



# Competences that affect the gastronomic entrepreneur for a proper business management

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## Abstract

The aim of this paper is to analyse the latest research using a systematic review of the literature and a bibliographic mapping in order to identify the competencies that a gastronomic entrepreneur should possess in order to be effective and achieve success in their business. To this end, a review of the literature is carried out through the most relevant topics, main authors and journals, and to visualise their interrelations. The results show that gastronomic management requires the acquisition of knowledge, competences and skills from a multidisciplinary perspective, specifically differentiating between the needed training competences to be a good gastronomic manager, and those that are acquired and developed during the work in the industry premises. A bibliometric mapping of the publications indexed in WoS and Scopus was conducted using VOSviewer software. During the search process, 178 references for a search period from 2014 to 2023 were obtained. Based on co-occurrence frequencies of key terms, our term map provides a visual representation of the latest research in the Gastronomic Entrepreneur's Competencies (GEC). This study contributes to the literature on gastronomy entrepreneurship research and its findings may be useful for gastronomic entrepreneurs, researchers, food business leaders and decision-makers in this sector.

**Keywords** Gastronomic entrepreneur · Gastronomy · Generic competences · Specific competences · Bibliometric Mapping · VOSviewer

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## Introduction

Sixty percent of restaurants (and in some regions, 90%) fail within their first year, and even when everything works, industry profit margins are typically stuck in the low single digits. Nonetheless, according to the U.S. National Restaurant Association's annual report, the industry sales were set to exceed a record \$863 billion in 2019 (3.6% year-on-year growth) during the year preceding the crisis caused by the COVID-19 pandemic (National Restaurant Association, 2019, 2024). Today, the foodservice industry is forecast reach \$1 trillion in sales in 2024. The industry workforce is projected to grow by 200,000 jobs.

The restaurant industry is predominantly comprised of independently owned, small and medium enterprises, created and managed by entrepreneurs (Assaker et al., 2020; Jogarathnam, 2002). Understanding restaurants managerial responsibilities is something that the sector needs to pay attention considering the importance or not about the educational levels of their employees, type of contracts, type of business structure and more important competences that the entrepreneurs need to develop the business properly.

It is evident that operators are increasingly relying on technology to meet challenges, reduce labor, cut costs and drive business forward, applying technology solutions to marketing, hiring, accounting, inventory management and more, but given the choice between people and technology, consumers still crave human hospitality in their dining experiences (National Restaurant Association, 2024).

In that sense, the research work that has been carried out delves into one of the multiple aspects from which the analysis of gastronomy can be approached: the Gastronomic Entrepreneur's Competences (GEC). Its relevance is undeniable for many reasons, some of which refer to an economic-business and institutional nature, given the multiple initiatives recent studies that incorporate studies for the education and training of health professionals the gastronomy.

There is no doubt that, at present, the gastronomic sector is very relevant in the knowledge society, with social tendencies towards the concentration of life in cities, appreciation for the culture in any of its manifestations, and the greatest attention to the care of food from the aesthetic point of view and health sciences.

The word gastronomy, according to Metaxas and Karagiannis (2016), appears two hundred years ago in France, as the title of a poem published by Berchoux (1804). Kivela and Crotts (2006) have suggested that "*gastronomy is the study of the relationship between culture and food*". Gastronomy doesn't mean only the set of foods or typical dishes of a locality. The concept is including food customs, traditions, processes, people and lifestyles that are defined around it. Gastronomy is also defined as the art of good eating in an infinite search for quality and hedonistic passion, being a pleasure, knowledge and culture (Batat, 2020a; De Kerviler, 2019).

The gastronomy contributes to appreciate the culture and the identity of a region, in addition to the preservation of its heritage. Faruk and Stanislav (2020) consider that social, natural and cultural factors of regions are reflected in the local culture in form of unique gastronomic values (Gordin et al., 2016). Gastronomy is a significant factor that is portraying the culture of destinations, a reality that attracts tourists eager

to learn different cultures through local food and drinks (Hillel et al., 2013; Kim et al., 2009; Kumar, 2019; Widjaja et al., 2020).

For all these reasons, gastronomy is consolidating as a driver of tourism and local, regional and national economic development with a high cultural value in recent years, where tourism activities generate significant amounts of income and jobs, promote knowledge of other cultures and preserve cultural and natural heritage, in addition to investing in local infrastructure (Saura et al., 2018).

The gastronomic sector considers the importance of the role of entrepreneurs and local producers in the development of regional tourism. Local gastronomy can help secure local employment and keep rural communities alive (Fusté-Forné et al., 2021; Hjalager, 2010; Metaxas & Karagiannis, 2016).

In addition to the prioritising skills that are generally indicated to be a successful entrepreneur (people skills, leadership skills, financial knowledge and creativity), a deeper analysis is necessary..

To fill the gap, in this sense, the problem statement studied in this paper explores how a bibliometric analysis and a literature review can be used to understand what Gastronomic Entrepreneur's Competences (GEC) are the ones to propose for a proper business management of a gastronomy restaurant.

In order to address this research question, the present study aims to achieve the following objectives through a bibliometric analysis of the relevant scientific literature on GEC found in multidisciplinary databases of Web of Science (WoS), Scopus, ProQuest, ScienceDirect, and SAGE, which can be used to understand what type of competences are those that propose the ideal entrepreneurship for a gastronomy restaurant. However, there has been less research focused specifically on the Gastronomic Entrepreneur's Competences, so this study fills the gap of insufficient information in academic literature. Consequently, the following research question is posed: What are the competencies that affect the gastronomic entrepreneur for a proper business management?

Therefore, the aim of this study is to conduct a literature review and a bibliometric analysis of the scientific articles that have dealt with the topic of entrepreneurship in gastronomy, and to look for the competences they point out or, failing that, the analysis of those co-occurrence terms that could be identified with them. That is, to understand how these competences could offer to the entrepreneurs the possibility to implement and manage the gastronomic business with more security about the proper skills of knowledge and the ones that the staff needs.

It is considered that, for all of the aforementioned reasons, this work constitutes an original and creative contribution. By proposing a methodology that combines bibliometric analysis and a literature review, the study aims to address the existing gap in the approach to the investigated problem: to understand which competencies of the Gastronomic Entrepreneur are those that should be proposed for an adequate business management of a gastronomic restaurant.

The conclusions derived from this study provide theoretical, empirical, and methodological insights with an interdisciplinary approach with implications for gastronomy entrepreneurs looking to optimize their success in their gastronomic business in the face of competences and skills. By using a combined methodology of Systematic Literature Review (SLR) and Bibliometric Mapping techniques, it is attempted to

give a better understanding of the relations between competences, gastronomy and entrepreneurs, so their more businesslike decisions can maximize the success of their restaurant.

The rest of the paper is structured as follows. After this introduction, an in-depth review of the scientific literature in this specific topic is carry out. The third section describes the methodology applied, followed by the main results obtained with the application of bibliometric mapping techniques using the VOSviewer software. Finally, in the fifth section the conclusions, implications and limitations are presented.

## Literature review

This study analyses the competences that affect the gastronomic entrepreneur for an adequate business management, suggesting clusters that define different characteristics in order to subsequently generate a model with the factors that determine them.

Knowledge in science is cumulative, as each new research builds on previous work and expands knowledge in a particular field. According to Hernández et al. (2007), a literature review consists of identifying, obtaining and consulting the literature and other materials, that are useful for the purposes of this study.

### Competences: general concept

The concept of competence underlying the expression: "*competent worker*" is old but not the most suitable for the purposes of the present investigation for being too unspecific, (Primoff & Sidney, 1988, citing Plato).

The use of the term "*competence*" within the field of education, as Mulder et al. (2007) recall, appears intermingled with other innovations such as the introduction of self-managed learning, the integration of theory and practice and new theories about learning. In this framework, that is relevant to this work, the concept of competence is integrated into the field of the objectives and contents of knowledge and learning and contributes to the goal of provide students with the most appropriate preparation to develop an effective role in the society.

According to this approach, competence can be considered as an attribute of the worker. In the words of Ellström and Kock (2008) and Sandberg and Pinnington (2009), a type of human capital or work resource that could be evaluated with reference to a certain level of results.

### Competences in the gastronomic sector

Focusing on the competences for the gastronomic sector, different authors consider that the restaurant sector requires an entrepreneurship framework to examine the skills, experiences and qualifications of entrepreneurs with a greater focus on the dimensions of "*human capital*" (HC) (Assaker et al., 2020; Lee et al., 2016)). HC is defined as the "*stock of personal knowledge, skills, and abilities that individuals accumulate through investments in education, training, and other types of experience*" (Hmielski et al., 2015).

In this theory, HC considers that people who develop higher levels of knowledge, education, and other skills will outperform others (Bruce et al., 2013; Mincer, 1958). HC encompasses the knowledge, skills, and abilities possessed by an individual from their formal education, training, and work-related experiences (Becker, 1962; Mincer, 1958).

As entrepreneurs build their HC, this increases their ability to better perceive and exploit profitable innovations, leading to a better company performance (Unger et al., 2011). In the restaurant sector, this is still an initial concept and therefore its effects on the performance of the company (Lee et al., 2016). From organizational psychology and entrepreneurship studies, this theory has received much attention (Hmielski et al., 2015; Skaggs & Youndt, 2004).

### Competence in gastronomy tourism

For the culinary tourism development, some authors consider other competences as dynamic capabilities. They define them as “*the abilities to reconfigure a firm’s resources and routines in the manner envisioned and deemed appropriate by its principal decision-maker(s)*” (Zahra et al., 2006; Duarte et al., 2018). In essence, the dynamic capabilities approach attempts to evaluate those sources of capture and wealth creation by firms. This approach can be perceived as potentially integrative in “*understanding the newer sources of competitive advantage*” (Teece et al., 1997). Capabilities approach has been employed in various contemporary tourism and hospitality studies (Alonso-Almeida et al., 2015; Crick et al., 2016).

But to continue talking about competences, it is observed that for specific positions in the gastronomic sector, as for example a fermentation specialist, the value of this publication for the formation of their competency portfolio lies in informing students about modern world gastronomic trends and using the wishes of consumers in new technological developments of fermentation specialists (Baianoç et al., 2016; Bene & Piskóti, 2017; Jiao et al., 2017).

Technological competencies as the use of modern technologies in the organization of fermentation production will significantly increase the competitiveness of a modern specialist (Albanese et al., 2017; Baklanov et al., 2018; Ivashova et al., 2018; Trukhachev et al., 2019). They are, unlike many culinary professionals, college graduate students. They have professional competencies and universal social skills that provide leadership in the production team.

### Entrepreneur in the gastronomic sector

Entrepreneurship is the process of creating something new with value, by giving the necessary time and effort, assuming the financial, psychological and social risks that accompany it, and receiving the resulting rewards (Hisrich, 2005; Metaxas & Karagiannis, 2016). It is a key factor in the economic and social development of countries (Czarniewski, 2016), where through its initiatives, it is possible to transform an opportunity into a competitive advantage, which generates value for the company itself and for the local economy,

Entrepreneurship is therefore the search for opportunities without considering the resources that are available (Metaxas & Karagiannis, 2016). Focusing on entrepreneurship in gastronomy, it could be examined from a business dimension, as well as from a strategic orientation, seeing the opportunity, the resources and the management structure and with a reward philosophy.

The way in which entrepreneurs, owners, and managers, deal with high uncertainty is one of the guarantees of entrepreneurial action (Townsend et al., 2018). This uncertainty is greater in the case of entrepreneurs, owners, and owner-managers as entrepreneurs because they must lead their business and be agents of entrepreneurial action, having this variable constantly (Kallmuenzer et al., 2019).

Entrepreneurship is increasingly recognized as a generator of jobs and innovation, and is therefore a key component of economic growth (Lynde, 2020), even more relevantly in rural areas where unemployment is more evident than in urban areas (Oliveira & Cardoso, 2023; Ribeiro-Soriano, 2017). For Sjolander-Lindqvist et al. (2019), the entrepreneur is a mediating agents whose acts reflect different social and cultural spheres, replicating in rural areas (Holt & Amilien, 2007; Sjölander-Lindqvist & Cinque, 2014).

As several authors argue (Kliksberg, 2004; Moulden, 2009; Navarro-Dols & Gonzalez-Pernia, 2020; Zandonai & Pezzini, 2004), some characteristics of the “chef” social entrepreneur must be considered. These unique characteristics of the social entrepreneur, compared to the for-profit entrepreneur, are such as: (1) having a scale of values and affective bonding in their most consolidated labor relationships; (2) consider trust among the members of the company as a key element in management; (3) manage with a very participative style with direct contact with the beneficiaries of the social action; (4) have a higher degree of job satisfaction, despite receiving lower salaries, since they value self-fulfillment, recognition, and working relationships with others more positively; (5) not being at the top of the hierarchical pyramid of the company, but having a more central position; and (6) they tend to stay longer in their position because for them their work is a way of life and not just an option in their professional career.

Entrepreneurship action in the gastronomy industry is influenced by various figures who can lead businesses. These actors can be entrepreneurs, owners, owners and managers as well as entrepreneurs who lead their business in times of uncertainty (Townsend et al., 2018; Kallmuenzer et al., 2019; Harms et al., 2021).

As a guide for this entrepreneurial action, the literature proposes actions such as: Effectuation; Lean Startup; Design Thinking, as well as other perspectives (Saravathy, 2001; Romme, 2003; Ries, 2011; Harms & Schwery, 2020; Mansoori & Lack-éus, 2020; Harms et al., 2021).

To sum up, an entrepreneur may be defined as an individual who sets up/launches a new business/businesses with the purpose of profit gains through change and creativeness (Celebi et al., 2020; Zapalska & Brozik, 2017).

### **Social entrepreneurship in the gastronomic sector**

Last decades some individuals have become involved in entrepreneurship to pursue social goals through both non-profit and for-profit businesses (Carragher et al., 2016).

In this context, gastronomy has become a dynamic sector for entrepreneurial initiatives (Navarro-Dols & Gonzalez-Pernia, 2020).

In that sense social entrepreneurship, is understanding for Navarro-Dols and Gonzalez-Pernia (2020) as “*a specific type of entrepreneurship that seeks solutions for social problems through the construction, evaluation and pursuit of opportunities that allow the generation of sustainable social value, reaching new and stable equilibriums in relationship with social conditions, through direct action carried out by non-profit organizations, companies or government agencies*”. Also necessary to obtain a profit and enable to reinvestment that allows the continuous improvement of the activity and at the same time a financial self-sufficiency that avoids its dependence on public or philanthropic aid.

According to Santos (2012), social entrepreneurship is an innovation process that works with its own understanding and rules with the logic of social value creation, that can develop low-income communities and, in a social entrepreneurship approach, it boosts the local economy and creates sustainable livelihoods (Aquino et al., 2018; Sorea et al., 2022).

Social entrepreneurship is appropriate for sustainable development, concentrating on supporting the well-being of the community, generating opportunities and benefits (Aquino et al., 2018), and taking into account social and community values, social entrepreneurship is a powerful vehicle of local identity (Boukas & Chourides, 2016; Bolborici et al., 2022).

Understanding the social entrepreneurship in the gastronomic sector, analysing the competence that an entrepreneur must have, it is crucial to recall Batat's (2020b) assertion regarding the role of Michelin-starred chefs as social entrepreneurs, driven by their values such as a sense of responsibility towards the community and society, as well as altruism. Alkire et al. (2019) and Batat (2020b) show that chefs with Michelin stars adopt social bricolage business thinking to deal with a limit situation or uncertain context and adopt multilevel response strategies to address social problems. They were not based on strategic thinking, but refer to entrepreneurial thinking, driven by motives, capabilities, and resources to adopt socially responsible practices during the crisis.

### **Connecting concepts: entrepreneur's and competences**

Creative, practical and analytical abilities are identified from the entrepreneurs, which are connected with the concept of successful intelligence of Sternberg (2004). Extensive evidence also indicates that their professional qualification and creative potential (Henry et al., 2016) reveal the imaginative and original way in which they act (Garud et al., 2007; Lachmann, 1977). The practical skill is learning to sell and convince others to support an idea (Aggestam & Wigren-Kristoferson, 2017).

Other authors as Aggestam and Wigren-Kristoferson (2017) considered other classification of skills as it can be observed here: creative skills, the ones to originate new ideas; practical skills, the need to convince and learn from others, and analytical skills to contrast with numbers the viability of the idea.

The European Commission, through the 2030 Food Strategy, highlights the key role of open innovation, education and capacity building in the gastronomy sector (European Commission, 2017; Oliveira & Cardoso, 2023).

Pérez Nuñez and Musteen (2020) suggest that the business/technical competencies are the ones that complete the necessary conditions for transforming entrepreneurs' thoughts from "*what should/can be done*" to "*that I should/can do*" and induces them to engage in sustainable venturing. There are more and more entrepreneurs with a conviction that there are business opportunities that can fulfil both environmental and social goals (Shepherd & Patzelt, 2011).

### **Intersection of technology and gastronomy, and the role of artificial intelligence in this domain**

The significance of technology within the realm of gastronomy cannot be overstated. It is imperative to acknowledge that technological advancements have a profound impact on the knowledge and competencies required of gastronomic entrepreneurs. In particular, Saura et al. (2021) emphasize the critical role of technology in ensuring secure payments, safeguarding data privacy and protection, establishing system responsibility for data, maintaining transparency, facilitating adequate access, and managing data exchange with third parties.

But in addition, technology means that in this new era data can be collected massively in the new connected society that uses applications for free in exchange for their data (Zuboff, 2019), which is a fundamental tool for companies to develop predictive strategies of user behavior based on artificial intelligence (Hermalin & Katz, 2006).

On these databases, applying artificial intelligence techniques such as machine learning and data mining, companies can improve their social listening algorithms to predict user behavior and thus improve the products and services of the companies that collect this information (Tan & Zhan, 2017; Wu et al., 2017; Ribeiro-Navarrete et al., 2021). Mariani and Dwivedi (2024) explore future research opportunities related to Generative Artificial Intelligence (GenAI) in innovation management.

Looking at the contribution of artificial intelligence applications to the gastronomic sector, it is understood that it brings benefits such as sorting in food, minimizing the cost of high cost and labor-intensive processes, reassuring prediction, ensuring food and beverage safety, and product standardization, (Milton, 2024; Şahin & Ağaoğlu, 2020; Türkoğlu & Yılmaz, 2022).

## **Methodology**

### **Data set**

This section covers the process for the groundwork for a bibliometric study of the scientific literature on GEC found in multidisciplinary databases of WoS, Scopus, ProQuest, ScienceDirect and SAGE, with access via the University Library of the Rey Juan Carlos University and the University of Huelva (Spain). In line with Durán

Sánchez et al. (2017), the aim is not to make an assessment of the quality of the papers included in the database, but a descriptive quantitative analysis of the presence of the conjunction of the gastronomic and entrepreneur concepts. The election of such databases is due to the importance for researchers of such tools as a source of documentation to support their work.

The Spanish Foundation for Science and Technology (FECYT) manages licenses for two major bibliographic databases: WoS and Scopus. WoS covers scholarly publications from 1900 onwards with in-depth citation analysis tools, while Scopus by Elsevier offers broader content including web sources and various metrics. ProQuest Research Library is a multidisciplinary database with a mix of full-text and non-full-text content across various disciplines, while ScienceDirect by Elsevier provides access to millions of scientific publications with abstracts being freely available and full-text usually requiring a subscription. Finally, SAGE is a major publisher offering over 1,100 journals across various fields, including open access options. The selection of these databases is due to the fact that they are the most complete, multidisciplinary, used and available in the vast majority of systematic literature reviews and bibliometric analyses.

Once the sources of documentation (databases) have been selected, the next step consists of collecting and compiling the dataset with which a bibliometric analysis will be carried out. That is, the construction of a representative dataset of gastronomic entrepreneurs' competences. To build this dataset, the sources where the largest number of studies relating these concepts can be found ought to be selected. Thus, a search should be conducted in the aforementioned databases WoS, Scopus, ProQuest, Science Direct and SAGE.

According to Durán Sánchez et al. (2017), the procedure of other similar studies will be followed (i.e. Aparicio et al., 2019; García-Machado, 2018; Merigó & Yang, 2017; Mohammed & Li, 2023; Zupic & Čater, 2015) to carry out this scientific approach on GEC, so the analysis only collects articles that use scientific journals as a transmission vehicle resulting in a sufficient representative sample of the international scientific activity ((Benavides Velasco et al., 2011). Therefore, no other documents have been taken into account (proceeding papers, book chapters, editorial materials, book reviews, etc.)

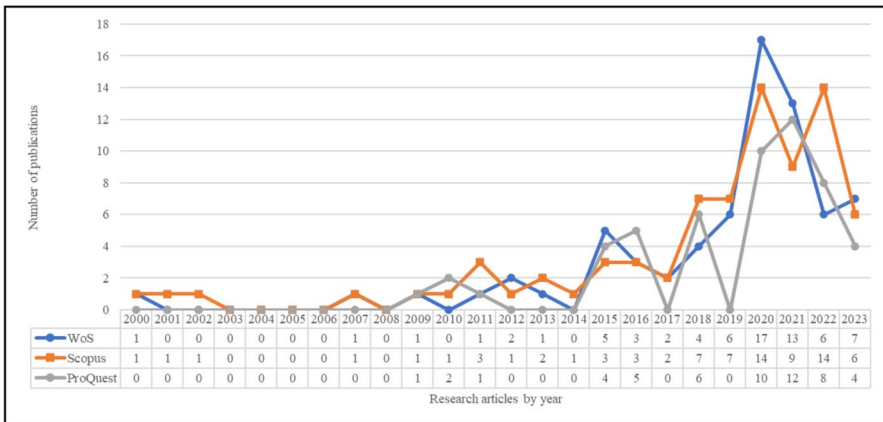
The research articles considered in this study were limited to those published in last decade. Therefore, the period pertaining to our data set was from January 2014 until May 2023. This most recent period is representative for the last developments in this very specific topic. Moreover, until 2013, only 7 articles out of 11 document types appear in WoS, and 12 out of 16 in Scopus, starting in 2000. And before 2000, only two research articles with the searched terms were published: one in ProQuest, published in the British Food Journal, entitled “*Gastrosophy and Nouvelle Cuisine: Entrepreneurial Fashion and Fiction*” authored by Gillespie (1994), and another in ScienceDirect, in the International Journal of Hospitality Management, entitled “*Contracting out food and beverage operations in hotels: A comparative study of practice in North America and the United Kingdom*” authored by Hallam and Baum (1996).

As far as the SAGE database is concerned, with our search terms in abstracts and for any period, only 5 documents have been identified since 2009, 4 of them research

**Table 1** Detailed conditions of data collection and results

Descriptions	Conditions/results		
	Web of Science DB	Scopus	ProQuest
Search target	Web of Science DB	Scopus	ProQuest
Search expression	“gastronom* AND entrepreneur*”	“gastronom* AND entrepreneur*”	“gastronom* AND entrepreneur*”
Search field	Topic, Title, Key words, and Abstract	Topic, Title, Key words, and Abstract	Topic, Title, Key words, and Abstract
First search results	96	108	62
Document types (only research articles)	70	78	53
Search period (last ten years)	2014– 2023 (May)	2014– 2023 (May)	2014– 2023 (May)
Last search date	07/06/2023	06/06/2023	10/06/2023
Refined search results	63	66	49

Source: Authors’ own research



**Fig. 1** Evolution of the numbers of articles collected on “gastronom\* AND entrepreneur\*” in WoS, Scopus and ProQuest. Source: Authors’ own research

articles. Meanwhile, although the ScienceDirect database contains more documents than Scopus, giving the focus on research articles published within the last ten years, it almost coincides with the articles extracted from Scopus. For these reasons, after the initial search already carried out in the latter two, the databases to be used henceforth will be WoS, Scopus, and ProQuest.

During this time span, the field has grown substantially and has become more interdisciplinary. As mentioned above, WoS, SCOPUS and ProQuest databases have been used to collect research results, and to build the research data set, as explained in Table 1. Data was retrieved in May–June 2023. Figure 1 shows the evolution of the number of research articles collected in these useful databases.

More specifically, the search criteria, and the way in which they have been entered in their respective entry fields according to each database, have been as follows:

- Search query in WoS:

(Title) OR gastronom\* AND entrepreneur\* (Abstract) OR gastronom\* AND entrepreneur\* (Author Keywords) and Article (Document Types) and 2023 or 2022 or 2021 or 2020 or 2019 or 2018 or 2017 or 2016 or 2015 (Publication Years).

- Search query in SCOPUS:

TITLE-ABS-KEY ( gastronom\* AND entrepreneur\* ) AND PUBYEAR > 2013 AND ( LIMIT-TO ( DOCTYPE, "ar" ) ) AND ( LIMIT-TO ( PUBYEAR, 2023 ) OR LIMIT-TO ( PUBYEAR, 2022 ) OR LIMIT-TO ( PUBYEAR, 2021 ) OR LIMIT-TO ( PUBYEAR, 2020 ) OR LIMIT-TO ( PUBYEAR, 2019 ) OR LIMIT-TO ( PUBYEAR, 2018 ) OR LIMIT-TO ( PUBYEAR, 2017 ) OR LIMIT-TO ( PUBYEAR, 2016 ) OR LIMIT-TO ( PUBYEAR, 2015 ) OR LIMIT-TO ( PUBYEAR, 2014 ) )

- Search query in ProQuest:

title("gastronom\*" AND "entrepreneur\*") OR summary("gastronom\*" AND entrepreneur\*)Limits applied. Databases: ProQuest One Business. Restricted by: year: 2016; 2017; 2018; 2020; 2021; 2022. Type of source: Scientific journals. Peer-reviewed articles: Peer-reviewed

The process followed for the selection and refinement of data collection was as follows: After applying the search keyword criteria, irrelevant areas were excluded, and a refinement and filtering was performed, after which only scientific articles published in the last 10 years in English were collected. That is, other options such as articles written in other languages (French or Spanish, for example) or proceeding papers were excluded. Finally, a reading review was carried out looking for the key expressions of gastronomy and entrepreneurship (with their possible grammatical derivations) by skimming the articles chosen in the previous phase in order to make a final screening of them.

The final result was 63 articles collected in 52 journals and written by 164 authors for WoS; 66 articles, 53 journals and 159 authors for Scopus; and finally, 49 articles, 38 journals and 118 authors for ProQuest.

## Research methodology

In this study a combination of SLR and Bibliometric Mapping techniques is used. The Systematic Literature Review (Dana et al., 2023; Pati & Lorusso, 2018) is a type of literature review that collects and critically analyses multiple research studies or papers through a systematic process and it has been developed from an international perspective including all the countries. Its purpose is to provide a exhaustive summary of the available literature relevant to a research question and it was born in the field of Medicine and Health studies to get expertise in a topic. The literature map-

ping is broadly used to complement the SLR and its techniques and outcomes are very different depending on the purpose.

A Bibliometric Mapping approach was employed to analyse the data set and identify the most recent development and trends in Gastronomic Entrepreneurship Competences (GEC), as well as to visualise their interrelations.

Bibliometrics is the scientific field that is concerned with the quantitative analysis of books, articles, and other types of written communication. In the field of bibliometrics, a significant amount of attention is paid to bibliometric mapping. Bibliometric mapping aims to produce visual representations of the relations between certain units of interest.

The units of interest can be, for example, documents, authors, or keywords, and the relations between the units can be based on, for example, citations, co-citations, co-authorships, or co-occurrences of keywords. The analysis focuses on relations between key terms in Gastronomy and Entrepreneur as identified by their co-occurrences in titles, abstracts, and keywords of relevant articles. As Aparicio et al. (2019) state, the co-occurrence of two keywords in the same article is an indication of a link between the issues referred to in the article, and reveals the patterns and trends of a specific discipline by measuring the strength of association between the representative terms of relevant publications produced in the same area (Zupic & Čater, 2015). Once this has been accomplished, a search is conducted utilising terms that delineate the competences that a proper gastronomic entrepreneur should possess.

The map produced in this study is referred to as a “term map”. In the literature, the maps are often referred to as co-word maps (Heersmink et al., 2011).

This study utilizes VOSviewer, a free software specifically designed for creating and visualizing bibliometric maps. Unlike other programs used for this purpose, VOSviewer prioritizes clear and informative graphical representations. It excels at displaying large and complex maps in an easily understandable way. A discussion of the advantages of the VOS mapping technique over traditional multidimensional-scaling-based approaches to bibliometric mapping can be found in Van Eck et al. (2010a). VOSviewer can construct co-citation maps for authors or journals, or co-occurrence maps for keywords. It offers a detailed viewer with various display options to highlight different aspects of the map. These functionalities are particularly valuable for maps with at least 100 items. The resulting maps are two-dimensional, with item placement reflecting their relatedness—closer together indicates a stronger connection—. Colors are used to visually represent item clusters, with items sharing a color suggesting a closer relationship than those with different colors.

Following Van Eck and Waltman (2023), the figures present the constructed maps in two visualizations: network and density. In the network view, items are labeled (potentially with circles or frames) with size reflecting their importance (weight). Labels might be omitted to prevent overlap. Item colors indicate their cluster membership. Additionally, the program provides details like weight and score for each item, while connecting lines represent links with varying strengths.

**Table 2** Top-10 highly productive journals collected from WoS

Rank	Source title	Re-cord Count	% of 63
1	Sustainability	5	7.94%
2	International Journal of Gastronomy and Food Science	4	6.35%
3	Ekonomika Poljoprivreda (Economics of agriculture)	2	3.18%
4	Journal of Tourism and Cultural Change	2	3.18%
5	Revista Universidad y Sociedad	2	3.18%
6	Tourism Recreation Research	2	3.18%
7	Advances in Hospitality and Tourism Research	1	1.59%
8	Agriculture Basel	1	1.59%
9	Administração: Ensino e Pesquisa	1	1.59%
10	Aims Geosciences	1	1.59%

Source: Web of Science Core Collection

**Table 3** Top-10 highly productive journals collected from Scopus

Rank	Source title	Re-cord Count	% of 66
1	Sustainability	6	9.09%
2	International Journal of Gastronomy and Food Science	4	6.06%
3	British Food Journal	2	3.03%
4	Journal of Foodservice Business Research	2	3.03%
5	Journal of Tourism and Cultural Change	2	3.03%
6	Tourism Recreation Research	2	3.03%
7	Revista Universidad y Sociedad	2	3.03%
8	Acta Geographica Slovenica	1	1.52%
9	Advanced Series in Management	1	1.52%
10	Advances in Hospitality and Tourism Research	1	1.52%

Source: Scopus

## Results

The following sections show the main results of this study.

### Most productive and influential journals

Tables 2, 3 and 4 show the Top-10 highly productive and influential journals collected from WoS, Scopus and ProQuest.

### Most cited articles

Tables 5 and 6 show the Top-10 most cited articles list collected from WoS and Scopus. In the case of ProQuest, as no citation number is provided, no list is displayed in this section.

**Table 4** Top-10 highly productive journals collected from ProQuest

Rank	Source title	Record Count	% of 49
1	Sustainability	6	12.24%
2	Journal of Gastronomy and Tourism	2	4.08%
3	Ekonomika Poljoprivreda (Economics of agriculture)	2	4.08%
4	Journal of Tourism and Cultural Change	2	4.08%
5	Journal of Developmental Entrepreneurship	2	4.08%
6	Revista de Administração de Empresas	2	4.08%
7	Wirtschaftsdienst	2	4.08%
8	British Food Journal	1	2.04%
9	Administração: Ensino e Pesquisa	1	2.04%
10	Gastronomica	1	2.04%

Source: ProQuest Research Library and authors' own research

### Most productive authors

Tables 7 and 8 display the Top-10 of most productive authors publishing on gastronomy and entrepreneurship in WoS and Scopus. In this section, authors' contributions are analysed using the VOSviewer's standard attribute of the total link strength (Van Eck & Waltman, 2023) and the combined method of the average of the number of citations received divided by the number of papers published (Merigó & Yang, 2017).

### Word co-occurrence maps

VOSviewer software which uses the VOS mapping technique is used to construct the map (Van Eck & Waltman, 2007 and Van Eck et al., 2010b). By means of a computer algorithm (Van Eck et al., 2010b), terms in the titles, abstracts, and keywords of the articles included in our data set are identified.

Only terms occurring at least 2 times in the titles, abstracts, and keywords were taken into consideration. The co-occurrence of each pair of terms within the same article was quantified. Co-occurrence frequencies of terms are a commonly used measure of the relatedness of terms. The co-occurrence frequencies of our terms were employed as input for the VOSviewer computer program. Based on the co-occurrence frequencies, the VOSviewer software constructs a term map. Terms with the same colour tend to co-occur with each other more frequently than terms with different colours. The clustering consists on the identification and structuring of several clusters.

VOSviewer provides three visualizations, referred to as the network visualization, the overlay visualization, and the density visualization. The network visualisation focuses on the details of the map, while the density visualisation provides a general overview of the map by indicating the relative importance of the various areas in the map. In the density visualisation, the colour of an area reflects the number of times the terms located in the area occur in the titles, keywords and abstracts of the articles in our data set. The overlay visualization is identical to the network visualization except that terms range from blue (the oldest) to green to yellow (the newest).

**Table 5** Top-10 most cited articles in WoS

Rank	Article title (Journal)	Author/s (Year)	Times Cited
1	How Michelin-starred chefs are being transformed into social bricoleurs? An online qualitative study of luxury foodservice during the pandemic crisis ( <i>Journal of Service Management</i> )	Batat, W (2020b)	32
2	Effectuation and causation configurations for business model innovation: Addressing COVID-19 in the gastronomy industry ( <i>International Journal of Hospitality Management</i> )	Harms, R., Alfert, C., Cheng, C.F., Kraus, S (2021)	26
3	We are only scratching the surface'—a resource-based and dynamic capabilities approach in the context of culinary tourism development ( <i>Tourism Recreation Research</i> )	Duarte Alonso, A., Kok, S., O'Brien, S (2018)	21
4	A conceptual study of the strategic role of gastronomy in tourism destinations ( <i>International Journal of Gastronomy and Food Science</i> )	Seyitoğlu, F., Ivanov, S (2020)	19
5	Craft beer—building social terroir through connecting people, place and business ( <i>Journal of Place Management and Development</i> )	Sjölander-Lindqvist, A., Skoglund, W., Laven, D (2019)	17
6	Examining heterogeneity through response-based unit segmentation in PLS-SEM: a study of human capital and firm performance in upscale restaurants ( <i>Current Issues in Tourism</i> )	Assaker, G., Hallak, R., O'Connor, P (2020)	16
7	Blended divergences: local food and medicinal plant uses among Arbereshe, Occitans, and autochthonous Calabrians living in Calabria, Southern Italy ( <i>Plant Biosystems</i> )	Mattalia, G., Söukand, R., Corvo, P., Pieroni, A. (2020)	15
8	Linking of Traditional Food and Tourism. The Best Pork of Wielkopolska-Culinary Tourist Trail: A Case Study ( <i>Sustainability</i> )	Niedbala, G., Jeczmyk, A., Steppa, R., Uglis, J (2020)	12
9	Marketing local food and cuisine culture online: a case study of DMO's websites in Egypt ( <i>International Journal of Tourism Cities</i> )	Mohamed, M.E., Hewedi, M., Lehto, X., Maayouf, M (2020)	12
10	A land of cheese: from food innovation to tourism development in rural Catalonia ( <i>Journal of Tourism and Cultural Change</i> )	Fusté-Forné, F., Mundet i Cerdan, L. (2021)	10

Source: Web of Science Core Collection

To avoid redundancy in the visualizations generated from co-occurrence terms in WoS, Scopus, and ProQuest, only those visualizations found in Scopus will be presented. Figures 2, 3, and 4 show these map visualizations of 52 key terms on the Gastronomic Entrepreneur (GE) in Scopus.

As can be seen in Fig. 3, the most recent terms collected in the latest scientific articles are related to sustainable development, intangible cultural heritage, cultural heritage, social entrepreneur or social entrepreneurship, and business model innovation, while the oldest ones are related to management, customer satisfaction, economic development or haute cuisine.

With regard to the cluster density visualisation (Fig. 4), this is available only if items have been assigned to clusters. In the cluster density visualisation, the colour of

**Table 6** Top-10 most cited articles in Scopus

Rank	Article title ( <i>Journal</i> )	Author/s (Year)	Times Cited
1	How Michelin-starred chefs are being transformed into social bricoleurs? An online qualitative study of luxury foodservice during the pandemic crisis ( <i>Journal of Service Management</i> )	Batat W (2020b)	36
2	Creating tourism experiences combining food and culture: an analysis among Italian producers ( <i>Tourism Review</i> )	Garibaldi, R., Pozzi, A (2018)	35
3	Effectuation and causation configurations for business model innovation: Addressing COVID-19 in the gastronomy industry ( <i>International Journal of Hospitality Management</i> )	Harms, R., Alfert, C., Cheng, C.F., Kraus, S (2021)	28
4	Oleotourism as a sustainable product: An analysis of its demand in the south of Spain (Andalusia) ( <i>Sustainability</i> )	Millán, M.G., Pablo-Romero, M.P., Sánchez-Rivas J (2018)	27
5	Wine lovers: their interests in tourist experiences ( <i>International Journal of Culture, Tourism, and Hospitality Research</i> )	Crespi-Vallbona, M., Mascarilla-Miró, O (2020)	26
6	Open for business? An integrative framework and empirical assessment for business model innovation in the gastronomic sector ( <i>British Food Journal</i> )	Bogers, M., Jensen, J.D (2017)	24
7	A conceptual study of the strategic role of gastronomy in tourism destinations ( <i>International Journal of Gastronomy and Food Science</i> )	Seyitoğlu, F., Ivanov, S (2020)	22
8	Craft beer– building social terroir through connecting people, place and business ( <i>Journal of Place Management and Development</i> )	Sjölander-Lindqvist, A., Skoglund, W., Laven, D (2019)	22
9	‘We are only scratching the surface’—a resource-based and dynamic capabilities approach in the context of culinary tourism development ( <i>Tourism Recreation Research</i> )	Duarte Alonso, A., Kok, S., O'Brien, S (2018)	22
10	Examining heterogeneity through response-based unit segmentation in PLS-SEM: a study of human capital and firm performance in upscale restaurants ( <i>Current Issues in Tourism</i> )	Assaker, G., Hallak, R., O'Connor, P (2020)	18

Source: Scopus

a point in the visualisation is obtained by mixing the colours of different clusters. The weight given to the colour of a certain cluster is determined by the number of items belonging to that cluster in the neighbourhood of the point.

Figures 5, 6, and 7 show in detail the relationships of gastronomy, entrepreneurship and entrepreneur with those co-occurring key terms.

### Bridging clusters to competences

Table 9 shows the 52 most frequently occurring terms at least two times in our Scopus dataset that make up each cluster in the most recent period of the last ten years. The results of the algorithm, after running the VOSviewer program, result in 7 clus-

**Table 7** Top-10 of most productive authors in WoS

No	Author	Documents	Citations	Total link strength	Average
1	Sorea, Daniela	3	10	6	3,3
2	Duarte, Alonso Abel	2	24	3	12
3	Pieroni, Andrea	2	23	3	11,5
4	Celebi, Duygu	2	6	4	3
5	Eris, Engin Deniz	2	6	4	3
6	Navarro-Dols, Jorge	2	6	4	3
7	Pirnar, Ige	2	6	4	3
8	Popescu, Agatha	2	1	9	0,5
9	Bonho, Daniel Vicente	2	0	4	0
10	De Oliveira Garcia, Roslaine Kovalczuk	2	0	4	0

Source: Web of Science and authors' own research

**Table 8** Top-10 of most productive authors in Scopus

No	Author	Documents	Citations	Total link strength	Average
1	Sorea, D	3	10	6	3,3
2	Celebi, D	2	9	4	4,5
3	Duarte, Alonso A	2	25	3	12,5
4	Eris, E.D	2	9	4	4,5
5	Garibaldi R	2	35	3	17,5
6	González-Pernía, J.L	2	7	4	3,5
7	Matta, R	2	19	0	9,5
8	Navarro-Dols, J	2	7	4	3,5
9	Pieroni, A	2	30	3	15
10	Pirnar, J	2	9	4	4,5

Source: Scopus and authors' own research

ters. Each category was named based on the highest number of co-occurrences and total link strength of its primary leading terms. The key words related to the gastronomic entrepreneur were highlighted in bold. Finally, each cluster is correlated with the general and/or specific competencies of a gastronomic entrepreneur. Within some clusters, terms related to the research methodologies employed and the geographical locations of studies conducted can also be identified. It was deemed appropriate to retain these terms, rather than refining them in the preceding section.







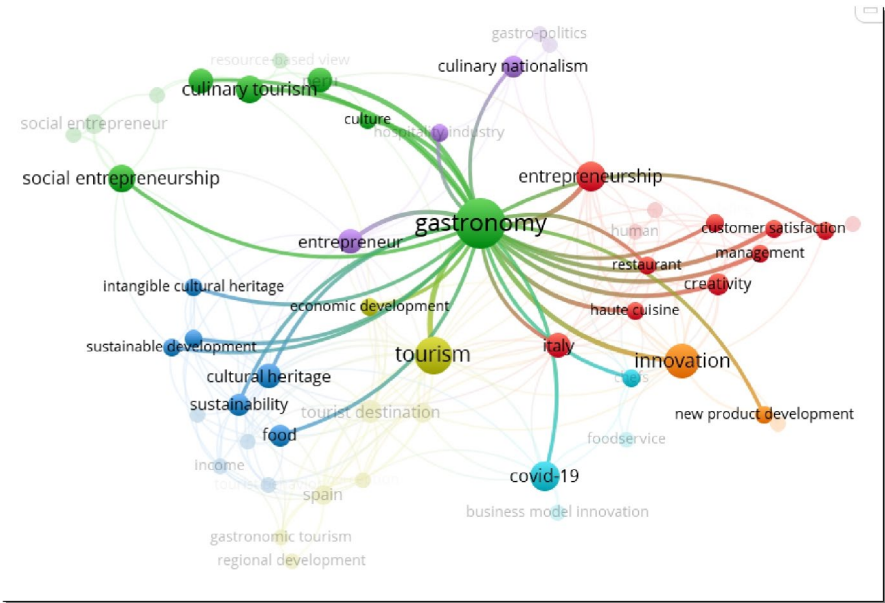


Fig. 5 Map of 52 key terms on GE in SCOPUS (focused on Gastronomy term). Source: Authors' own research

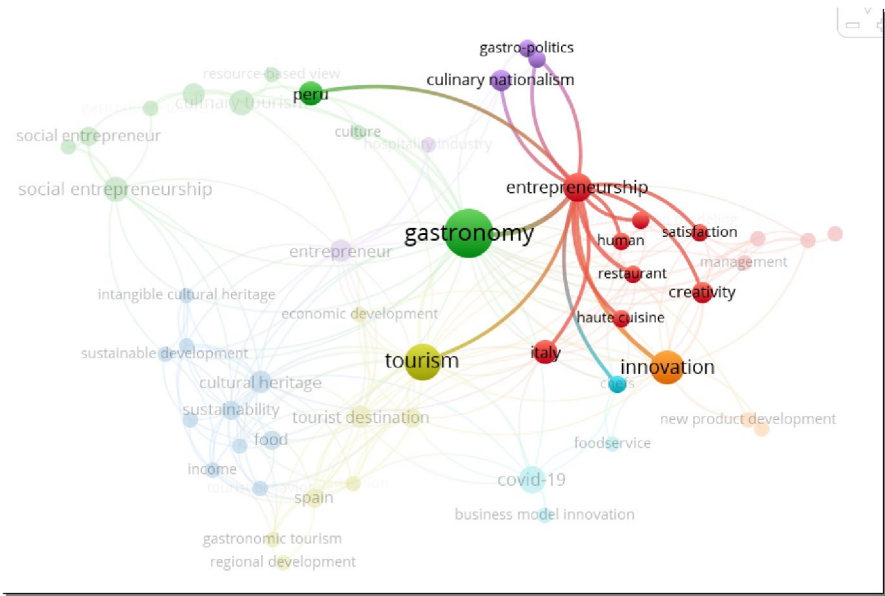
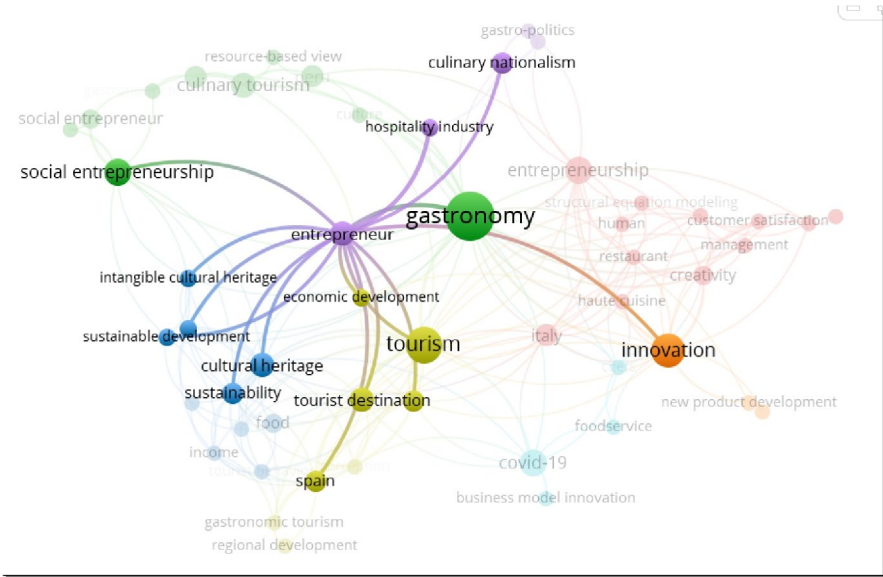


Fig. 6 Map of 52 key terms on GE in SCOPUS (focused on Entrepreneurship term). Source: Authors' own research



**Fig. 7** Map of 52 key terms on GE in SCOPUS (focused on Entrepreneur term). Source: Authors' own research

of high-cost and labor-intensive processes, predictive safety, ensuring food and beverage safety, and product standardization (Şahin & Ağaoğlu, 2020; Türkoglu & Yilmaz, 2022). For Milton (2024), at the forefront of this relationship is the pursuit of personalized guest experiences, facilitated by AI-driven systems such as chatbots and virtual assistants. These intelligent systems use machine learning algorithms to analyze customer data and preferences to provide personalized recommendations, reservations and dining experiences that increase customer satisfaction and loyalty.

## Conclusions, implications and future research

This study examined the literature review and carried out a bibliometric analysis of the evolution of scientific research in gastronomic entrepreneurship to look for the competences to become a proper business management in the gastronomy sector. This is a first attempt to conduct a comprehensive study on GEC applying bibliometric techniques.

A bibliometric mapping analysis of the most recent research on this specific topic has been presented, through a representative data set comprising titles, keywords, and abstracts of 266 articles published in prominent journals, retrieved from the multidisciplinary databases of WoS, Scopus, ProQuest, ScienceDirect, and SAGE. And, after a process of screening and refinement, they remained in 178 from WoS (66), Scopus (63), and ProQuest (49).

The data set was constructed and subsequently analysed with the computer program VOSviewer. The resulting term map contains the 52 most frequently occurring terms and 7 clusters, namely: Gastronomic entrepreneurship, Gastronomy and Social

**Table 9** The most frequently occurring terms in each cluster in the most recent period

Number of terms	Clusters	Number of occurrences	Total link strength	Competences
<b>Cluster 1: "Gastronomic entrepreneurship"</b>				
1	Creativity	3	14	Business
2	Customer satisfaction	2	7	Engagement,
3	<b>Entrepreneurship</b>	<b>6</b>	<b>19</b>	Quality Pro-
4	<b>Gastronomic industry</b>	2	1	grammes,
5	Haute cuisine	2	8	Management
6	Human	2	6	Expertise,
7	Italy	4	14	Financing,
8	Learning	2	7	and Leader-
9	Management	2	8	ship and
10	Restaurant	2	12	Excellence
11	Satisfaction	2	11	
12	Structural Equation Modeling	2	5	
<b>Cluster 2: "Gastronomy and Social entrepreneurship"</b>				
13	Culinary tourism	5	9	Cooking
14	Culture	2	4	skills, Self-
15	Food tourism	4	4	motivation,
16	<b>Gastronomy</b>	<b>18</b>	<b>45</b>	Talent,
17	<b>Gastronomy tourism</b>	2	4	Learning
18	Peru	4	8	competences
19	Resource-based view	2	2	and Social
20	<b>Social entrepreneur</b>	3	6	commitment
21	<b>Social entrepreneurship</b>	5	13	
22	<b>Social gastronomy</b>	2	4	
<b>Cluster 3: "Sustainable heritage gastronomic culture"</b>				
23	Alternative agriculture	2	7	Knowl-
24	<b>Cultural heritage</b>	<b>4</b>	<b>22</b>	edge of the
25	Food	3	6	History of
26	Income	2	10	gastronomy,
27	Intangible cultural heritage	2	7	Designation
28	Romania	2	6	of origin
29	Sustainability	3	18	and Organic
30	Sustainable development	2	11	farming
31	Tourist behavior	2	11	
32	Transylvania	2	11	
<b>Cluster 4: "Gastronomic tourism for economic development"</b>				
33	Economic development	2	8	Cross-
34	<b>Gastronomic tourism</b>	2	7	cutting
35	Perception	2	12	knowledge,
36	Questionnaire survey	3	13	Marketing,
37	Regional development	2	2	Tourism pro-
38	Spain	3	13	motion and
39	<b>Tourism</b>	<b>10</b>	<b>35</b>	Development
40	Tourist destination	4	15	
<b>Cluster 5: "Entrepreneurial policy in gastronomy"</b>				
41	Culinary nationalism	3	8	Self-em-
42	<b>Entrepreneur</b>	<b>4</b>	<b>17</b>	ployment,
43	Gastro-politics	2	5	Knowledge
44	Hospitality industry	2	4	of regula-
45	Peruvian cuisine	2	5	tions and
				Ability to
				influence the
				sector

**Table 9** (continued)

Number of terms	Clusters	Number of occurrences	Total link strength	Competences
<b>Cluster 6: "Change management adoption in gastronomy"</b>				
46	Business model innovation	2	2	Resilience,
47	Chefs	2	9	Adaptability,
48	Covid-19	<b>6</b>	<b>12</b>	Business
49	Foodservice	2	3	and Sales Management
<b>Cluster 7: "Food design and creative gastronomy"</b>				
50	Innovation	<b>8</b>	<b>26</b>	Creativity,
51	New product development	2	4	Innovation
52	Traditional food	2	2	and Disrup- tive thinking

Source: Authors' own research

entrepreneurship, Sustainable heritage gastronomic culture, Gastronomic tourism for economic development, Entrepreneurial policy in gastronomy, Change management adoption in gastronomy, and Food design and creative gastronomy. And each cluster is related to a general or specific competence of a gastronomic entrepreneur.

According to García-Machado (2018), the interpretation of a bibliometric map is not entirely straightforward. The interpretation of a map should always be done in a very careful manner. Essentially, there are two types of limitations of bibliometric mapping, namely limitations imposed by the data and limitations imposed by the map. A bibliometric map provides a tool that helps experts to improve their knowledge of the field in which they are active and makes all kinds of suggestions. These suggestions may confirm or contradict an expert's ideas on the state of his field. They may also assist an expert in developing new ideas. However, even with the help of a bibliometric map, complete consensus among experts seems unlikely to emerge. More likely, different experts will give somewhat different interpretations to a bibliometric map. For this point of view, it is always good to have the opinions of multiple experts (Heersmink et al., 2011).

The study reported in this paper can be seen as the first step towards a dynamic analysis of the GEC research. Similar studies can be undertaken in the future and may then indicate the developments in this topic. For example, suggesting several latent variables and measurement models that define different characteristics in order to subsequently generate a structural model with the factors that determine the GEC.

The Spanish gastronomic entrepreneur and, in general, those who do business in the catering industry in Spain, require acquiring a lot of knowledge from a multidisciplinary perspective to adequately develop their functions. For this purpose, the competency-based approach should be applied in Spain and serve for the design of training of these professionals because their activities have significant significance, prestige and volume in our country, at present.

It is necessary to be able to define clearly the meaning of the term "competence" since at this moment it is an arduous task. No agreement has been reached from national institutions (of Spain, for example) or international institutions (OCDE, EU, etc.), with respect to the term competition. This makes the evaluation process more

complex of people about the degree of ability or skill with which they perform their tasks.

It is understandable to create specific competences that could offer to the entrepreneurs the possibility to implement and manage the gastronomic business with more success about their proper needs and skills of knowledge and the general, specific, training, creative and so on for their staff.

Comparing findings with the existing literature, the research presented here focuses on the approach to a GEC. The limited literature is a limitation to get through the specific competence, but it could be seen how different authors argue about that the professional qualification and creative potential reflect the way they operate in an inventive and original manner (Garud et al., 2007; Henry et al., 2016; Lachmann, 1977). The practical skill is learning to sell and convince others to support an idea (Aggestam & Wigren-Kristoferson, 2017). Other considered other classification of skills as they maintain the creative skills, the ones to originate new ideas but they differ in practical skills, needed to convince and learn, and implemented an analytical skills to use for the viability of the idea.

Harms et al., (2021), focused on the cause and effect of ignoring other core conditions such as drivers or inhibitors of innovation in gastronomy, such as leadership, strategy, customers, and others (Berenguier de Vasconcelos et al., 2020), hoping that gastronomy entrepreneurs can weather any crisis. For them, the core condition that best distinguishes configurations that lead to a high degree of business model innovation is control.

To summarise and compare this study with others that explore different developments in the culinary world. A strong case is made for competency-based training for Spanish culinary entrepreneurs, while Türkoglu and Yilmaz (2022) focus on the potential of artificial intelligence (AI) to revolutionise gastronomy through applications in areas such as menu planning and health forecasting. Shah et al (2023) examine the challenges and opportunities of a specific food trend—millet—highlighting a growing market but also obstacles such as consumer awareness. Finally, Milton (2024) highlights the transformative potential of AI in hotels, suggesting that it can personalise the guest experience, improve efficiency and promote sustainability. Overall, the necessity for ongoing development and adaptation within the gastronomic sector is emphasized.

This article has both theoretical and practical implications that highlight several key factors that could contribute to the success of gastronomic entrepreneurs, food business leaders and decision-makers in this sector.

## Theoretical implications

Authors such as Vogel et al. (2020), recall how the last two decades have seen a growth of the Culinary Arts (CA) sector, driven among other reasons by the rise of the restaurant industry, as well as the media appeal of the sector. Therefore, the importance of human capital theory is one of the points addressed in our research, where knowledge, skills, and abilities gained through education, training, and experience are essential drivers of a restaurant's performance. The responsibility for integrating educational competencies in line with industry needs lies with higher education

(Edens, 2011; Suhairom et al., 2014), making available the most robust in relation to specific professional knowledge, skills and attitudes.

Secondly, the article stresses the need for dynamic capabilities. The restaurant industry is constantly evolving, thus the adaptability and adjustment of resources in response to changing market trends is vital. Entrepreneurs who are flexible and adaptable, and can leverage new technologies, are better positioned for success. Competence is understood as the mobilization of knowledge, skills and attitudes, demonstrated by an individual in action, resulting from his or her judgment (decision making), when faced with a situation (Fleury & Fleury, 2013; Le Boterf, 2003; Perrenoud, 1999, 2000; Zarifian, 2001). A competency model functions as a competency management platform and consists of mapping knowledge, skills and attitudes (Sandwith, 1993; Suhairom et al., 2014).

Thirdly, it also considers the social entrepreneurship, how chefs and restaurateurs can use their businesses to address social issues, promote sustainability, and create a positive social impact. Competencies are vital factors that provide an incredible impact on individuals' career sustainability (Suhairom et al., 2014). Zopiatis (2010) highlighted the need to explore the knowledge, skills and abilities of a specific job classification such as "Chef".

Finally, the article emphasizes the need for a multidisciplinary approach to gastronomic entrepreneurship as success requires more than just culinary skills. Entrepreneurs also need business acumen, marketing expertise, and an awareness of social and environmental factors. Understanding the bigger picture is key to navigating the complexities of the industry. The article utilizes a technique called bibliometric mapping analysis to investigate the current state of research in this field. This method helps map the knowledge landscape, identifying emerging trends, key research topics, and the relationships between different concepts. By doing so, it offers valuable insights into the evolution of the latest research in GEC.

## Practical implications

This study offers valuable insights for gastronomic entrepreneurs, researchers, food business leaders, and decision-makers in the sector. It identifies crucial competencies that a gastronomic entrepreneur should possess to achieve success and offers practical implications for developing competency-based training programs. Here are some of the improved practical implications incorporating the requested elements, based on the drafting of specific competencies for each cluster:

- Cluster 1: "Gastronomic Entrepreneurship" requires strong creativity, customer service skills, and a deep understanding of entrepreneurship. This cluster highlights the importance of managing customer expectations, building a strong brand identity, and navigating the complexities of the food service industry.
- Cluster 2: "Gastronomy and Social Entrepreneurship" emphasizes the need for cooking skills, self-motivation, and a commitment to social responsibility. Entrepreneurs in this cluster must be passionate about quality food, sustainability, and ethical sourcing practices.
- Cluster 3: "Sustainable Heritage Gastronomic Culture" necessitates knowledge

of the history of gastronomy, its origin, and sustainable farming practices. Entrepreneurs in this cluster strive to preserve and promote regional culinary traditions, fostering a connection between food and cultural heritage.

- Cluster 4: "Gastronomic Tourism for Economic Development" emphasizes cross-cutting knowledge, marketing, promotion, and development skills. This cluster highlights the importance of integrating gastronomy with tourism to create economic opportunities for regions and communities.
- Cluster 5: "Entrepreneurial Policy in Gastronomy" requires self-employment and the ability to understand and navigate government regulations and policies that influence the sector. This cluster emphasizes the importance of advocating for policies that promote the growth of the gastronomic sector.
- Cluster 6: "Change Management Adoption in Gastronomy" necessitates resilience, adaptability, and strong business and sales management skills. This cluster highlights the importance of adapting to changing consumer preferences and market trends, particularly in the face of unexpected challenges like pandemics.
- Cluster 7: "Food Design and Creative Gastronomy" emphasizes the need for creativity, innovation, and disruptive thinking. Entrepreneurs in this cluster focus on pushing boundaries, developing innovative culinary concepts, and creating unique dining experiences.

This study could also help to make a compelling case for the implementation of competency-based training programs for gastronomic entrepreneurs. Such programmes should encompass a diverse range of skills, including business engagement, quality programmes, management expertise, and social commitment. It is imperative that entrepreneurs adopt an adaptable and flexible adaptive business approach. This encompasses the utilisation of technology, embracing innovation, responding trends in the market (i.e. monitoring and adapting to evolving consumer preferences and dietary trends), and understanding the local context, incorporating local ingredients and cultural elements into their offerings. The development of a social impact strategy is also a key consideration for gastronomic entrepreneurs. Gastronomic entrepreneurs may utilise their platform to promote social causes, support local farmers and contribute to the well-being of their community and stakeholders in the food industry.

### **Future research**

Future research in GEC should address the following questions: The development of a comprehensive competency model is a key objective. Further research is required in order to develop a comprehensive and detailed competency model for gastronomic entrepreneurs, which incorporates specific skills, knowledge, and attributes. The assessment of the impact of training is a crucial aspect of any training programme. It is necessary to conduct studies to evaluate the effectiveness of different training programmes in equipping gastronomic entrepreneurs with the necessary skills. A further area of research is the exploration of the role of technology in the gastronomic sector. Further research is required to ascertain the emerging impact of disruptive technologies, particularly artificial intelligence (AI), on the gastronomic sector and the implications for entrepreneurs. The social impact of gastronomy requires further

investigation. Further research is required to investigate the potential of gastronomy to contribute to social welfare, address food security, and promote sustainable food systems.

Finally, this article offers valuable insights for anyone interested in the future of gastronomy. By grasping the pivotal role of competencies in entrepreneurial success, aspiring gastronomic entrepreneurs can be better equipped with the necessary tools to succeed in this challenging but rewarding industry.

#### Author Contribution

**Diana C. Perez-Bustamante Yábar:** Conceptualisation, investigation, literature review, discussion, theoretical implications, conclusions and future research, supervision, validation, writing—original draft, and writing—review.

**Juan José García-Machado:** Formal analysis, investigation, data collection, methodology and data analysis, practical implications, conclusions and future research, supervision, validation, writing—original draft, writing—review, and proof correction.

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**Conflict of interest** The authors declare not to have competing interests related to the work submitted for publication.

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