost knowledge transfer between the chefs of the sample have been classified into professional or personal aspects. In addition, these elements have been grouped into factors that, according to the literature, enhance the exchange of knowledge and the generation of ideas: Face-to-face (subdivided into events, collaborations, travels and visits and special complicities); and Non-face-to-face (subdivided into Communications and Additional aspects) (see Figure 13). The effects of the relationships are presented at the end of this section.

It should be mentioned that the elements of the relationships are not exclusive and can occur at the same time, even in some cases one type of relationship leads to another. However, it was decided to discern them to better identify their characteristics. Furthermore, it is important to note that not all relationships include all the elements shown in Figure 13, nor does a type of relationship necessarily have to occur between the participants, there are cases that the chefs simply know each other but do not maintain a relationship.

Figure 13. Elements of the relationships that boost knowledge transfer

		PROFESSIONAL ASPECTS	PERSONAL ASPECTS
FACE-TO-FACE	EVENTS	-Joint participation professional events	
	COLLABORATIONS	-Co-authorship of books -No joint recipe creation	
	TRAVELS/VISITS	-Visits to his / her restaurant	- Frequent visits to his / her restaurant
	SPECIAL COMPLICITY		-Sporadic or regular dinners -Geographical proximity -Career sharing
NON-FACE-TO-FACE	COMMUNICATIONS	-Consultation of recipes (doubts)	-Frequent communications (telephone, email....)
	ADDITIONAL ASPECTS	- Joint participation in a company/project -Exchange of staigers	-Reading of their books because they are friends

Source: Own elaboration

5.3.1. Face-to-face

Regarding the section "face-to-face", the analysis of the interviews with the chefs of the sample has allowed the elements of relationships to be classified into four subgroups: events, collaborations, travels/visits, and special complicity.

The first is *Events* and it includes the elements related to meetings at professional events where chefs share space, time and knowledge with other chefs and with agents of the sector. As some chefs pointed out, this type is the most common way for them to start their relationships and some of them have even organized events together. The main and best known are the conferences and congresses but it also includes fairs, competitions, solidarity events or award ceremonies. In these events chefs share knowledge by participating in workshops, creating menus or attending talks:

"At conferences you meet great chefs and maybe their concept fits a lot with yours. They show you things that may not have come to your mind

before or you have never considered. They lead the way and you can follow them, taking their ideas and adapting them to your kitchen."

Collaborations is the next subgroup in this type of relationship and it mainly includes collaborations not encompassed in the previous subgroup, as for example the co-authorship of books and the joint creation of recipes. The first is very common among this type of professionals since publishers and entities invite them to collaborate to publish cookbooks, for example. However, as far as recipe creation for the restaurant is concerned, it is the only point where all the participants agree on saying that they do not collaborate. The creation of recipes is unique to each restaurant and only takes place at special events but not for their restaurants:

> *"It is very personal. Usually, when cooks create recipes together it is because there is a proposal, because an association asks for it and we do it gladly but is done for something that we will not do in the restaurant. We are all very suspicious of our own identity and personality, although we have a good relationship."*

The creation of recipes is what defines them as restaurants, that is why they do it internally, nevertheless, afterwards they do not have problems to share them. This is an example of the importance of knowledge transfer, sharing this knowledge enriches the development and growth of the sector. Transparency is important but also is ethics, aspects that all participants have highlighted:

> *"All chefs use techniques from other chefs, they are international and heritage of the whole sector. However, what you cannot do, if you are a chef with a certain prestige, is to present a technique as if it were yours. I mean, you have to comment that you found out this technique when you went to that restaurant, you analysed it, it gave you an idea, you worked on it and something else came out ... this process is very beautiful!"*

The following subgroup is *Travels / Visits*. Visits as mutual clients is also a common reason why the relationship between chefs has been encouraged. In these visits they not only eat, but also share opinions and advices:

> *"I always meet them because they are clients. Maybe in my restaurant we make a different cuisine and for them is very interesting to visit."*

"I have something special with him, I don't know what exactly it is. His restaurant is a restaurant that I have always revered. He is a highly educated and polite person, whenever we have met, he has come to greet me, we have always respected each other a lot. Whenever I have gone to his restaurant or he has come to mine we have taken good care of each other. It is not a personal relationship but I have a special affection for him."

The exercise of visiting other restaurants to learn about other chefs' cuisine is considered a common professional practice in haute cuisine. However, when these visits become more regular, trust facilitates a closer and personal relationship:

"When they come as customers, we talk about many issues. They ask for techniques, where they can get products, etc. They come as clients and ask me questions. I teach them secrets and they teach me too, we talk about suppliers, etc."

Special complicity is the last subgroup and it includes elements that go beyond the professional relationship. For example, when the personal relationship is closer, they state that they meet more frequently:

"We meet often and have dinner together. When they come, we usually share a couple of meals and took advantage of them a lot. We do not only share ideas, but sometimes generational events, what is happening in the hospitality industry…It allows us to stay a bit up-to-date with everything."

Considering that it is a large group of individuals, there are different examples of relationships. For instance, in some cases, chefs have a special complicity because they initiated the gastronomic restaurant approximately at the same time or studied together:

"I think the relationship is to share projects, illusions, to feel accompanied in a project that 20 years ago was not so easy. The most common thing was to open a Catalan typical restaurant and it sure worked. We were brave, we took risks and now it is evident to see it because we have done well."

"We are four or five cooks of the same age that we studied together and we meet each year."

Chefs with more years of experience have a closer and longer relationship:

"In my case, the profession has taken me to meet them. The profession or that curiosity as a gourmet to visit that house and not having established a personal relationship yet."

As well as chefs who are geographically close:

"We are both from the inland of Catalonia. We work with more or less similar parameters and, although the two restaurants are absolutely different, there is a very good and close relationship."

"There is more contact with the cooks who are from the province of Girona, because for any event or act that is done, you have more contact."

5.3.2. Non-face-to-face

In reference to "non-face-to-face" section, it includes all those elements that do not necessarily involve face-to-face contact between the chefs. These elements can be classified into two groups, *Communications* and *Additional aspects*.

As mentioned, the chefs of the sample comment that they do not create recipes together but if any chef requires their creations, they have no problem sharing them. The fact of sharing recipes or solving doubts of cooks who want to apply techniques of other professionals are frequent exercises that all chefs of the sample do, for instance, by telephone, by mail or visiting other restaurants:

"One of the important things is the transparency of great chefs. Explain all the recipe and answer all doubts. Ferran Adrià is one of the main examples, he explained everything he did."

In many cases, frequent communications by telephone or email are linked with sporadic dinners. The relationship began for professional reasons and over the years the relationship became more personal, even friendship:

"We all know each other; we meet many times for professional issues that then end with leisure time. We do not just do professional work; if there is a time afterwards, we share it. There is a friendship that goes beyond the profession but the profession has led us to it. It seems very positive that within the same profession, we admire, respect and relate to each other."

Finally, the rest of the elements detected in the relationships that could not be classified as *Communications*, have been grouped under *Additional aspects*.

Regarding the professional aspects, it is worth mentioning that the gastronomic sector brings together a lot of agents such as clients, suppliers, promoters and others chefs, thus in some cases a relationship is established in which joint projects are started as partners in a company or other types of collaboration:

"I remember how we met. I was organizing a cooking school in Terrassa with a friend of mine who had studied in Girona and one day we went to visit his former school. We were received by one of his teachers who was also a chef and who had recently opened his restaurant. We went to lunch together and we talked about our future projects."

In addition, they exchange kitchen personnel or *staigers*, since there are cooks who want to go through different haute cuisine kitchens to improve their training and experience:

"Every restaurant is different. If we have a person and we want him or her to develop more, we send him or her to another restaurant to see how it works. And the same with us, we also receive people from other restaurants."

With regard to personal aspects, some chefs mention that they read the books of specific chefs not only because they are good cookbooks but also because they are books of their friends.

5.3.3. Effects of the relationships

The analysis of the interviews also shows that among the participating chefs there is a relationship based on admiration, respect, recognition for the work

done, the interest of all for all, the follow-up they make of their careers and the maximum collaboration among them whenever they can:

"I am very impressed by his work, I admire how he has done it, as he combines two very different cooks in the same place, he is capable of being very avant-garde and very traditional at the same time."

"It was curious that the year that they were awarded the third star, we were also recognized and that has twinned us a little. That year was very important for us, with many interviews, we coincided in some of them and there is a good relationship."

Hence it can be considered that the relationship between them is good and what changes is the intensity of the relationship. There are members of the sample who have more contact than others, but, as they say, there is no competence, but a mutual learning:

"I do not think they are rivals, on the contrary, most of them serve me as examples."

Regarding the relationship between generations, the most experienced chefs are the reference of the younger generations, they are the examples to follow. In addition, some of the younger chefs base their relationships, initially, on the relationships of their bosses, and then develop networks through participating in events. This kind of relationship also makes possible to enforce the connection between generations and to guarantee it, since it acts as a bridge between the different professionals. The transfer of knowledge between generations is very important for the sustainability of the sector and is a practice that is maintained and encouraged:

"I met him because he was my teacher at the hospitality school when I was 17-18 years old. For me he was very important because he gave me a good base and taught me very well about the basis of traditional cuisine."

"He gave me the focus towards the cuisine I make, the way to see the profession, the restaurant business".

"At that time, I thought it was interesting and different from all the other restaurants. I have always thought that he had a unique way of cooking.

I do not know why but when he explained the dish to you, when he explained what he was doing, you saw that it was very different."

Related to proximity, there are chefs who are part of groups and associations of chefs, such as La Cuina de l'Empordanet, La Cuina del Vallès, Euro-Toques and Slow Food Km0, among others. These associations have not only allowed them to know in depth the local products and gastronomy in their area, but also to know and establish relationships with different chefs of the collective:

"In the association we are cooks friends that we have our own restaurant and we like to eat a lot. We have dinner together and we talk for hours, we exchange opinions, ideas, etc., we complement each other."

Hence, the different ways of relating and interacting have an important impact on their career but also have implications for the sector.

One of the keys of the good relationship between them is because everyone knows what their role is and what is their contribution to the good functioning and growth of the sector. Somehow all the chefs contribute to the success of the haute cuisine sector and are important to explain this phenomenon. As some chefs pointed out, they all collaborate and help in favor of the common good:

"Among the cooks, there is a personal relationship based on proximity. At the gastronomic level, particularly in Catalonia and Girona, all have assumed their role very well, everyone has assumed, with respect and consideration, everything that has happened in their environment and has recognized the progress. There is no rivalry. Here there has always been respect for everyone, professional and personal, and it is what makes personal relationships stronger".

"We do not understand the proximity between us as competition, it is enrichment".

An example of the benefits of good relationships is the promotion that some chefs make of other restaurants in front of gastronomic experts or by visiting them in order to make their work known:

"Everyone has helped me in some way. They all come to my restaurant and promote it. They started telling the press that it was a very interesting

restaurant. The chefs with three stars also come and if people see that they are here, they give me a good image".

"This is also an important reason to explain why Catalonia has the level it has, because we make others discover places with potential, because we understand that the better we are here, the better for everyone. We do not understand it as competition, but as a way to strengthen the gastronomic fabric that provides an idea of power and increase the magnetism of the high-level public and gastronomic tourism that nourishes all these restaurants. That is why we try to channel it, and when we see that there are restaurants that have ambition, and work, we try to help as much as we can."

Regarding to what extent are the relationships important in their careers, some of the youngest chefs commented that the influence has been crucial. Even some of them declared that they would have not reached their recognition without their help:

"What has influenced me from them is mainly the care, the affection, how they take care of the product, how they work, how they value the product, how they take care of the details of the table, that is, the esteem and passion for this trade."

The role of great chefs and their contribution to the evolution of the sector are also important elements to understand the phenomenon. Ferran Adrià, Santi Santamaria, Carme Ruscalleda or Joan Roca are some examples of chefs that have contributed positively to the sector during their careers. On the one hand, they had opened the Catalan cuisine to the world using different products and techniques, and on the other hand, they had acted as knowledge transfer catalyzers through their openness, transparency and collaboration with all the chefs:

"I consult Joan [Roca]*'s books a lot in order to know how he does certain things, what cooking time he uses, etc. In the same way, I have gone to Carme* [Ruscalleda]*'s restaurant and I have paid attention to the combination of product that she uses to get the taste. You write down these things because you always get ideas from others, always. For example, when I visit El Celler de Can Roca, I always try to enjoy but I also try to see what they are doing and how they are doing it."*

As an example, El Bulli has been more than a restaurant, it has acted as a research and development center where many cooks attended workshops:

> *"It can be said that all the cooks who were able to go, we met at El Bulli on Sunday nights and Mondays, and we shared table and experiences."*

5.4. Discussion

After identifying and classifying the different elements of the relationships between chefs and their effects, the contributions to the creation and transfer of knowledge are discussed below.

According to the results of this study, chefs are relatively reserved about their recipes, that means, they have no problem sharing their culinary creations and answering questions and doubts to their colleagues but they prefer to carry out the process of creating a recipe internally, for their restaurant. In fact, culinary creations cannot be patented and one way to register them is to present them in front of an audience (Vargas-Sánchez & López-Guzmán, 2018).

Nevertheless, this does not contradict what is stated in the literature, which means that culinary creativity and innovation processes do not take place in isolation (Stierand *et al.*, 2014; Svejenova *et al.*, 2007) and also needs an external validator to accept and adopt the creative outputs (Aubke, 2014). As Ottenbacher and Harrington (2007a, 2007b, 2008) and Feuls (2018) pointed out, the community plays an active role in the development and spread of innovations not only at congresses and at the professional meetings but also in the visits that the chefs make to other restaurants to see what is cooking. The concentration of Michelin-starred restaurants in a territory such as Catalonia provides a safe environment where chefs can interact more and better, establishing networks of trust that facilitate the exchange of information and knowledge (Di Stefano *et al.*, 2017).

As pointed in the literature, Face-to-face relationships (Marshall, 1890; Chiffoleau & Touzard, 2014) and frequent communications and repeated contacts (Gulati & Sytch, 2008; Becerra & Gupta, 2003), enhance long-term commitment, trust and cooperation. It has been proven that also apply in the haute cuisine sector. In the specific case of Catalan cuisine, repeated encounters for many years have led some chefs to establish close relationships, even friendships. The elements detected in the relationships

indicate that knowledge fluctuates between members of the sector through meetings, personnel exchanges and consultations, and this in turn allows knowledge to adapt and develop new creations.

As in Aldamiz-Echevarría *et al.* (2014) all the networks have been analysed but, in this case, it has focused on the chefs' relationships, instead of analysing all collaborative networks (see Figure 14). The existing relationships between them in a network of collaborations with other agents, favor the development of ideas by itself and also the transfer of knowledge between individuals, which in turn can also enhance the generation of ideas. This fact is part of the sources of inspiration for chefs and restaurants to carry out culinary creativity and innovation processes.

Figure 14. The role of collaborative relationships between chefs
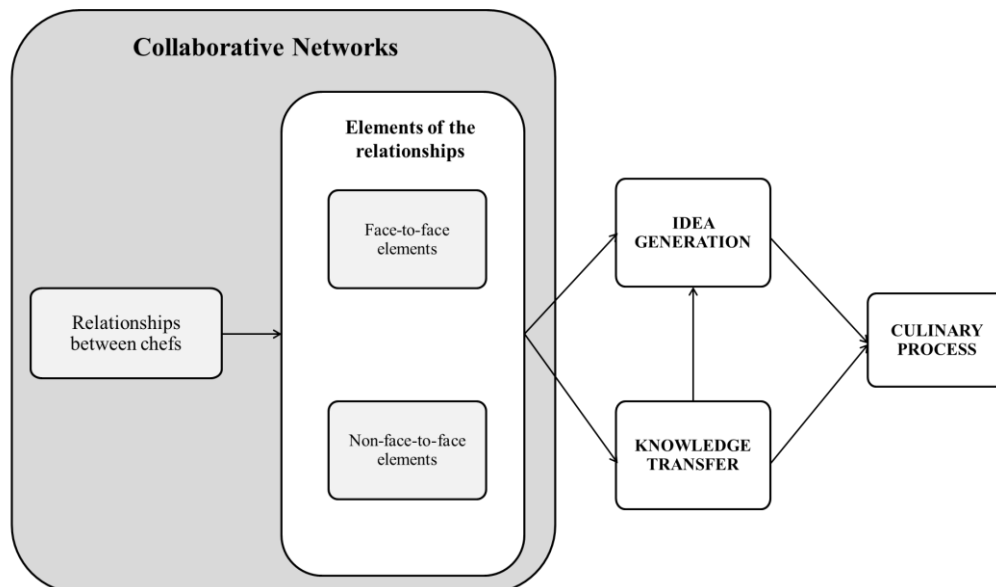
Source: Own elaboration.

5.5. Conclusions

This research aimed to analyse the relationships between chefs as contributors in the creation and transfer of knowledge in the haute cuisine sector. In order to achieve this objective, 60 interviews were carried out over three years providing a wealth of detailed information.

Based on the data obtained from the interviews, the authors manage to characterize the elements and identify the effects of the relationships among the population of haute cuisine chefs in Catalonia. The findings indicate that

the elements that favor the creation and exchange of knowledge in this sector can be classified into professional and personal aspects and grouped into: Face-to-face or Non-face-to-face elements. All the identified elements collaborate to a greater or lesser extent in the generation and exchange of ideas. Hence, it can be stated that the relationships between chefs enable the creation and transfer of knowledge.

This study contributes to the literature about haute cuisine chefs and restaurants, benchmarks for the entire sector. As previously commented, the analysis of clusters, networks and other organized ways of collaborating as enabler for the creation and transfer of knowledge in the haute cuisine sector has not yet been deeply analysed. Hence, to the best of the author's knowledge, this is one of the few studies that analyses the creation of an environment of professional and personals relationships as an enabler for collaboration and achievement of common objectives in this sector.

In addition, this study has practical implications. These findings would justify the development of policies that promote collaboration within this sector and motivate chefs to continue collaborating and maintaining their relationships. Furthermore, if these collaborations include chefs from other countries, it will allow the establishment of international collaboration networks while globalizing the exchange of knowledge and incorporating techniques from other cultures. In this regard, this paper encourages governments to support the creation and development of cooking schools, staff training, and the organization of professional events to boost the creation and transfer of knowledge.

To summarize, relationships can become a fundamental element to maintain the international recognition of Catalan gastronomy, which besides being beneficial for restaurants and for agents of the sector, is also an element that boost tourism and young talents attraction, both necessary to reverse crisis, such as the situation of COVID-19.

This paper is not without limitations. The study is based on a sample from one geographical location, Catalonia, with specific characteristics. Also, it focuses in only one segment of the industry, the haute cuisine sector. From all of this, the expansion of the research to other professionals of the sector or other locations is a line of work to explore. In addition, it is necessary to analyse how relationships and networks have been affected by the pandemic.

Chefs have had to find other ways to share knowledge and develop their culinary processes because of the difficulty of meeting face-to-face derived from lockdowns and local restrictions.

CHAPTER 6. CONCLUSIONS

The structure of the next chapter is as follows. Firstly, as the individual conclusions have already been presented in each of the previous chapters, this chapter will present the joint conclusions of the thesis. Secondly, the most important contributions of this research are presented, followed by the academic and practical implications. Finally, the limitations of this work are explained and future lines of research are proposed.

6.1.   General conclusions

The first conclusion that can be drawn from this thesis is that the restaurant sector is important both economically and socially. As mentioned at the beginning of this work, the restaurant industry contributs significally in the Spanish GDP and acts as a pole of attraction for tourists, without forgetting the role it plays in the socialisation of people. This is also confirmed by the extensive literature on the restaurant industry within the hospitality sector. In particular, haute cuisine should be highlighted as a successful sub-sector within the restaurant sector, which in recent years has gained importance in society. As several studies point out, gastronomic restaurants have become a tool for promoting territories and attracting gastronomic tourists. They are also pioneers in innovation and creativity and have become benchmarks for the rest of the sector.

The success of the restaurant sector has led to the emergence of a number of classifications and quality standards. Among the generally accepted quality systems, the star system provided by the Michelin Guide stands out. It is a quality standard for the gastronomic sector whose diffusion is growing like other sectoral standards. However, it has its own characteristics that differentiate it from other management system standards, in terms of implementation and certification.

Another conclusion of this research is that there is no single factor that explains how to achieve success in this sector. There are a multitude of factors that if combined, some of them can explain why a restaurant is successful and why others fail. However, the list of factors is not finite and may expand as studies progress. Among this group of factors, some of them also help to explain why there are territories that concentrate a greater number of haute cuisine restaurants compared to other territories with similar economic and social characteristics.

6.1.1. Geographic concentration

Among the factors that explain the geographical concentration of restaurants in a territory, specifically in Catalonia, the following should be highlighted:

- Great chefs

Firstly, Ferran Adrià's role as a pioneering chef not only in the creation of culinary novelties but also in openness and transparency towards the rest of the sector stands out. Other chefs, such as Santi Santamaria, Carme Ruscalleda and Joan Roca have followed him in his wake. They have all contributed positively to the growth of the sector by opening up Catalan cuisine to the world and acting as catalysts for the transfer of knowledge throughout the sector (Capdevila *et al.*, 2018; Svejenova *et al.*, 2007).

- Catalan society: culture and socio-economic level

Catalan society has always been open to new gastronomic experiences and interested in these restaurants. Moreover, the socio-economic level of this society has been able to afford this type of cuisine. Culture and tradition are also closely related, as most celebrations are held around a table (Capdevila *et al.*, 2018).

- **Territory and products**

The Catalan territory provides a wide range of different and high quality products (Noguer-Juncà *et al.*, 2021). This variety favours cuisine that can use local products and also incorporate and combine with products from other cultures.

- French cuisine

The proximity to France has influenced Catalan cuisine. Many chefs have made the practicum or worked in French restaurants and eventually brought styles and trends to Catalonia (Capdevila *et al.*, 2018).

- Education and the new generation of chefs

Formal studies and hospitality schools are fundamental to train professionals in this sector (Gomez and Bouty, 2011; Presenza and Petruzelli, 2019). Each new generation is trained more and better than the previous one, ensuring the continuity of the sector. This is demonstrated by the fact that 2 of the 3 chef clusters identified have formal cooking studies. In addition, it is important to

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note the diffusion of knowledge that takes place in these schools. In some cases, chefs from previous generations act as teachers, facilitating the transfer of knowledge between generations.

However, as the third group of chefs shows, formal training in cooking is not always an option, and chefs can achieve success and acquire and transfer knowledge through lifelong learning.

- The socialization of the cuisine

Bringing haute cuisine closer to society to make these restaurants better known and demystify the sector. The role played by the media or the offer of cheaper menus has helped to socialise haute cuisine (Tarabini and Jacovkis, 2020).

- **Relationships as a means of knowledge sharing**

The proximity between establishments has enabled the creation of a safe environment in which chefs can interact more and better, establishing collaborative networks and enabling information exchange (Di Stefano *et al.*, 2017). Face-to-face relationships (Chiffoleau and Touzard, 2014; Marshall, 1890) and frequent communications and repeated contacts (Gulati and Sytch, 2008) foster long-term commitments, trust and cooperation, developing in some cases into personal relationships and friendships.

These factors are in line with the literature, which states that creativity and innovation do not emerge in isolation (Stierand *et al.*, 2014; Svejenova *et al.*, 2007) and an external validator is needed to accept and adopt the creative outputs (Aubke, 2014). As Ottenbacher and Harrington (2007a, 2007b, 2008) and Feuls (2018) pointed out, the community and its environment act as developers and disseminators of innovations.

Hence, the last conclusion derived from this thesis is that the relationships between chefs within the sector network – which includes relationships with other actors (Aldamiz *et al.*, 2014) – together with their education and training, boost the generation of ideas and also the transfer of knowledge which in turn stimulates culinary creativity and innovation processes.

6.1.2. Future of the sector

The media have been key to socialising this sector. TV and radio programmes and magazines and publications about restaurants and haute cuisine are

available not only to professionals but also to the rest of society. This good relationship with the media must be maintained and even improved for a sustainable success of the sector.

Related to this, the future of the sector lies in making these restaurants leaders in sustainability. On the one hand, to obtain good economic results and make them profitable (Daries *et al.*, 2021) and also to reduce waste and contribute to a greener future.

The new generations of chefs, the tourism sector and the participation and interest of society will be key and necessary to ensure the future development of the sector.

6.1.2.1. *Covid-19 and post pandemic scenario*

One of the first challenges the sector will have to face is the post-pandemic scenario. Covid-19 has had a major impact on all the world's economies. The restaurant sector has been one of the affected, as it is a pandemic caused by a virus that is easily transmitted by air, which has led many customers to decide not to gather in these establishments for fear of becoming infected. In addition, government closures to curb the spread of the virus, which reduced travel and tourism, and restrictions in bars and restaurants have significantly affected the sector.

Restaurants that have managed to keep afloat have had to make drastic decisions. Firstly, to ensure the requirements of government guidelines on social distance and hygiene, which has led to a significant increase in costs. Information Technologies (IT) budgets have also had to be increased to enable businesses to adapt to home delivery and contactless payment. To compensate for the reduction in customers, some owners have been forced to reduce staff, adjust their prices further or diversify their businesses.

Today, with the rising cost of products and resources, and therefore inflation, the sector is facing a new challenge and will have to make drastic decisions to survive. One of the most imminent concerns staff recruitment. Due to the pandemic, the labour market has changed and the workforce now demands different conditions than those that have been offered for years by the sector. Associations and collaboration between competitors will also be important in order to help each other not only for their own benefit but for the benefit of the whole sector. Finally, continuous training will be necessary to acquire

and consolidate new knowledge and to adapt to the new situations that lie ahead.

6.2. Contribution

This thesis has contributed to the analysis of the Michelin star system from different points of view not considered so far in the literature. Firstly, a gap in the literature on management standards in the gastronomy sector has been filled by analysing and comparing the Michelin star system with other quality standards in this sector. This analysis contributes to the existing literature that advocates that organisations prefer sectoral standards as they fit better with their activities and allow them to differentiate themselves from competitors and achieve competitive advantage (Llach *et al.*, 2011; Marimon *et al.*, 2011; Alonso-Almeida *et al.*, 2013).

However, it also shows that the Michelin star system has its own characteristics that need to be analysed in particular. Therefore, after analysing and classifying the factors of success in the restaurant sector, the second contribution is to fill a gap in the literature of the haute cuisine restaurant segment. To date, most studies have focused on analysing the creativity and innovation of these restaurants but without going into the factors that explain the concentration of fine dining restaurants in a territory. For this reason, this thesis is one of the first studies to qualitatively analyse practically the entire population of Michelin-starred restaurants in Catalonia, the region of Spain with more Michelin-starred restaurants. Until now, studies had not analysed the entire population or conducted quantitative studies (Aubke, 2014). This analysis has helped to identify the factors that explain the success and concentration of haute cuisine restaurants in Catalonia and has highlighted the training and relationship between chefs.

Hence, the analysis of the factors has demonstrated the existence of three clusters of haute cuisine chefs with a specific training and the identification of aspects of the relationships that favour the creation and exchange of knowledge in this sector.

In general terms, this thesis has contributed to highlighting some of the specificities of the Michelin star system, emphasising the important role that cooking schools and universities play in the dissemination of knowledge in the haute cuisine sector, and not forgetting that success requires solidarity and continuous training.

6.3. Implications

6.3.1. Academic implications

In terms of research implications, this thesis fills a new gap in the restaurant literature. In particular, it is one of the few studies that does not focus on innovation and creativity in this sector but analyses the success of haute cuisine through two factors, education and network creation. Moreover, it analyses a specific region with its own characteristics, which opens up a new line of research on this topic that can be analysed from different perspectives.

6.3.2. Practical implications

This thesis has managerial implications both for the restaurant sector and for governments and decision-makers.

6.3.2.1. Practical implications for the restaurant sector

Firstly, implications for chefs, as this study highlights their behaviour and encourages them to continue collaborating and maintaining their relationships.

In terms of practical implications for the restaurant industry, this study highlights the importance of ongoing cooking training and professional experience as a catalyst for knowledge transfer between mentors and apprentices and between peers. It therefore encourages chefs and students to continue training and thus increase their theoretical and practical knowledge both through formal education and through nonformal and informal education.

In addition, it also has implications for women, since it has been shown that although the number of female chefs is limited, some of them have reached the highest positions and have become benchmarks for the entire sector. Therefore, the sector must support and collaborate in order to encourage more women to undertake studies in haute cuisine in schools or universities and to raise to positions of responsibility in the restaurant industry. Breaking the glass celiing should be the next revolution.

Finally, implications for the sustainability of the sector, both socially and ecologically. The path initiated by restaurants and recognised by the green stars of the Michelin Guide must continue and increase its presence in all restaurant activities. Ensuring the well-being of the members of the

organisation will favour the subsistence of the restaurant and the achievement of its objectives.

6.3.2.2. *Practical implications for governments and decision makers*

This thesis has also shown to governments that promoting collaboration in the sector is a way of creating value for a country's economy and culture. It is worth investing in this as it will, in turn, have an impact on complementary sectors such as tourism, which are key to the economy of Spain and Catalonia.

Regarding education, governments and decision makers should promote all kinds of education and training programmes with the aim of attracting young people and guaranteeing the continuity of the sector. Also, the creation of more cooking schools, programmes and even gastronomic careers and the organisation of events that boost the creation and transfer of knowledge.

In summary, the education and networking of chefs is fundamental to maintaining the international recognition of Catalan gastronomy. Not only are they beneficial for the restaurants and for industry players, but they are also elements that promote tourism and attract young talent, both of which are much needed to overcome the Covid-19 situation.

6.4. Limitations

The main limitations of this thesis from a generalised perspective, taking into account that the limitations have already been developed more specifically in each of the previous chapters, are that the research has focused on Michelin-starred restaurants, so it is not applicable to all types of culinary establishments. Moreover, although an attempt has been made to analyse all Michelin-starred restaurants in the territory, some chefs have been unwilling or unable to participate in the study. Furthermore, the list of restaurants is updated every year, which means that although the sample was extended to include new award-winning restaurants, the results obtained may change depending on the time the study is carried out.

In addition, the study refers to restaurants and chefs in a specific geographical location, Catalonia, with its specific characteristics, so the results obtained are not generalisable. Finally, the methodology mainly used in the development of the thesis is qualitative. Although it is considered adequate for the objectives set, as practically the whole population was included, a

quantitative methodology could also have been used to be more representative.

6.5. Future research

Given these limitations and taking into account the lines of research suggested in the previous chapters, the following proposals for future research are presented.

Firstly, the extension of the study to other geographical areas both in the Iberian Peninsula and in other countries is line of future research. Territorial extension will allow comparisons between territories, deepen the analysis of the effects of the factors analysed and analyse the influence of other factors found in the literature such as culture and tradition (Aldamiz-Echevarría *et al*., 2014) or available resources (Plaza, 2000; Camillo *et al*., 2008).

Future research should also analyse different samples, both within the haute cuisine sector and the rest of the restaurant sector. Analysing the point of view of other professionals will help to identify new factors and establish relationships, in order to better understand the success of this sector. Further lines of future research would also address other factors that condition the success of the sector (Tzeng *et al.*, 2002; Mandabach *et al.*, 2011; Jeambey, 2016) and the profitability of restaurants (Daries *et al.*, 2021).

In addition, future research could address the issue of internationalisation and diversification of fine dining restaurants. So far only a limited number of fine dining restaurants have taken this option but it is likely that in the future other restaurants will see the internationalisation and/or diversification of their business as an option to grow, improve their competitiveness and better withstand crisis cycles.

As previously mentioned, the pandemic has meant that many restaurants have suffered the consequences of confinements, restrictionss and a reduction in tourism. It is necessary to analyse whether the two factors discussed in this thesis have contributed to the survival of restaurants during the pandemic. Analyse how relationships and networks influence the profitability of restaurants after COVID-19 and how relationships among chefs have helped businesses to survive. Moreover, as many professionals have had to adapt their businesses to survive the new conditions, future studies could address the role of education and training in the survival and reinvention of the sector

as well as the role of digitalisation in the future scenario. Finally, future research could analyse the impact of the pandemic on clusters, study whether clusters would be different if data were collected in this situation and which clusters would be most affected by the pandemic.

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ANNEX 1. QUESTIONNAIRES

Universitat de **Girona**
Departament d'Organització,
Gestió Empresarial i Disseny
de Producte

Universitat
de Barcelona
Facultat d'Economia i Empresa
Dep. d'Economia i Organització
d'Empreses

Enquesta membres de l'equip

Projecte: Xarxes de relacions professionals en els restaurants amb Estrelles Michelin de
Catalunya

TOTES LES DADES PROPORCIONADES SÓN CONFIDENCIALS I ES TRACTARAN DE
MANERA AGREGADA. NO ES PUBLICARÀ CAP INFORMACIÓ QUE NO HAGI ESTAT
VALIDADA PEL RESTAURANT IMPLICAT.

Des de la Universitat de Girona i la Universitat de Barcelona, volem analitzar si
la xarxa entre professionals del sector de la restauració ha contribuït, i com, a
l'èxit dels restaurants catalans.

És per això que li demanem que participi en aquest estudi omplint l'enquesta
que trobarà a continuació. La informació que ens doni serà tractada de manera
agregada i ens serà de gran valor per poder dur a terme el projecte.

En cas de dubte, estem a la seva disposició:

Anna Arbussà: anna.arbussa@udg.edu

Dades generals
Datos personales

1. Nom (opcional)
   Nombre (opcional)

2. Edat_____Home ☐ Dona ☐   Lloc de naixement (província i país)
   Edad   Hombre   Mujer   Lugar de nacimiento (provincia y país)

3. En aquest restaurant: ☐ Treballo ☐ Faig una estada de formació
   En este restaurante: Trabajo   Hago una estancia de formación

4. Categoria professional (marqui la que correspongui):
   Categoría profesional (marque la que corresponda)

   ☐ Cap de cuina ☐ Cap de partida ☐ Ajudant de partida ☐ Altres (especificar):
   Jefe de cocina   Jefe de partida   Ayudante de partida   Otros (especificar)

5. Anys d'experiència en el sector _____
   Años de experiencia en el sector

Educació
Educación

Les preguntes que hi ha a continuació es refereixen als estudis realitzats.

Las preguntas que hay a continuación se refieren a los estudios realizados

1. Ha realitzat estudis a escoles de cuina, màsters universitaris o altres cursos de *durada mínima de 6 mesos*?
   ¿Ha realizado estudios en escuelas de cocina, masters universitarios u otros cursos de duración mínima de 6 meses?

Nom del curs *Nombre del curso*	Nom de l'escola *Nombre de la escuela*	Durada (mesos o anys) *Duración (meses o años)*

2. Dels estudis de *durada màxima de 6 mesos*, cursos més curts, quins han estat els que més impacte han tingutper a la seva carrera professional?
   ¿De los estudios de duración máxima de 6 meses, cursos más cortos, cuáles han sido los que más impacto han tenido en su carrera profesional?

Nom del curs *Nombre del curso*	Nom de l'escola *Nombre de la escuela*	Durada (mesos o anys) *Duración (meses o años)*

3. En quins altres restaurants ha realitzat estades de formació (sense contracte laboral)? Ordeni'ls segonsl'impacte que han tingut en la seva carrera professional.
   ¿En qué otros restaurantes ha realizado estancias de formación (sin contrato laboral)? Ordénelos según el impacto que ha tenido en su carrera profesional

Nom del restaurant *Nombre del restaurante*	Xef del restaurant *Chef del restaurante*	Durada (dies, mesos, anys) *Duración (días, meses, años)*

Experiència professional
Experiencia profesional

Les preguntes que hi ha a continuació es refereixen a l'experiència professional (amb contracte laboral).
Las preguntas que hay a continuación se refieren a la experiencia profesional (con contrato laboral).

4. En quins restaurants, incloent l'actual, ha treballat? Ordeni'ls cronològicament, sempre que sigui possible.
   ¿En qué restaurantes, incluyendo el actual, ha trabajado? Ordénelos cronológicamente, siempre que sea posible

Nom del restaurant *Nombre del restaurante*	Xef del restaurant en aquell moment *Chef del restaurante en esemomento*	Núm. estrelles Michelin del restaurant en aquell moment *Núm. estrellas Michelin del restaurante en ese momento*	Durada (dies, mesos, anys) *Duración (días, meses, años)*

5. En quines trobades professionals participa (formals i informals)? Per exemple, congressos, fires, etc.
¿En qué eventos profesionales participa (formales e informales)? Por ejemplo, congresos, ferias, etc.

Nom de la trobada *Nombre del evento*	Temàtica de la trobada *Temática del evento*	Anys *Años*

Valoració
Valoración

6. De tot el que li hem preguntat, quina activitat ha estat la més important en la seva carrera professional? Puntuïde l'1 al 5, on 1 significa "la més important", i 5 significa "la menys important". Si us plau, no repeteixi puntuació:
De todo lo que le hemos preguntado, ¿qué actividad ha sido la más importante en su carrera profesional? Puntúe del 1 al 5, donde 1 significa "la más importante", y 5 significa "la menos importante". Por favor no repita puntuación:

Estudis a escoles de cuina, màsters (mínim 6 mesos de durada) _____
Estudios en escuelas de cocina, masters (mínimo 6 meses de duración)

Cursos curts (màxim 6 mesos de durada) _____
Cursos cortos (máximo 6 meses de duración)

Estades de formació en altres restaurants (sense contracte laboral) _____
Estancias de formación en otros restaurantes (sin contrato laboral)

Experiència professional (amb contracte laboral) _____
Experiencia profesional (con contrato laboral)

Participació en trobades professionals _____
Participación en eventos profesionales

Observacions: (Anoti aquí altres eines que utilitzi per a la seva formació, com per exemple: Associacions deprofessionals del sector, llibres, publicacions professionals sector, etc.)
Observaciones: (Anote aquí otras herramientas que utilice para su formación, como por ejemplo: Asociaciones de profesionales del sector, libros, publicaciones profesionales sector, etc.)

Codi rest.:

Universitat de Girona
Departament d'Organització,
Gestió Empresarial i Disseny
de Producte

UB
Universitat
de Barcelona
Facultat d'Economia i Empresa
Dep. d'Economia i Organització
d'Empreses

Enquesta xefs

Projecte: Xarxes de relacions professionals en els restaurants amb Estrelles Michelin deCatalunya

Proyecto: Redes de relaciones profesionales en los restaurantes con

Estrellas Michelin de Catalunya

Relació amb xefs de restaurants de 2 i 3 estrelles Michelin a Catalunya
Relación con chefs de restaurantes de 2 y 3 estrellas Michelin en Catalunya

1. De la llista de xefs guardonats amb 2 i 3 estrelles Michelin a Catalunya, indiqui quin és el tipus/contingut dela relació PERSONAL:
De la lista de chefs galardonados con 2 y 3 estrellas Michelin en Catalunya, indique cuál es el tipo/contenido de la relación PERSONAL:

	Sopars junts *Cenas juntos*	Relació d'amistat *Relación de amistad*	Comunicació freqüent (e-mail, telèfon, etc.) *Comunicación frecuente (e-mail, teléfono, etc.)*	Lectura de llibres seus *Lectura de sus libros*	Altres *Otros*
Joan Roca (El Celler de Can Roca)					
Carme Ruscalleda (Sant Pau)					
Jordi Cruz (Àbac)					
Paco Pérez (Miramar-Enoteca)					
Paolo Casagrande (Lasarte)					
Fina Puigdevall (Les Cols)					
Raül Balam/Alberto Castiñeiras (Moments)					

2. De la llista de xefs guardonats amb 2 i 3 estrelles Michelin a Catalunya, indiqui quin és el tipus/contingut dela relació PROFESSIONAL:
De la lista de chefs galardonados con 2 y 3 estrellas Michelin en Catalunya, indique cuál es el tipo/contenido de la relación PROFESIONAL:

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	Creació noves receptes / Creación nuevas recetas	Consulta receptes / Consulta recetas	Co-autors llibres / Co-autores libros	Organització conjunta congressos / Organización conjunta congresos	Participació conjunta tallers (formació) / Participación conjunta talleres (formación)	Intercanvi personal / Intercambio personal	Socis / Socios	Altres / Otros
Joan Roca (El Celler de Can Roca)								
Carme Ruscalleda (Sant Pau)								
Jordi Cruz (Àbac)								
Paco Pérez (Miramar-Enoteca)								
Paolo Casagrande (Lasarte)								
Fina Puigdevall (Les Cols)								
Raül Balam/Alberto Castiñeiras (Moments)								

3. De la llista de xefs guardonats amb 2 i 3 estrelles Michelin a Catalunya, indiqui el temps aproximat que fa que es coneixen i la intensitat de la relació, on "forta" significa que "no hauria arribat allà on sóc sense aquesta persona" i feble que "hauria arribat allà on sóc sense aquesta persona":

De la lista de chefs galardonados con 2 y 3 estrellas Michelin en Catalunya, indique desde cuándo se conocen aproximadamente y la intensidad de la relación, en la que "fuerte" significa que "no habría podido llegar dónde he llegado sin esta persona" y débil que "habría llegado donde he llegado sin esta persona":

	Intensitat de la relació *Intensidad de la relación*			Relació *Relación*		
	Feble *Débil*	Mitjana *Media*	Forta *Fuerte*	Anys *Años*	Motius per iniciar-la *Motivos para iniciarla*	Impacte/beneficis *Impacto/beneficios*
Joan Roca (El Celler de Can Roca)						
Carme Ruscalleda (Sant Pau)						
Jordi Cruz (Àbac)						
Paco Pérez (Miramar-Enoteca)						
Paolo Casagrande (Lasarte)						
Fina Puigdevall (Les Cols)						
Raül Balam/Alberto Castiñeiras(Moments)						

Relació amb altres xefs de restaurants
Relación con otros chefs de restaurantes

4. De la llista següent de xefs, indiqui amb qui té relació personal i/o professional i la seva durada:

De la lista siguiente de chefs, indique con quién tiene relación personal y/o profesional y su duración:

	Restaurant *Restaurante*	Xef *Chef*	Província *Provincia*	Tipus de relació *Tipo de relación*		Anys *Años*
				Personal *Personal*	Professional *Profesional*	
1	L'Aliança d'Anglès	Lluís Feliu i Martí	Girona			
2	Les Magnòlies	Víctor Trochi	Girona			
3	Ca L' Arpa	Pere Arpa	Girona			
4	Alkimia	Jordi Vilà	Barcelona			
5	Caelis	Romain Fornell	Barcelona			
6	Cinc Sentits	Jordi Artal	Barcelona			
7	Comerç 24	Carles Abellán	Barcelona			

8	Dos Cielos	Sergio i Javier Torres	Barcelona			
9	Dos Palillos	Albert Raurich	Barcelona			
10	Gaig	Carles Gaig	Barcelona			
11	Hisop	Oriol Ivern	Barcelona			
12	Hofmann	Mey Hofmann	Barcelona			
13	Koy Shunka	Hideki Matsuhisa	Barcelona			
14	Lluerna	Víctor Quintillà	Barcelona			
15	Manairó	Jordi Herrera	Barcelona			
16	Moo (H. Omm)	Felip Llufriu	Barcelona			
17	Nectari	Jordi Esteve	Barcelona			
18	Neichel	Jean Louis Neichel	Barcelona			
19	Saüc	Xavier Franco	Barcelona			
20	Via Veneto	Sergio Humada	Barcelona			
21	Can Jubany	Nandu Jubany	Barcelona			
22	Can Bosch	Joan Bosch	Tarragona			
23	Rincón de Diego	Diego Campos	Tarragona			
24	La Llar	Joan Viñas	Girona			
25	Estany Clar	Josep Xandri	Barcelona			
26	Bo.Tic	Albert Sastregener	Girona			
27	Mas Pau	Xavier Sagristà	Girona			
28	Massana	Pere Massana	Girona			
29	La Fonda Xesc	Francesc Rovira	Girona			
30	Ca l'Enric	Isabel i Jordi Juncà	Girona			
31	Casamar	Quim Casellas	Girona			
32	Els Tinars	Marc Gascons	Girona			
33	Sala	Antonio Sala	Girona			
34	Els Brancs	Javier Cabrera	Girona			
35	Els Casals	Oriol Rovira	Barcelona			
36	L'Angle (H. Cram)	Jordi Cruz	Barcelona			
37	Fogony	Zaraida Cotonat	Lleida			
38	Capritx	Artur Martínez	Barcelona			
39	La Cuina de Can Simón	Xavier Lores	Girona			
40	Torreó de L' Indià	Francesc López	Tarragona			
41		Ferran Adrià	Barcelona			
42	Tickets, 41º	Albert Adrià	Barcelona			
43		Xavier Pellicer	Barcelona			
44		Antonio Saéz	Dubai			

45	L'O	Jordi Llobet	Barcelona			
46	Les Moles	Jeroni Castell	Tarragona			
47	Malena	Josep M. Castaño	Lleida			

Concentració geogràfica
Concentración geográfica

5. Respecte a la concentració geogràfica:
Respecto a la concentración geogràfica:

• Com l'explica?
¿Cómo la explica?

• Fins a quin punt ha usat els elements distintius?
¿Hasta qué punto ha usado los elementos distintivos?

• Quin impacte ha tingut en l'èxit?
¿Qué impacto ha tenido en el éxito?

ANNEX 2. CONTACT E-MAIL EXAMPLE

Bon dia,

Em dic Mercè Bernardo i sóc professora de la Universitat de Barcelona. Em poso en contacte amb vosaltres per demanar-vos la vostra participació en un projecte que estem duent a terme des de la Universitat de Barcelona i la Universitat de Girona per tal d'explicar l'èxit dels restaurants amb estrelles Michelin de Catalunya.

Aquest projecte el vam iniciar l'any 2013 i vam aconseguir 54 entrevistes amb la majoria dels restaurants que en aquells moments tenien estrella Michelin i altres cuiners que n'havien tingut. El novembre de l'any passat es va presentar el llibre, "Cuina de relacions" a Girona, llibre que també presentarem a Barcelona el dia 6 de març. En el llibre hi analitzem tant la formació dels cuiners (basada en l'enquesta adjunta titulada "Equip") així com les relacions entre cuiners (basada en l'enquesta adjunta titulada "Xefs").

El nostre desig ara és actualitzar les dades i poder comptar amb la participació de tots els cuiners que tenen estrella Michelin a Catalunya, i per això us enviem aquest correu electrònic. El que us demanem és poder venir un dia al restaurant i poder entrevistar el xef. La durada aproximada de l'entrevista és d'1 hora.

En els propers dies us trucarem per si us és possible participar.

Moltes gràcies per la vostra amabilitat.

Salutacions,

Mercè Bernardo
Department of Business
Universitat de Barcelona
934020135

ANNEX 3. CODING TABLE

Codes

Nombre	Recursos	Referencias
2.RELACIÓ ENTRE CUINERS	56	3296
2.1.Cuiners amb 2 i 3 estrelles	56	935
2.1.1.Relació personal	56	538
2.1.1.1.Joan Roca	54	127
2.1.1.2.Carne Ruscalleda	48	99
2.1.1.3.Jordi Cruz	45	89
2.1.1.4.Paco Pérez	45	74
2.1.1.5.Paolo Casagrande	18	30
2.1.1.6.Fina Puigdevall	45	74
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