Check for updates

Kyklos

WILEY

KYKLOS

ORIGINAL ARTICLE OPEN ACCESS

Evaluating Chef's Creativity and Restaurant Quality: An Empirical Analysis of the Role of Gastronomic Guides in the Italian Fine-Dining Market

Francesco Angelini | Massimiliano Castellani | Pierpaolo Pattitoni

Department of Statistical Sciences, University of Bologna, Rimini, Italy

Correspondence: Massimiliano Castellani (m.castellani@unibo.it)

Received: 6 March 2023 | **Revised:** 1 October 2024 | **Accepted:** 7 February 2025

Keywords: chef | expert | restaurant | restaurant guide | SEM

ABSTRACT

The quality of fine-dining restaurant food is complex and presents information issues in customers' quality evaluation, configuring this good as a luxury and cultural good. We investigate the role of experts in influencing customers' evaluation and other stakeholders' characteristics in such a sector by analyzing a dataset of top Italian chefs and restaurants from 2011 to 2019. To complement these data, we directly surveyed starred chefs to get their self-assessment. We use a structural equation model to measure cooking knowledge, culinary creativity, chefs' and restaurants' names, and experts' and customers' evaluations. We analyze the relationships between these constructs and variables like meal prices, seating capacity, tourist and resident numbers, and chef's age. Guides play a significant role in shaping customers' evaluations and influencing prices. Furthermore, fine dining experts focus more on evaluating the businesses themselves, the supply side, rather than the chefs' creation process, the "creative side".

JEL Classification: C10, C21, Z11

1 | Introduction

Fine-dining food consists of refined and elaborate preparations and presentations of aesthetically satisfying meals, usually offered at a high price, served in gourmet restaurants and luxury hotels.[1] In the restaurant industry, fine dining is characterized by a high economic value and a significant cultural value, putting this sector at the crossroads between the creative and food service industry (Piano 2021), having features of both cultural and luxury goods.[2]

Fine-dining food has already reached the status of culinary art, for example, in France, where chefs' creations are often considered artworks, with the chef's style embedded in the meal preparation as a creative endeavor (Paris and Leroy 2014). French gastronomic meals have been added to the UNESCO Representative List of the Intangible Cultural Heritage of Humanity. Therefore, *haute cuisine* chefs seem to share several features of those of artists in the art market (Rosen 1981; Adler 1985; Paris and Leroy 2014), such as the emergence of superstar chefs or "celebrity chefs" widely observed in the last years (Yang 2018).[3]

This paper focuses on Italian *haute cuisine* restaurants, top chefs, food experts, and restaurant guides. In the Italian market, *haute cuisine* plays a crucial role in both the food and the wine industries, as well as in the hospitality and tourism sectors (Leone 2020). Italian *haute cuisine* is also a distinctive feature of the Italian gastronomic heritage, and it is one of the most known cuisines in the world.

Concerning fine-dining food per se, the quality of fine-dining restaurants is complex. It presents information issues in the customers' quality evaluation, configuring this good as an

This is an open access article under the terms of the Creative Commons Attribution License, which permits use, distribution and reproduction in any medium, provided the original work is properly cited.

© 2025 The Author(s). *Kyklos* published by John Wiley & Sons Ltd.

experience or credence good, depending on the ability of the consumer to understand the quality through consumption. The agents who can adequately process information are the food experts, who have accumulated enough educational capital to be capable of reading the complexity of fine dining quality and can spread information about their evaluation. These agents can also be called insiders and consist of professional experts, such as restaurant guides contributors, and nonprofessional experts, such as gourmets and experienced consumers, who can evaluate quality without incurring information costs. Furthermore, the existence of experts capable of processing information has some similarity to what is observed in the art market, where experts play a crucial role in spreading information about artwork quality and in shaping artists' reputations, together with prizes and awards (Ginsburgh 2003; Ginsburgh et al. 2019).

As in every complex-good market, only some agents possess the knowledge and ability to assess food quality. Also, outsiders exist. Outsiders are agents who need information and support when choosing which good to consume and when evaluating its quality. As non-informed agents, outsider customers must use signals from experts and restaurants to assess quality. They may incur costs collecting information and are exposed to potential experts' and restaurants' opportunistic behavior. Outsiders can obtain information about food quality from other sources, such as social networks and other platforms where consumers can post restaurant reviews. Electronic word-of-mouth and platforms like Tripadvisor, Facebook, and Google are popular media and can help consumers make their choices (Harrington et al. 2013). These online signaling devices, incorporating customers' word of mouth and possibly gourmets' opinions, generate a ranking of restaurants (Kim et al. 2016).

What motivates this study is the need to investigate how non-expert customers' quest for information about quality works and how a different type of extrinsic information in the market influences this information. We do so by considering the restaurants' guide evaluations, which are widely recognized as one of the main signals of food quality in the fine-dining industry, as well as electronic word-of-mouth and the personal point of view of celebrity chefs about their creativity, talent, and management ability. The food quality in this sector is likely to be linked with latent and observable variables (such as creativity, food quality, fame, talent, expert evaluation, etc.). Not all of these have been measured yet.

In our paper, we investigate three main research questions. First, we ask if the chef's human capital shapes the experts' evaluation, reflected in the restaurant guides. Second, we ask whether the experts' evaluation influences customers' evaluation. Finally, we investigate whether experts' evaluation has a role in forming restaurant prices. These main questions constitute the primary goal of our paper, namely, investigating whether the experts in the fine-dining industry play a pivotal role in assessing complex goods in this market. In other words, we wonder whether restaurant guides operate as *dei ex machina* within this particular market. Our analysis also focuses on a series of secondary hypotheses, investigating other roles that chefs, experts, and customers may play in the fine dining restaurant market. These hypotheses allow us to place our work among the first empirical exploration of Italy's entire fine dining market, examining the role of all its main stakeholders. To answer our research questions, first, we must establish what variables can be used to measure latent variables in this sector, such as chef talent and culinary creativity. Then, we can check the relationships between latent and observable variables, such as restaurant features and chef characteristics. We perform our empirical analysis based on a unique hand-collected dataset of chefs- and restaurant-specific information on the top Italian chefs between 2011 and 2019. We collected data from restaurants' guides, customers' online reviews, and restaurants' and chefs' websites. Furthermore, we surveyed a sample of the best Italian chefs by administering a questionnaire. We selected 107 top chefs working in 108-starred restaurants reviewed by experts' guides and users of social media. We then estimate a Structural Equation Model (SEM) to measure latent constructs such as cooking knowledge, culinary creativity, chef's and restaurant's names, experts' and customers' evaluations and to identify the primary relationships between these latent variables and several observable variables such as average meal price per person, the maximum number of seats hosted in each restaurant, number of tourist arrivals and inhabitants per Italian province, and age of the restaurant's chef. We measure chefs' human capital and creative talent using a set of self-evaluation measures of knowledge and creativity for each chef. On the other hand, we measure a chef's fame and a restaurant's brand using a set of measures of digital exposure of chefs' and restaurants' names, working as brands. Furthermore, we use restaurants' guide ratings as a measure of quality evaluation of experts and social media votes as measures of consumers' quality perception. Within this empirical framework, we can test our research hypotheses and verify that experts' evaluation positively affects customers' evaluation, restaurants' prices, and chefs' and restaurants' names. Moreover, chefs' culinary creativity positively affects their cooking knowledge, and chefs' age is positively related to experts' evaluations.

The remainder of the paper is organized as follows. Section 2 presents the literature review, the conceptual and theoretical frameworks, and states the research hypotheses. Section 3 describes our data, the measures, and the statistical methods. Section 4 shows the results. Section 5 concludes.

2 | Conceptual Frameworks and Theories

This section presents a systematic review of the literature on fine dining, a sketch of the main theories applied in this sector, and the hypotheses we test with our conceptual model.

2.1 | Literature Review

In this section, we review the fine dining literature, focusing on three main topics: (i) the role of human capital, talent, fame, and brand in chefs' careers, (ii) the role of restaurant experts, and (iii) the role of social media in the fine-dining industry. We then present the most relevant empirical studies that use qualitative approaches to these topics. Table 1 contains the empirical studies mostly related to ours.[4]

In literature, several scholars consider restaurant food as a cultural good (Hegarty and O'Mahony 2001; Fogarty 2012;

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 1 | Related literature.

Author(s)	Country(es)/year(s)	Data/source(s)	Method(s)
Chossat and Gergaud (2003)	French chefs (2000)	185 leading French chefs (Gault Millau)	Ordered logit
Gergaud et al. (2007)	Paris restaurants (2002)	571 Paris restaurants surveyed (Zagat)	Spatial econometric models
Ehrmann et al. (2009)	German restaurants (2007)	Germany's 204 star-rated restaurants and the 229 restaurants with at least 16 points (Michelin and Gault Millau)	OLS
Fogarty (2012)	French chefs Australian restaurants (2006–2007)	523 restaurants in Victorian and in New South Wales restaurants (The Age Good Food Guide and The Sydney Morning Herald Good Food Guide)	Hedonic price regression
Aubke (2014)	German chefs (2011)	Career trajectories of 262 German Michelin-starred chefs (Michelin)	Network analysis
Olders (2014)	French chefs (1999–2004)	569 biographies of star-rated French chefs (Michelin)	OLS
Gergaud et al. (2015)	New York City restaurants (2003–2006)	471 nonrandomly selected restaurants (Michelin)	Difference-in-differences and propensity score matching approach
Clarke et al. (2016)	US and non US chefs (2015)	A census of the world's top 48 celebrity chefs' diffusion of social media (Facebook, YouTube, Twitter, Google+, Instagram, LinkedIn, Pinterest, Blog, App, and Tumblr)	Content analysis
Kim et al. (2016)	US restaurant (2015)	About 7,910 reviews on 70 restaurants in 16 states in the United States (TripAdvisor, Urbanspoon, and Foursquare)	Hierarchical multiple regression
Ganzaroli et al. (2017)	Venice restaurants (April–June 2015)	About 126,500 reviews on 575 restaurants in Venice (TripAdvisor)	SEM
Chen and Peng (2018)	Luxury restaurants (2017)	Survey on 361 Taiwanese tourists (32-question survey)	SEM
Yi et al. (2018)	Miami restaurants (2017)	Survey on 363 restaurants in North and South Beach areas of the city of Miami (Self-administered questionnaire)	SEM
Clauzel et al. (2019)	Relais Bernard Loiseau	665 online reviews	Regression and ANOVA

(Continues)

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 1 | (Continued)

Author(s)	Country(es)/year(s)	Data/source(s)	Method(s)
	(2004–2007)	(TripAdvisor)	Correspondence analysis, automatic textual and content analysis
Gergaud et al. (2020)	French chefs	Career of 1000 starred and not starred chefs	Probit and ordered probit analyses
	(1980–2001)	(Michelin)	
Onorati and Giardullo (2020)	Aosta Valley Restaurants	1673 reviews on 100 restaurants	Content analysis
	(June 2015–June 2017)	(TripADvisor)	
Fang (2022)	Restaurant industry in Texas	15,417 restaurants	Structural demand model
	(January 1995–December 2015)	(Google Trends, Yelp, and TripAdvisor)	with consumer learning
This paper	Fine-dining sector in Italy	108 restaurants	Structural equation model
	(2011–2019)	(Survey; Michelin and other guides; Google, Facebook, and TripAdvisor)	with chefs', experts', and consumers' evaluation

Waldfogel 2020). Indeed, restaurant food—and fine-dining restaurant food in particular—presents all the three necessary conditions to be called a cultural good introduced by Throsby (2001): (i) It incorporates creativity, that is, the chef's culinary creativity; (ii) it contains some type of intellectual property, even though *haute cuisine* food is not defended by any copyright law (Presenza et al. 2017); (iii) it conveys symbolic messages, related to the food and restaurant's place and culture of origin (Barrère et al. 2012).[5]

2.1.1 | Chefs' Careers

Within the stream of literature that analyzes the chefs' career and their human capital, talent, fame, and brand as determinants of their income and success, Ehrmann et al. (2009) analyze whether superstar effects exist in the market of the best German restaurants, where the stars are chefs and the superstars are international chefs. They analyze which factors determine the stars' rents and find that higher performance quality increases chefs' revenues, but not disproportionately and without a direct superstar effect. Gergaud et al. (2011, 2020) analyze a large sample of top French chefs' careers over more than 20 years and investigate the determinants of their success, such as quality of apprenticeship and mentoring, and the dynamics of performance and reputation of the restaurants where the chefs worked. In particular, Gergaud et al. (2011) analyzes how chefs' reputations are made and unmade and how much human capital, or talent, can be transferred from a mentor to their apprentice. They show that measures of accumulated human capital are a crucial determinant of performance (*chef de cuisine*), and the quality of apprenticeship is more critical at the end of the apprenticeship (*sous-chef*). At the same time, it turns out to be less important at the intermediate and entry levels (*chef de partie* and *commis de cuisine*). Gergaud et al. (2020) shows that the prestige of the restaurant where individuals work affects the chefs' career, though it is declining throughout their career. They also find that the quality of apprenticeship is strongly related to future success as a chef, even when controlling for unobserved heterogeneity. These results suggest that human capital is partially transferable between mentors and apprentices. Aubke (2014), through the analyses of the careers of 262 German chefs using social network analysis, finds that the culinary network comprises a dense core. However, some chefs can be found at the periphery or isolated. Ties between chefs with different star ratings occur more often than between chefs with similar star ratings. Fewer ties are more beneficial for individual creative productivity, and knowledge transfers are more likely between chefs with different levels of experience, skills, and creative ability. Olders (2014) studies 569 biographies of French chefs and argues that high-quality experiences at the early stages of a chef's career are essential to accumulate the skills needed to cook professionally. However, popularity seems more important than talent among acquired taste or knowledge, except for superstars. Yi et al. (2018) investigate how brand image and price affect three primary restaurant selection attributes: that is, ambiance, food quality, and service quality. They found that the brand image significantly affected customers' preference over the restaurant attributes, while the status of residents versus tourists partially affected customers' preference over the restaurant attributes. Restaurant operators attract new customers and retain their customers by improving these attributes.[6]

All these studies introduce measures related to chefs' characteristics, but these are only partially linked with the restaurants' pricing and performance in the analyses. The same holds for the

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

relationship with experts' evaluation. Our paper considers these relationships within a unique model, helping to shed light on the role played by those chefs' characteristics that are more related to their creativity in influencing other stakeholders' evaluation and choices.

2.1.2 | Experts

Several scholars have analyzed the importance of food experts both from the supply side (Cotter and Snyder 1998) and the demand side of *haute cuisine* restaurants (Balazs 2002). According to Surlemont and Johnson (2005), restaurant guides are essential in reducing information asymmetries since they help build restaurants' reputations. In fact, due to the crucial role of reputation in this sector, people are more likely to consult an expert's review when they want to consume a fine-dining meal (Piano 2021). Guides, as experts, managed to be recognized as such, with the consequence of influencing the perception of food quality (Gergaud et al. 2015) and acting as gatekeepers in the sector, imposing a standard for quality (Chossat and Gergaud 2003). At the same time, the restaurant guides, which are then taste-makers, together with other influential individuals who operate outside the guides market, also worked as attributors of aesthetic value to *haute cuisine* food (Lane 2013). Chossat and Gergaud (2003) identify the main determinants of the experts' quality evaluations and estimate their impact on the success of chefs. According to the experts, the art of cooking is the only determinant they consider when selecting and evaluating chefs. In contrast, chefs consider the setting at least as necessary as the art of cooking. Among these two strategies to become a first-rate chef, the art of cooking seems to prevail over the setting, even though some gourmet restaurants tend to over-invest in luxurious surroundings. Gergaud et al. (2007) use spatial econometric models, applied to the case of Paris gastronomic restaurants, to understand the influence of expertise in the fine-dining industry. They aim to test if the attribution of Michelin stars is related to non-artistic determinants, such as the percentage of starred restaurants in the neighborhood. They show that location matters in attributing stars, even if Michelin claims the opposite. Measuring how prices depend on stars awarded and the number of starred restaurants in the neighborhood, they find that rewards allow the awarded chefs to charge a price premium of about 25%. This premium is shown to spread over all restaurants in the neighborhood. Independently of the level of perceived quality, the likelihood of being awarded a Michelin star is more significant in *arrondissements* where the share of starred restaurants is higher. Fogarty (2012) uses the hedonic price approach to investigate the role of experts' opinions, cuisine reputation, and the value of different objective attributes in the market for restaurant meals in New South Wales and Victoria (Australia). The implicit price of individual reputation indicators, cuisine type reputation indicators, and other objective indicators suggest that individual restaurant reputation and cuisine type reputation are essential. Other important factors include the quality of the restaurant wine list, the availability of private dining rooms, and whether there is an outdoor dining option. Investing in the restaurant wine list is rewarded with higher prices. Furthermore, European and modern food attracts higher prices than Asian food. Gergaud et al. (2015), employing a difference-in-differences and a propensity score matching approach, find significant Michelin treatment effects on food and *décor* quality. Based on consumers' quality perception and producer investment in New York City restaurants, they find a Michelin-induced price increase of approximately 30% per Michelin star. So Michelin-reviewed restaurants are more likely to improve food and non-food quality, leading to significant price increases and investing in their wine list more than other restaurants.[7]

The studies we reviewed strongly helped the understanding of experts' role in spreading information and quality recognition. However, none of these studies empirically considered chefs' characteristics (but reputation) in their framework in a systemic way. Our paper analyzes the expert role in evaluating the whole experience of high-quality food consumption, considering chefs' creativity and restaurants' performance as food suppliers.

2.1.3 | Social Media

An emerging vein in literature explores the role of social media in representing the customers' preferences over restaurants and restaurants' performances.[8] Kim et al. (2016) examine the influence of social media reviews and operating efficiency metrics on restaurant financial performance and explore the moderating role of an excellence certificate. They find that the number of online reviews customers make has a significant positive impact on restaurant performance. Ganzaroli et al. (2017) investigate the efficiency of TripAdvisor in helping tourists make informed decisions and increasing the popularity of restaurants that offer higher expected quality. They study how TripAdvisor in Venice contributes to strengthening the popularity of known restaurants, despite their rating in terms of quality, or restaurants that are less known but accredited for higher quality. Their findings suggest that, although TripAdvisor's algorithm is designed to reward quality, it does not adequately meet this goal. Clauzel et al. (2019) study the Relais Bernard Loiseau that was downgraded from a three-star to a two-star restaurant by the Michelin Guide in 2016. They analyze how the downgrading rating influences the consumers' legitimacy judgments. Based on the quantitative and qualitative analyses of the 665 online reviews on the TripAdvisor website from 2004 to June 2017, they find a null effect on the rating (as the quantitative component of the evaluation) and a non-linear influence on their online comments (as the qualitative component). Onorati and Giardullo (2020) analyze TripAdvisor's reviews of the restaurants in the Italian region Aosta Valley over 25 months. Their analysis highlights the process of food taste re-mediation played by social media and the emergence of a culinary capital based on "plastic habitus" and plural socialization of food that ranges from TV "foodtainment" to digital narratives to new patterns of "aware eating." Fang (2022), using a dataset containing restaurant revenues and information from major online review platforms and building a structural demand model with social learning, quantifies the effects of online review platforms on restaurants and consumer welfare. Their empirical evidence shows that online review platforms help consumers learn faster about restaurant quality, affecting restaurant revenues and survival

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

rates. Still, online review platforms do not significantly affect chains' and old independent restaurants' revenues or survival rates. However, online review platforms have little impact on the total industry revenue.[9]

A comprehensive analysis of the relationship between experts' and customers' evaluation is still missing in this literature. In fact, to the best of our knowledge, only Clauzel et al. (2019) studied such a relationship, limiting the analysis to a single restaurant in a particular situation (a reduction of the number of Michelin stars). In our analysis, we will study such a relationship considering a higher number of restaurants so that a link between evaluations from insiders and evaluations from outsiders can be estimated.

2.1.4 | Other Empirical Studies

Several authors use qualitative approaches, such as interviews, surveys, or case studies, to analyze issues addressed by quantitative empirical studies. For instance, Surlemont and Johnson (2005) and Surlemont et al. (2005), by using 20 exploratory field interviews of chefs belonging to the star system in France, Switzerland, and the United Kingdom, analyzed how the Michelin guide star system operates as a signaling device in the fine-dining industry and how secrecy contributes to preserving chefs' creativity for the benefit of customer satisfaction. Also, they studied the chefs' strategies and identified the most successful in terms of Michelin rating and profitability. Lane (2013), by using 30 in-depth interviews with chefs and two interviews with Michelin inspectors in Britain and Germany, examined the roles played by gastronomic critics as tastemakers in the fine-dining restaurant industry of these countries. Analyzing 170 head chefs from the Republic of Ireland, Allen and Mac Con Iomaire (2017) explored the factors for success within the Irish culinary industry. Eren and Güldemir (2017), by using semi-structured interviews conducted with award-winning Turkish chefs, identified the operational and cultural factors related to the absence of Turkish chefs and restaurants in the culinary world.[10]

Although previous studies have analyzed starred chefs as part of a complex system like the one we are examining in this paper, they have not implemented a quantitative model to effectively operationalize all the agents' choices and characteristics within it. In contrast, our model, which we will describe in Section 3, takes into account potential feedback between variables and controls for possible endogeneity, resulting in an improved analysis of the complex interactions between observable and latent variables.

2.2 | Theoretical Background

Before presenting our conceptual model and the corresponding hypotheses in detail, we give some background on the fine-dining sector and some definitions we rely on throughout the paper. We base our conceptual model on several latent theoretical constructs: opinions and evaluations of experts and customers; human capital, talent, and fame of chefs; brand of restaurants.

2.2.1 | Experts' Evaluations

According to Surlemont and Johnson (2005), restaurant guides as food experts and tastemakers can contribute to solving the problem of experience goods in the quality evaluation of restaurants by building the restaurants' reputation. In addition, experts as gatekeepers influence the perception of food quality (Gergaud et al. 2015) or the emergence of a standard for quality (Chossat and Gergaud 2003). In our framework, we define the ranking of restaurant guides as a credible signal by providing reliable and trustworthy advice on the quality of restaurants.[11]

2.2.2 | Customers' Evaluations

Gourmets, as nonprofessional experts in the fine-dining industry, can evaluate the restaurants' quality and release signals about the restaurant quality through online social media reviews on hotels and restaurants. Furthermore, all these signals incorporate customers' word of mouth and gourmets' opinions to generate a ranking of hotels and restaurants (Kim et al. 2016). So, we define the social media ranking on restaurants as another signal of the quality of restaurants provided by both gourmets and customers.

2.2.3 | Chef's Human Capital and Knowledge

Crook et al. (2011) define human capital as a complex interplay of knowledge, skills, and abilities. Following Gomez et al. (2003), in this work, we define cooking knowledge as a set of subjective and objective competencies, technical skills, and rules enforcement embedded in physical activities. Gergaud et al. (2011) show that measures of accumulated human capital are a crucial determinant of chefs' performance.[12] While the concepts of human capital and talent may seem the same, they are considered separately in the literature. In particular, human capital stems from various sources, mostly from formal education and training. Still, it is also influenced by culture, family background, social context, and innate abilities (Folloni and Vittadini 2010). Goode (1959) states that "Human capital can be defined as knowledge, skills, attitudes, aptitudes, and other acquired traits contributing to production." Towse (2001) states that "Creativity, talent, skill, craft are all aspects of human capital," and a distinction between the two concepts is also found in the analysis by Bryant and Throsby (2006). Hence, in this paper, we will treat human capital as distinguished from talent.

2.2.4 | Chef's Talent

According to Stierand et al. (2008), a creator is guided by personal creativity, which consists of talent and experience. Talent is primarily an "innate ability" (Towse 2006).[13] On the other hand, experience leads to perfect talent via "acquired ability." We regard a chef's talent as a form of artistic talent. Thus, we agree with Menger (2014), who defines talent as "the expression of abilities that seem to originate in the genetic lottery (especially if they manifest themselves early in the artist's

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

life) as well as in the interaction between this genetic capital and a family and social environment that can bring it to fruition." In line with that, studies by Towse (2001, 2010) suggest that, although creative talent can be cultivated through training, it is not generated through such means but it is rather innate. Chefs use their creative talents to innovate the cooking processes (Drew 1987).

When it comes to evaluating oneself, it can be argued that experienced chefs should have a better understanding of their abilities and talent and therefore be more accurate in their self-evaluation. However, this may not be the case for younger chefs who are new to the industry and may require external validation of their skills, such as awards or recognition from experts.[14]

2.2.5 | Chef's Fame

Celebrity chefs enjoy widespread fame and popularity. Their professional background drives their public recognition locally and possibly globally (Henderson 2011; Yang 2018). Fogarty (2012) finds that individual reputation is critical to the restoration market. According to Slavich et al. (2014), top chefs invest in entrepreneurship to maximize their reputation for greater profits. In this spirit, we follow Giousmpasoglou et al. (2019) and define a chef's fame as the result of a "celebrification" process, transforming a chef's name into an authentic human brand. Here, we intend the human brand as the "intangible asset linked to a person, which generates economic and social value through its visibility as a result of a personal branding process" (Scheidt et al. 2020).

2.2.6 | Restaurant's Brand

A physical product's intrinsic and extrinsic characteristics are mainly summarized by its brand (Richardson et al. 1994). Likewise, the name of a restaurant can be viewed as a product brand. In the following, we use a restaurant's brand as a unique identifier that leads to perceiving one restaurant as distinct.

2.2.7 | Chef's Seniority

According to the literature on human capital, learning by cooking is the key to becoming a top chef (Gergaud et al. 2011). A chef operating in the *haute cuisine* market accumulates experience and renown over time. The more years a chef is active in the sector, the more likely they will be renowned and known by experts and customers.

2.2.8 | Restaurant's Longevity

Similar to what happens to a chef's fame, a restaurant that remains active and continues offering high-quality dishes over the years is more likely to have a stronger brand. This relationship can be even stronger given the more long-lasting investments in building a brand, as consumers may perceive brand longevity as an indicator of quality (Baumert and de Obesso 2021).

2.3 | Testable Hypotheses

In this section, we list the most relevant hypotheses we tested with our data by dividing them into the core and collateral hypotheses. Since we mainly focus on the expert's role in the fine-dining sector, in the first group, we consider how the chefs' ability can influence the experts' evaluations and the effects of these evaluations on the restaurant's prices and customers' evaluations. Among the collateral hypotheses, we test major and minor hypotheses directly and indirectly connected with our research questions. Focusing on the major hypotheses, we are interested in the effects of the experts' evaluations on the chefs' fame and restaurants' brands and how the chefs' experience can affect the experts' evaluations. The minor hypotheses regard potential links between chefs' talent and their human capital and the restaurants' size, the relationship between chefs' experience and fame, the link between restaurants' longevity and brands, and the relationship between market size, restaurant prices, and customers' evaluations.

2.3.1 | Core Hypotheses

Hyphothesis 1a. H1a *A chef's human capital positively affects experts' evaluations.*

Experts should be able to identify better the chef's ability and skills in the creation of dishes and in proposing quality food. This idea is indeed in line with what Durand et al. (2007) found, namely, that the number of Michelin stars (as an external expert evaluation) is positively related to education level (among other variables). If so, this hypothesis should be supported by the data.

Hyphothesis 1b. H1b *Experts' evaluations positively affect a chef's human capital.*

Hyphothesis 1c. H1c *Experts' evaluations positively affect a chef's talent.*

It is worth considering alternative hypotheses to H1a when chefs self-evaluate their abilities. For instance, expert evaluations may influence how chefs perceive and evaluate their human capital and talent. This effect may be stronger for less established chefs than those who have already earned Michelin stars. However, even Michelin-starred chefs may be influenced by this internationally recognized award. Michelin stars are a measure of social comparative performance because they place chefs in a group of the world's top chefs, allowing them to be compared with others within this high-quality group. Being part of such a group may boost self-evaluation, and the strength of the signal (i.e., the number of stars and other ratings from guides) may further enhance this effect.[15]

Hyphothesis 2. H2 *Experts' evaluations positively affect customers' evaluations.*

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Guides act as gatekeepers in the fine-dining sector by imposing a standard for quality (Chossat and Gergaud 2003), so their evaluations are recognized as quality signals and can influence the perception of food quality (Gergaud et al. 2015). Restaurant guides and other influential individuals outside the guides market are the tastemakers who attribute aesthetic value to *haute cuisine* food (Lane 2013). Hence, customers' evaluation will likely consider these nputs when evaluating their consumption experience.

Hyphothesis 3. H3 *Experts' evaluations positively affect restaurant prices*.

As a quality signal that explicitly communicates a restaurant's relative quality level and allows consumers to rank restaurants based on their levels of quality, one can expect to observe a price premium for each additional Michelin star a restaurant is endowed with. This link between stars and price has already been found in the literature for France (Snyder and Cotter 1998), Germany (Ehrmann et al. 2009) and, more recently, for France and the United Kingdom (Craig et al. 2023). It can be explained by the existence of a bandwagon effect (more stars, more demand, higher prices), but also of a snob effect (more stars, more high-income demand, higher prices), and even by a hedonic benefit (more stars, more perceived benefit derived from the dishes, higher prices).

2.3.2 | Major Hypotheses

Hyphothesis 4. H4 *Experts' evaluations positively affect a restaurant's brand*.

According to Surlemont and Johnson (2005), restaurant guides are essential in reducing information asymmetries since they help build the restaurants' reputation. In fact, due to the crucial role of reputation in this sector, people are more likely to consult an expert's review when they want to consume a fine-dining meal (Piano 2021). Since the restaurant brand is related to its reputation, one can claim that experts' evaluations have a role in building the restaurants' brands.

Hyphothesis 5. H5 *Experts' evaluations positively affect a chef's fame*.

Critics have a crucial role in reputation and fame building in cultural markets (Cameron 1995; Debenedetti 2006). This applies to the fine-dining restaurant sector as well, where experts and guides are essential in drawing attention towards a chef's name.[16]

Hyphothesis 6. H6 *A chef's seniority positively affects experts' evaluations*.

Experts and critics reward quality, and they are active in spotting restaurants that propose quality. However, an emerging chef must be outstanding to be noticed by experts and critics. In contrast, a more established chef might find it easier, not because of fame per se but because of the longer active period in the market. This point is in line with what Durand et al. (2007) found, namely, that Michelin stars are positively related to the chef's age.

2.3.3 | Minor Hypotheses

Hyphothesis 7. H7 *A restaurant's longevity positively affects its brand*.

The ratio behind this hypothesis is that the longer a restaurant is active, the longer the time devoted to building its brand (Baumert and de Obesso 2021). As found by Laukkanen et al. (2016), older firms are generally more oriented towards brand strategies and more effective than younger ones.

Hyphothesis 8. H8 *A chef's talent positively affects her human capital*.

This hypothesis is grounded on previous studies on human capital, such as Rosen (1987) and Towse (2006). Human capital can be defined as the stock of skills and product knowledge people embody. It can be seen as a complex concept given by inherited characteristics, innate ability, and acquired skills and knowledge. If we think about talent and creativity as natural abilities (Angelini et al. 2023), it is easy to spot the link between these concepts and human capital, with a positive relationship. A more talented person will also find it easier to accumulate experience on the job and will face lower costs of investment in schooling.

Hyphothesis 9. H9 *The number of seats in a restaurant negatively affects a chef's human capital*.

In the restaurant industry, where quality is produced through variable costs, the number of varieties and the maximum quality increases, as well as the market fragmentation, as size increases (Berry and Waldfogel 2010). However, in the fine-dining industry, the head chef determines product quality, and their human capital is the main source of the restaurant's quality. If we consider seating capacity as a proxy of restaurant size, a lower number of seats could signal more service quality and refined cooking, which are likely to be positively related to a higher human capital of the chef.[17]

Hyphothesis 10. H10 *A chef's seniority positively affects her fame*.

Based on the definitions of fame in the literature,[18] fame is strongly linked to recognition and renown. Hence, the longer a chef has been active in the market, the higher the likelihood of higher fame. Candela et al. (2016) and Angelini et al. (2023) indeed use longevity to measure an artist's fame.

Hyphothesis 11. H11 *Restaurant prices negatively affect customers' evaluations*.

In high-tier markets such as the fine-dining sector, consumers expect a high-quality level that matches the information collected through experts and other sources. Higher quality should be reflected in a higher price. Otherwise, the price would not be a good signal for the consumers. As found by Liu et al. (2022), this holds if a relationship exists between perceived luxurious value and willingness to pay a price premium. However, if there is no alignment between price and quality, the consumers' evaluation will likely be lower.

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Hyphothesis 12. H12 *The number of inhabitants and tourists positively affects restaurant prices.*

The idea behind this hypothesis is that the price setting in the fine-dining sector is based on a standard demand–supply relationship. Since these restaurants have a fixed number of seats and often have long booking lists (even longer than 1 month), a higher number of inhabitants and tourists is likely to be reflected in higher demand that, given a fixed supply, would generate pressure on prices.[19]

In what follows, we will refer to model 1 when considering H1a together with the Hypotheses H2–H12, while we will refer to model 2 when considering H1b and H1c together with the Hypotheses H2–H12.

3 | Methodology

3.1 | Data and Sample

We perform our empirical analysis using a unique hand-collected dataset, including information on top chefs and starred restaurants in Italy between 2011 and 2019. As detailed in Appendix B.2, data come from several sources, including restaurant guides, websites reporting customers' reviews, restaurant and chef websites, and memberships to professional associations. Additional data comes from the Italian National Institute of Statistics (ISTAT).

We complement our dataset by administering a questionnaire and gathering information on a sample of 107 top chefs working in 108 starred restaurants. The questionnaire was issued in 2019. Chefs were interviewed using a computer-assisted telephone interviewing (CATI) approach based on the script provided by a software application. Before the questionnaire, the interviewer educated the chefs on the importance of timely and accurate responses. The interviewer annotated the degree of comprehension, interest, and facility in answering questions during the questionnaire. The registered awareness and interest levels were high, and the questions were perceived as easy to understand. Interviews took 15 min on average.

The questionnaire, available on request, is divided into three sections. In the first section, we ask the chefs to self-evaluate their skills in several dimensions compared to the other starred chefs. The second section of the questionnaire is about a chef's intentions and motivations. The third section collects general information about chefs' education, training, and job experiences to complete and double-check public information collected from other sources.[20]

3.2 | Variables and Measures

The hypotheses presented in Section 2.3 describe the structural relationships between a set of observable and latent variables. In the empirical application, observable variables can be directly replaced by their empirical counterpart. On the other hand, latent variables need to be "extracted" from observable variables. In this section, we describe all observable variables and discuss how they can be directly used in the empirical model or combined to extract the underlying latent variables.

Observable main variables. The main variables with a directly observable counterpart are restaurant prices, the number of seats, a chef's seniority, a restaurant's longevity, and the number of inhabitants and tourists. All these observable variables, except the prices, are exogenous.

The first variable of interest in our work is the average meal price. For each restaurant, we calculate the average between the price of a complete *à la carte* meal (maximum price) and the price of a tasting menu (minimum price). These prices average about €99 and exhibit significant variability ranging from €51 to €188. To mitigate heteroscedasticity and interpret estimated coefficients as elasticities and semi-elasticities, we log-transform this variable and indicate it as `Price`.

A restaurant's production capacity can be measured by its maximum seats. This variable has an average value of 42 and a standard deviation of about 16. We indicate the log-transformed variable in the empirical model as `Size`.

We proxy chef seniority by their age. On average, chefs are about 45 years old, with a standard deviation of about 11. In the empirical model, we log-transform this variable and indicate it as `Seniority`. We also asked chefs about their years of professional experience in the questionnaire. Age and experience exhibit a high correlation of about 0.73. This is somewhat expected since both these variables are linear functions of time.

A restaurant's age measures its history and longevity. This variable has an average value of about 22 years and a standard deviation of about 16 years. In the empirical model, we log-transform this variable and indicate it as `Longevity`.

The number of tourist arrivals and inhabitants of each Italian province is a good measure of the potential flow of a restaurant's customers in a specific destination (Feruzzi 2017). The mean and the standard deviation of this variable are about four million. We log-transform this variable and use it in the empirical model as `Population`.

The upper panel of Table 2 shows descriptive statistics on the main observable variables (after the log transformation).

Observable control variables. To recreate an ideal *ceteris paribus* condition and facilitate the economic interpretation of the results, we include several control variables in our empirical model. These variables are meant to control for chef-specific and restaurant-specific effects.

Chef-related variables indicate if a chef attended cooking schools or is self-taught (`Selftaught`), if she is the restaurant owner (`Patron`), and gender (`Gender`).[21]

Several dummy variables consider restaurant characteristics. A set of dummy variables indicate a restaurant cuisine style (`Classic`, `Creative`, or `Modern`) as indicated by the Michelin classification. We also control for the restaurant

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 2 | Descriptive statistics of observable variables.

	N	Mean	SD	Min	Max
Main variables					
Price	108	98.86	30.15	51.00	187.50
Size	108	3.65	0.40	2.48	4.50
Seniority	108	3.29	0.39	2.30	4.16
Longetivity	108	2.75	0.93	0	4.08
Population	108	14.66	1.12	12.27	16.49
Control variables					
Selftaught	108	36.11	0.48	0	1
Patron	108	62.04	0.49	0	1
Gender	108	16.67	0.37	0	1
Classic	108	18.52	0.39	0	1
Creative	108	47.22	0.50	0	1
Modern	108	34.26	0.48	0	1
Multiunit	108	34.26	0.48	0	1
Multiproduct	108	71.30	0.45	0	1
Hotel	108	37.96	0.49	0	1
Central	108	23.15	0.42	0	1
Island	108	8.33	0.28	0	1
Northeast	108	25.00	0.44	0	1
Northwest	108	25.93	0.44	0	1
South	108	17.59	0.38	0	1

Note: The table shows, for observable variables, the number of observations (*N*), means, standard deviations (SD), minima (Min), and maxima (Max) for continuous variables and relative frequencies (%) for dummy variables. Values are rounded to the second digit.

being located in more than one place (Multiunit) and if it provides delivering, catering, banqueting, or similar services (Multiproduct). We further consider if the restaurant is part of an accommodation complex with rooms for the night (Hotel) and in which part of Italy is located (Central, Island, Northeast, Northwest, and South).

In our sample, 36% of the chefs are self-educated, 62% are restaurant owners, and 83% are males. Nineteen percent of the restaurants offer classic cuisine, 47% creative cuisine, and 34% modern cuisine. Furthermore, 34% of the restaurants are multi-unit, 71% are multi-product, and 38% offer hotel rooms. Finally, regarding geographical location, 23% of the restaurants are located in central regions, 8% in the main islands, 25% in the north-east area, 26% in the north-west part, and 18% in the southern regions.

The lower panel of Table 2 shows descriptive statistics on the control variables.

Measures for latent variables. The hypotheses in Section 2.3 involve several latent variables. Latent variables are not directly observable. However, we can extract the signal underlying latent variables from a set of observable measures retrieved from the questionnaires or collected from public sources of information. To do so, we first present which observable variables are supposedly correlated with latent variables. In the following sections, we explain our statistical approach and comment on whether the empirical results are compatible with our assumptions.

Our conceptual framework places emphasis on six latent variables: a chef's human capital (labeled Human), talent (Talent), and fame (Fame), a restaurant's perceived brand (Brand), and aggregate evaluations of a restaurant by experts (Expert), and customers (Customer). None of the above variables are directly observable. However, we can find observable variables associated with or influenced by these latent variables. To give a simple example, although a chef's talent is not directly measurable, we could infer it by observing variables such as her ability to innovate and adapt that can be seen as measures of talent.

More specifically, we use self-evaluation measures of a chef's knowledge regarding cooking operations (Operations), techniques (Tecniques), recipes and menus (Recipes), and ingredients and raw materials (Ingredients) to define her human capital. The questionnaire asked all chefs to rate their knowledge on the previous four items compared to other starred chefs using a 5-value scale where 1 indicates *definitely worse than the others* and 5 *definitely better than the others.*

Similarly, a set of self-evaluation measures of a chef's creativity, including culinary innovation (Innovation), adaptation (Adaptation), and mutation (Mutation), defines a chef's creative talent.

Finally, a measure of digital exposure of a chef's name (Googleclick) and her association memberships (Membership) define her fame. Specifically, Googleclick is the logarithm of the number of results for the query "name of the chef" on Google.[22] Membership is a dummy variable indicating if a chef is a member of at least one of the following prestigious clubs: Relais & Chateaux, Jeunes Restaurateurs (JRE), Le Soste Association, Associazione Italiana Ambasciatori del Gusto (AIAG), and Charming Italian Chef (CHIC).

We measure a restaurant's brand using social media (Review) and internet (Googlehit) references. Review is the total number of reviews on a restaurant posted on Tripadvisor, Facebook, and Google. On the other hand, Googlehit is the total number of results for the query "name of the restaurant" and "restaurant" on Google. Both variables are log-transformed.

The food experts' evaluations are measured by the number of stars by the Michelin guide (Stars), the number of forks by the Gambero Rosso guide (Forks), and the number of toques by the L'Espresso guide (Toques), the most important gastronomic guides in Italy. Finally, we consider social media average rates and scores from Tripadvisor (Triprate), Facebook (Facerate), and Google (Googlerate) as measures of quality perception by consumers.

Table 3 shows descriptive statistics on all measures of latent variables.

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 3 | Descriptive statistics of the measures for latent variables.

Measures	*N*	Mean	SD	Min	Max
Chef's human capital (Human)					
Operations	108	3.67	0.76	2	5
Technique	108	3.67	0.83	2	5
Recipes	108	3.77	0.85	2	5
Ingredients	108	3.93	0.86	2	5
Chef's talent (Talent)					
Innovation	108	3.69	0.83	2	5
Adaptation	108	4.06	0 .93	1	5
Mutation	108	3.95	0.88	1	5
Chef's fame (Fame)					
Googleclick	108	9.20	1.49	4.09	13.20
Membership	108	0.49	0.50	0	1
Restaurant's brand (Brand)					
Review	108	6.34	0.67	4.74	8.36
Googlehit	108	7.01	1.55	4.49	10.08
Experts' evaluation (Expert)					
Stars	108	1.22	0.50	0	3
Forks	108	2.02	0.45	0	3
Toques	108	1.95	0.97	0	5
Customers' evaluation (Customer)					
Triprate	108	4.44	0 .25	0	5
Facerate	108	4.81	0.18	0	5
Googlerate	108	4.57	0.22	0	5

Note: The table shows, for latent variables, the number of observations (*N*), means, standard deviations (SD), minima (Min), and maxima (Max) for continuous variables and relative frequencies (%) for dummy variables. Values are rounded to the second digit.

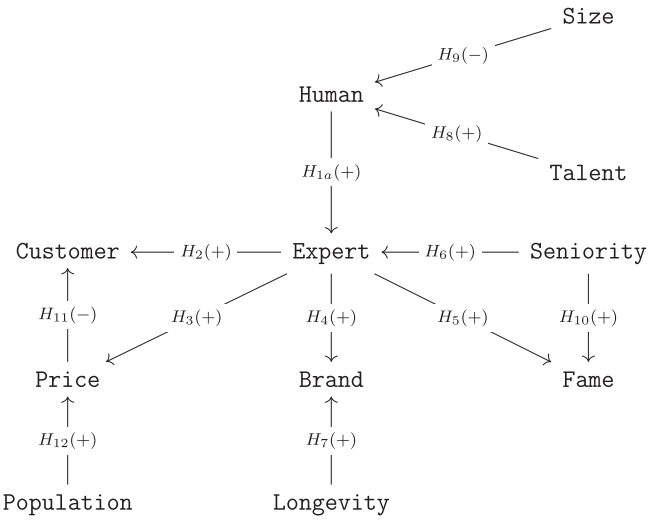

FIGURE 1 | Conceptual model for model 1. Figure contains the structural relationships between latent and observable variables in our model 1. Each arrow representing a relationship has the corresponding theoretical hypothesis reported, with the sign we expect to observe.

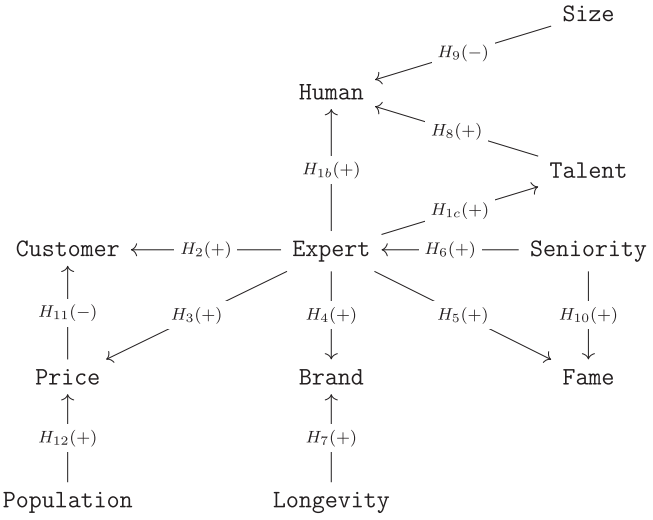

FIGURE 2 | Conceptual model for model 2. Figure contains the structural relationships between latent and observable variables in our model 2. Each arrow representing a relationship has the corresponding theoretical hypothesis reported, with the sign we expect to observe.

3.3 | Statistical Methods

The set of hypotheses in the theoretical section describes the structural relationships between different observable and latent variables. Using the definitions in the previous section, we can conveniently represent the entire hypothesis system through a graphical representation. Figure 1 presents the conceptual model underlying our hypotheses in model 1, while Figure 2 presents the conceptual model in model 2.

Assuming that, at least as a first-order approximation, the relationships represented in Figures 1 and 2 are linear, we can test our models using a structural equation modelling (SEM) approach. SEM is a specialized approach designed to manage multivariate equations involving latent and observable variables adeptly. The framework of a typical SEM model consists of two integral components: the structural part and the measurement part. The structural facet elucidates the interplay between endogenous and exogenous variables, which may be observable or latent. Conversely, the measurement part is focused on gauging latent variables through observable measures.

SEM is a comprehensive statistical methodology amalgamating elements from factor analysis, multiple regression, and path analysis. Its primary purpose is to scrutinize intricate relationships among variables. SEM is widely employed to assess and refine theoretical models across diverse disciplines, such as psychology, sociology, economics, management, and

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

biology. The methodology visually encapsulates the relationships between latent and observed variables through graphical representations, utilizing paths or arrows to denote the direction of influence.

A distinctive strength of SEM lies in its capability to handle concurrent relationships among variables. In conventional statistical methods like regression, variables are typically categorized as either predictors or outcomes. SEM, however, accommodates bidirectional relationships, feedback loops, and simultaneous influences among variables. Estimating SEM models involves various techniques, with maximum likelihood (ML) estimation emerging as the most prevalent.[23] While the structural and measurement parts are estimated simultaneously, we separate the explanations for simplicity.

As for the measurement part, we retrieve all six latent variables by estimating the following system of equations:[24]

$$\begin{aligned}
\texttt{Operations} &= \alpha_{11} + \alpha_{12}\texttt{Human} + \epsilon_1 \\
\texttt{Techniques} &= \alpha_{21} + \alpha_{22}\texttt{Human} + \epsilon_2 \\
\texttt{Recipes} &= \alpha_{31} + \alpha_{32}\texttt{Human} + \epsilon_3 \\
\texttt{Ingredients} &= \alpha_{41} + \alpha_{42}\texttt{Human} + \epsilon_4 \\
\texttt{Innovation} &= \alpha_{51} + \alpha_{52}\texttt{Talent} + \epsilon_5 \\
\texttt{Adaptation} &= \alpha_{61} + \alpha_{62}\texttt{Talent} + \epsilon_6 \\
\texttt{Mutation} &= \alpha_{71} + \alpha_{72}\texttt{Talent} + \epsilon_7 \\
\texttt{Googleclick} &= \alpha_{81} + \alpha_{82}\texttt{Fame} + \epsilon_8 \\
\texttt{Membership} &= \alpha_{91} + \alpha_{92}\texttt{Fame} + \epsilon_9 \\
\texttt{Review} &= \alpha_{101} + \alpha_{102}\texttt{Brand} + \epsilon_{10} \\
\texttt{Googlehit} &= \alpha_{111} + \alpha_{112}\texttt{Brand} + \epsilon_{11} \\
\texttt{Stars} &= \alpha_{121} + \alpha_{122}\texttt{Expert} + \epsilon_{12} \\
\texttt{Forks} &= \alpha_{131} + \alpha_{132}\texttt{Expert} + \epsilon_{13} \\
\texttt{Toques} &= \alpha_{141} + \alpha_{142}\texttt{Expert} + \epsilon_{14} \\
\texttt{Triprate} &= \alpha_{151} + \alpha_{152}\texttt{Customer} + \epsilon_{15} \\
\texttt{Facerate} &= \alpha_{161} + \alpha_{162}\texttt{Customer} + \epsilon_{16} \\
\texttt{Googlerate} &= \alpha_{171} + \alpha_{172}\texttt{Customer} + \epsilon_{17}
\end{aligned} \tag{1}$$

The structural part of our SEM model for model 1 includes the following 6 equations:

$$\begin{aligned}
\texttt{Human} &= \beta_1 + \gamma_1\texttt{Talent} + \gamma_2\texttt{Size} + \varepsilon_1 \\
\texttt{Expert} &= \beta_2 + \gamma_3\texttt{Human} + \gamma_4\texttt{Seniority} + \varepsilon_2 \\
\texttt{Brand} &= \beta_3 + \gamma_5\texttt{Expert} + \gamma_6\texttt{Longevity} + \varepsilon_3 \\
\texttt{Fame} &= \beta_4 + \gamma_7\texttt{Expert} + \gamma_8\texttt{Seniority} + \varepsilon_4 \\
\texttt{Customer} &= \beta_5 + \gamma_9\texttt{Expert} + \gamma_{10}\texttt{Price} + \varepsilon_5 \\
\texttt{Price} &= \beta_6 + \gamma_{11}\texttt{Expert} + \gamma_{12}\texttt{Population} + \varepsilon_6
\end{aligned} \tag{2}$$

So, the complete set of hypotheses for the model 1 can be mapped to the following expected signs for the coefficients:

- H1a ($\texttt{Human}\rightarrow^{+}\texttt{Expert}$) implies $\gamma_3 > 0$;
- H2 ($\texttt{Expert}\rightarrow^{+}\texttt{Customer}$) implies $\gamma_9 > 0$;
- H3 ($\texttt{Expert}\rightarrow^{+}\texttt{Price}$) implies $\gamma_{11} > 0$;
- H4 ($\texttt{Expert}\rightarrow^{+}\texttt{Brand}$) implies $\gamma_5 > 0$;
- H5 ($\texttt{Expert}\rightarrow^{+}\texttt{Fame}$) implies $\gamma_7 > 0$;
- H6 ($\texttt{Seniority}\rightarrow^{+}\texttt{Expert}$) implies $\gamma_4 > 0$;
- H7 ($\texttt{Longevity}\rightarrow^{+}\texttt{Brand}$) implies $\gamma_6 > 0$;
- H8 ($\texttt{Talent}\rightarrow^{+}\texttt{Human}$) implies $\gamma_1 > 0$;
- H9 ($\texttt{Size}\rightarrow^{-}\texttt{Human}$) implies $\gamma_2 < 0$,
- H10 ($\texttt{Seniority}\rightarrow^{+}\texttt{Fame}$) implies $\gamma_8 > 0$;
- H11 ($\texttt{Price}\rightarrow^{-}\texttt{Customer}$) implies $\gamma_{10} < 0$,
- H12 ($\texttt{Population}\rightarrow^{+}\texttt{Price}$) implies $\gamma_{12} > 0$;

Conversely, the structural part of our SEM model for model 2 requires the following changes:

$$\begin{aligned}
\texttt{Human} &= \beta_1 + \gamma_1\texttt{Talent} + \gamma_2\texttt{Size} + \gamma_3\texttt{Expert} + \varepsilon_1 \\
\texttt{Expert} &= \beta_2 + \gamma_4\texttt{Seniority} + \varepsilon_2 \\
\texttt{Talent} &= \beta_7 + \gamma_{13}\texttt{Expert} + \varepsilon_7
\end{aligned} \tag{3}$$

So, the corresponding hypotheses can be mapped to the following alternative expected signs for the coefficients:

- H1b ($\texttt{Expert}\rightarrow^{+}\texttt{Human}$) implies $\gamma_3 > 0$;
- H1c ($\texttt{Expert}\rightarrow^{+}\texttt{Talent}$) implies $\gamma_{13} > 0$;

In the equation system (2) (which is referred to as model 1), all latent variables, except for `Talent`, are endogenous. This is because talent is considered a natural trait of chefs, something they are born with, which is difficult to change in the short term. In contrast, model 2 treats the variable `Talent` as a reflection of the chef's self-evaluation, which means it can be influenced by expert evaluation. Therefore, in model 2, the variable is no longer exogenous. Both models share the same endogenous observable variable, `Price`.

Coefficients are estimated via maximum likelihood (ML). Results are presented in tables and path diagrams.

4 | Empirical Analysis

We estimate the relationships of interest using the SEM approach detailed in the previous section. We show the results of the structural part of the model in Table 4 and Figure 3 for model 1 and in Table 5 and Figure 4 for model 2. The model's measurement section in Appendix C shows that all the latent variables significantly impact the observable measures. Figures 3 and 4 are path diagrams that represent the empirical counterparts of Figures 1 and 2. While continued arrows indicate significant relationships, dashed arrows indicate non-significant relationships. All coefficients are standardized. Standardized coefficients are transformed values derived from the original coefficients to express relationships between variables on a standardized scale. These coefficients, obtained by dividing the original coefficients by the standard deviation of the corresponding variable, facilitate the comparison

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 4 | Estimated coefficients of SEM structural equations of model 1.

Variable	Talent	Size	
Human	0.598***	−0.173*	
	(0.113)	(0.092)	
	Human	Seniority	
Expert	−0.09	0.343***	
	(0.139)	(0.121)	
	Expert	Longevity	
Brand	0.552***	0.219	
	(0.207)	(0.136)	
	Expert	Seniority	
Fame	0.775***	−0.192	
	(0.160)	(0.180)	
	Expert	Price	
Customer	0.509**	−0.291*	
	(0.215)	(0.172)	
	Expert	Population	Controls
Price	0.447***	0.129	Yes
	(0.121)	(0.082)	
N	108		

Note: The table shows ML estimates of the structural part of an SEM model to test Hypotheses 1a and 2–12. Robust standard errors are in parentheses. Values are rounded to the third digit.
*$p < 0.10$.
**$p < 0.05$.
***$p < 0.01$.

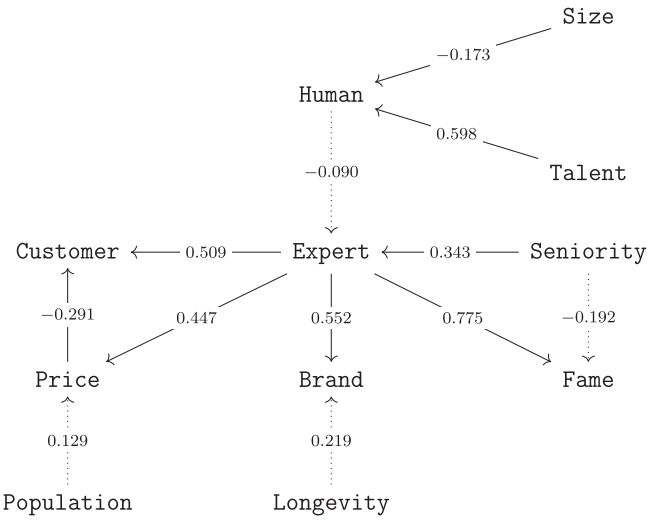

FIGURE 3 | Estimated structural paths of model 1. Estimated structural paths of model 1. Solid lines indicates a statistically significant relationship and dashed lines a non statistically significant relationship. Coefficients reported over the arrow indicate standardized estimated direct effects.

of relationship strengths across different variables within the model.

The empirical results of model 1 support all our hypotheses, except hypotheses H1a (the relationship Human→⁺Expert), H7 (Longevity→⁺Brand), H10 (Seniority→⁺Fame), and H12 (Population→⁺Price). In model 2, we obtain similar results, namely, all hypotheses, but H1b, H1c, H10, and H12 are supported. In this formulation of the model, the relationship between price and customers' evaluation (H11) remains negative, but it is slightly non-significant.

The post-estimation indicators evaluating the overall system of equations and individual equations indicate a noteworthy degree of explanatory efficacy for the endogenous variables within the systems of both models. Specifically, the chosen specifications explain a substantial part of the variance of the latent variables in the two models. RMSEAs falling within an acceptable range and the high coefficient of determination for the two model specifications attests to a substantial explanatory capacity: they indicate significant associations between observed and predicted values. Lastly, both systems adhere to stability conditions.

Table 4 and Figure 3 (for model 1) and Table 5 and Figure 4 (for model 2) show standardized direct effects. Direct effects measure how much a change in a variable impacts a dependent variable while keeping all other variables in the system constant. Thus, they are partial effects. However, considering total effects could be very interesting when analyzing a multivariate system of equations with more than one endogenous variable. Total effects measure a change in a dependent variable, allowing all variables in the system to vary. For example, considering Figure 3, Expert has a direct effect on Customer of 0.509. However, it also has an indirect effect of −0.130 (Expert) through Price. The total effect is thus the sum of the direct and indirect effects mediated by Price −0.379 (0.509 − 0.130). Tables 6 and 7 show all the total effects implicit in our system, for models 1 and 2, respectively. Notice that also total effects are standardized to facilitate comparisons. The variables that influence the system the most in both models through their direct and indirect effects are Expert, Talent, Size, and Seniority.

Our findings reveal intriguing insights into the distinctive features of fine-dining restaurants. Primarily, experts play a pivotal role akin to a *deus ex machina* within this market. This assertion is based on the relationships between their quality assessments and various factors involving stakeholders, such as chefs' renown, restaurant brands, customer reviews, and food prices. While some of these associations are not groundbreaking in empirical studies, our model consolidates and validates them, incorporating causality and potential feedback loops. Consequently, this enhances the reliability of prior findings. Further research on the central role of experts is needed to understand the origins of this result. This could involve analyzing the degree of experts' independence in their evaluations and determining whether an unobservable central variable—such as the actual quality of products and services—plays a dominant role in shaping their judgments.[25]

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 5 | Estimated coefficients of SEM structural equations of model 2.

Variable	Talent	Size	Expert
Human	0.620***	−0.174**	−0.103
	(0.100)	(0.087)	(0.136)
	Expert		
Talent	0.017		
	(0.186)		
	Seniority		
Expert	0.334***		
	(0.127)		
	Expert	Longevity	
Brand	0.565***	0.225*	
	(0.206)	(0.136)	
	Expert	Seniority	
Fame	0.781***	−0.194	
	(0.158)	(0.178)	
	Expert	Price	
Customer	0.496**	−0.281	
	(0.228)	(0.181)	
	Expert	Population	Controls
Price	0.434***	0.128	Yes
	(0.141)	(0.083)	
N	108		

Note: The table shows ML estimates of the structural part of an SEM model to test Hypotheses 1b, 1c, and 2–12. Robust standard errors are in parentheses. Values are rounded to the third digit.
*$p < 0.10$.
**$p < 0.05$.
***$p < 0.01$.

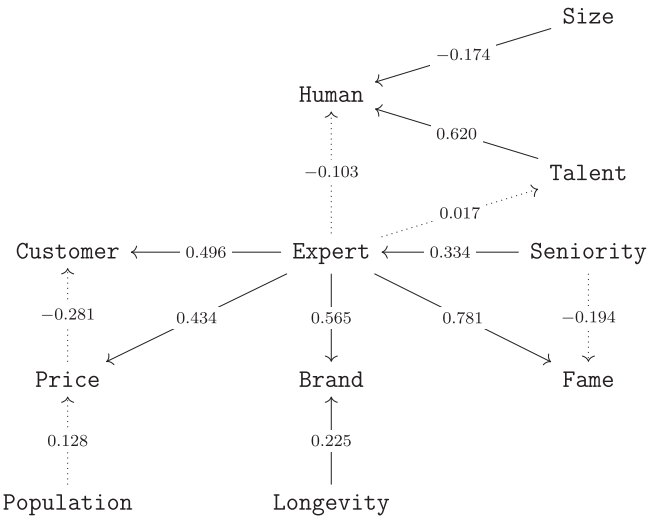

FIGURE 4 | Estimated structural paths of model 2. Estimated structural paths of model 2. Solid lines indicates a statistically significant relationship and dashed lines a non statistically significant relationship. Coefficients reported over the arrow indicate standardized estimated direct effects.

Simultaneously, our analysis highlights that the role of experts as the market's *dei ex machina* is predominantly observed on the "supply side," referring to restaurants functioning as firms providing high-quality food. This contrasts with its impact on the "creative side," which revolves around chefs as creative agents, the entire creative process, and the significance of inputs. This conclusion remains consistent regardless of the interpretation assigned to variables like Human and Talent–derived from self-evaluation responses in our survey. Whether considered as measures of actual human capital and talent or as self-evaluations influenced by expert opinions, these variables consistently distinguish between the two facets of the market.

This intriguing outcome prompts further exploration, particularly concerning the nature of experts' evaluations. Their assessments may be more reflective of how restaurants produce the cultural goods they serve rather than serving as a gauge of chefs' creative prowess. While this insight adds depth to our understanding, additional investigations are warranted to grasp its implications fully.

The analysis of model 2 reveals an interesting observation: established chefs in the Italian fine-dining sector appear to remain unaffected by expert evaluations when assessing their own human capital and talent. This discovery, to the best of our knowledge, introduces a new dimension to empirical investigations in the *haute cuisine* market.[26]

This outcome may be attributed to the chefs' self-evaluation process, which seems less susceptible to external influences such as evaluations from guides or other experts. Alternatively, chefs can accurately self-assess their talent and human capital. In this scenario, their self-evaluations align closely with the actual values of these attributes, making them unreceptive to external evaluations.

The implications of these findings prompt further exploration along this avenue. Additional investigations are warranted to delve deeper into the dynamics of chefs' self-evaluation and its potential impact on their perception of human capital and talent within the context of the haute cuisine market.

5 | Conclusions

The fine-dining restaurant sector overlaps with other areas, such as the food service and creative industry, and configures its products as luxury and cultural goods with complex quality. Several insider and outsider agents are active with different roles in this sector. Among insiders, there are chefs and experts, and among outsiders, the non-expert customers are the main ones. Understanding the relationships between their evaluation of quality and their choices is key to having a clear view of how this sector works.

In this paper, we empirically study how quality and price in this sector interact with chefs' characteristics and experts' evaluation, also considering other agents' actions, such as the electronic Word Of Mouth (eWOM) of non-expert consumers' evaluation

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE 6 | Estimated total effects in structural equations for model 1.

←	Human	Expert	Price	Talent	Size	Seniority	Longevity	Population
Human				0.598***	−0.173*			
Expert	−0.090			−0.054	0.016	0.343**		
Brand	−0.050	0.552***		−0.030	0.009	0.189**	0.219	
Fame	−0.070	0.775**		−0.042	0.012	0.074		
Customer	−0.034	0.379*	−0.291	−0.020	0.006	0.130		−0.038
Price	−0.040	0.447**		−0.024	0.007	0.153**		0.129

Note: The table reports the standardized total effects of the structural part of model 1. Values are rounded to the third digit.
*$p < 0.10$.
**$p < 0.05$.
***$p < 0.01$.

TABLE 7 | Estimated total effects in structural equations for model 2.

←	Human	Expert	Price	Talent	Size	Seniority	Longevity	Population
Human		−0.093		0.620***	−0.174**	−0.031		
Expert						0.334**		
Brand		0.565***				0.188**	0.225	
Fame		0.781**				0.066		
Customer		0.374	−0.281			0.125		−0.036
Price		0.434**				0.145*		0.128

Note: The table reports the standardized total effects of the structural part of model 2. Values are rounded to the third digit.
*$p < 0.10$.
**$p < 0.05$.
***$p < 0.01$.

and geographical and socio-economic characteristics of the places hosting the restaurants. This paper is the first attempt to quantitatively measure these relationships in a complex framework, using a methodology that allows for feedback among variables and can consider causality and reverse causality. We do so by using Italian data on Michelin-starred restaurants, from guides and surveys to starred chefs and other sources such as digital platforms with consumer reviews. We build a structural equations model to study the relationship between latent variables such as chefs' talent, fame, and human capital, restaurants' brand and market longevity, and experts' evaluation, testing a total of 14 hypotheses about relationships between them.

Experts act as *dei ex machina* in this sector, confirming the importance of restaurants' guides as gatekeepers. Their evaluation influences prices, customers' evaluation, the chef's fame, and the restaurant's brand. We also measure the importance of chefs' characteristics in influencing these evaluations, with repercussions on prices and customers' evaluations. Experts in the food industry evaluate the sector in two parts: one focuses on the chef's creativity and ingredient choices, while the other focuses on the restaurant as a business. The evaluation process is more influenced by the business aspect, and established chefs are not affected by experts' evaluations. Further research is needed to confirm these findings.

While this result is limited to established chefs, an interesting path for future research could investigate whether chefs entering the fine dining sector may be susceptible to external viewpoints, an intriguing aspect that remains unexplored in the existing literature to the best of our knowledge.

An intriguing aspect of fine-dining cuisine is its complexity, both in terms of quality and preparation. As the preparation becomes more complex, it takes more time to cook the food. Investigating how this affects the choices of consumers, similar to the research conducted by Ekelund and Watson (1991) on fast food and ethnic food, could be an interesting avenue for future research.

The study offers a detailed and nuanced perspective on the potential paths for the fine-dining market. This information can be useful for stakeholders such as chefs and guides who are interested in quality assessment and improvement. The existing paradigm in this market is similar to an advertising market, where guides hold a prominent position. This paradigm suggests that restaurants can benefit from understanding and emulating the strategies of higher-quality ones. However, an alternative paradigm could propose a shift towards more established review methods, such as the scientific publication reviewing system based on blind peer review.

Acknowledgements

Open access publishing facilitated by Universita degli Studi di Bologna, as part of the Wiley - CRUI-CARE agreement

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by Cochraneltalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Data Availability Statement

Research data are not shared.

Endnotes

[1] In 2019, fine dining was estimated to account for $476.74 billion and growing by 4.4% over the same period. Italian cuisine was worth €236 billion in 2019, representing 18% of the global full-service restaurant market and growing by 6.3% (Deloitte 2021). See Appendix B.1 for additional stylized facts about the fine dining industry.

[2] Chen and Peng (2018) suggested that the symbolic value of luxury goods such as *haute cuisine* restaurants is one of the main reasons why consumers purchase these goods, and they found that consumers' perceptions of the symbolic value of luxury restaurants positively affect their preferences towards luxury restaurants, in line with Bourdieu's idea of distinction (Bourdieu 1984).

[3] Henderson (2011) defined a celebrity chef as "someone with a professional background who enjoys a certain element of recognition domestically and possibly globally, unconfined to the world of expensive restaurants." As a result of their "celebrification," some of the most famous chefs became holders of a (human) brand, that is, their names (Giousmpasoglou et al. 2019), which can have an impact not only in influencing food cultures and consumption practices but also public policy (Phillipov and Gale 2020).

[4] For a general investigation of the evolution of restaurant research over the past decades, see Rejeb et al. (2023).

[5] According to Barrère et al. (2012), food is the culinary common, with recipes and ways of using natural resources that can be seen as shared resources. However, some foods are protected by designation (such as Protected Designation of Origin in the EU) that identifies their creation process, area of origin, and ingredients.

[6] Fine-dining restaurants are at the crossroad between creative and food service industries (Piano 2021), so one has to consider that the chefs are comparable to artists (Paris and Leroy 2014), as happens in the art market (Rosen 1981; Adler 1985) where many scholars have studied the relationship between artists' brand and their fame and talent (Candela et al. 2016; Angelini and Castellani 2019; Angelini et al. 2023).

[7] The fine-dining experts can process the information correctly as they accumulated enough educational capital to be capable of reading the complexity of fine dining quality and can spread information about their evaluation, similar to what is observed in the art market, where art experts play a crucial role in disseminating information about artworks and in shaping artists' reputation, together with prizes and awards (Ginsburgh 2003; Wijnberg 2003; Frey and Gallus 2017).

[8] Clarke et al. (2016) report a pilot study of how celebrity chefs have adopted and implemented social media, especially Pinterest, using the diffusion of innovations as a theoretical framework. They find that all the top 48 chefs adopted Facebook, followed closely by 47 chefs adopting Twitter and just 17 adopting Pinterest.

[9] In the economics of movies, several studies have examined the effect of user reviews relative to expert reviews on movie-looking decisions, showing that experts tend to be more critical but more consistent in their reviews than users but experts' reviews, even if there is no evidence that ratings of the most famous movie review aggregator affect box office performance (Basuroy et al. 2020; Nishijima et al. 2022). For a survey about the economics of the motion picture industry, see McKenzie (2023).

[10] In literature, there are many case studies on the most famous international chefs such as Ferran Adrià (Svejenova et al. 2007; Svejenova et al. 2010; Opazo 2012), Gordon Ramsay (Jones 2009), and René Redzepi (Messeni Petruzzelli and Savino 2014). Other case studies focused on Italian-starred chefs such as Moreno Cedroni and Davide Scabin (Slavich et al. 2014), Niko Romito (Presenza and Messeni Petruzzelli 2019a; 2019b), and Italian restaurants awarded with three Michelin stars such as Al Sorriso, Dal Pescatore, Le Calandre, La Pergola, and Da Vittorio (Messeni Petruzzelli and Savino 2015). Within this framework, Goodsir et al. (2014) focus on the critical perspective of Peter Calder, one of New Zealand's most well-known restaurant reviewers, to understand the importance of restaurant critics.

[11] Appendix A describes the guides covering Italian restaurants that we will use in our empirical analysis.

[12] On a side note, Gergaud et al. (2020) point out that human capital is partially transferable between mentors and their apprentices.

[13] See Angelini et al. (2023) for several definitions of artists' talent, which can be applied to chefs too.

[14] All the chefs we analyze in this paper can be considered established chefs since they all received at least 1 Michelin star between 2010 and 2019.

[15] Such a hypothesis has been investigated and partially confirmed within the academic world (Bosch and Wilbert 2023).

[16] Indeed, from 2010, *haute cuisine* has been recognized as a creative and cultural industry (Abbate et al. 2019). However, only French gastronomic meals are part of the UNESCO Representative List of the Intangible Cultural Heritage of Humanity.

[17] Note that if larger markets would allow larger investments in the human capital of head chefs and if the fixed cost of the human capital dominated the impact of the marginal costs, we could see the fragmentation in restaurants decreases as their markets size increases (Berry and Waldfogel 2010).

[18] See Table 1a in Angelini et al. (2023).

[19] Rationing by waiting lists is alternative to equilibrium prices for demand rationing (Oberholzer-Gee 2006).

[20] See Appendix B.3 for further information about the questionnaire design.

[21] Piano (2021) shows that quality, measured by the number of Michelin stars, pairs with higher levels of chef ownership.

[22] It is worth noting that this measure could potentially reflect the impact of television on fame, as certain programs like MasterChef, which feature renowned chefs as hosts, are frequently covered by various websites and blogs. To the best of our knowledge, there have been no studies conducted on the role of TV show exposure on fame. However, we do recognize other analyses that have explored the impact of tense situations in these programs, where performance may be influenced by fear of failure (Chong and Chong 2023) or the existence of racial bias in participant evaluations (Chong and Chong 2022).

[23] Various software packages are commonly utilized for SEM estimation, with popular options including LISREL, R, and Stata (our preferred software).

[24] Notice that the measurement part is the same for the two models.

[25] We thank an anonymous reviewer for this suggestion.

[26] We are indebted to an anonymous referee for suggesting to investigate possible feedback going from experts' evaluation to chefs' self-evaluation of talent and human capital.

[27] Several features made the Michelin guide a signal of reliable and trustworthy advice. Despite its prominent role among gastronomic guides, the Michelin guide has been criticized in several aspects. See Lane (2013).

[28] In our analysis, we standardized the pre-2017 toques in the range of 0–5 to make the two periods' evaluations comparable.

[29] In our sample, only three chefs appear in six restaurants since we have considered the possibility of a chef changing a restaurant during the period. Note that we collected the latest evaluations of the guides

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

published in 2019 for 2018, that is, the latest evaluations available in 2011–2019 for restaurants that have changed chefs or ceased to operate in that period.

[30] The questionnaire is available on request from the authors.

References

Abbate, T., A. Presenza, F. Cesaroni, M. Meleddu, and L. Sheehan. 2019. "Creativity and Innovation in Haute Cuisine Restaurants: Factors Affecting the Creative Process of Michelin-Rated Chefs." *Sinergie* 37, no. 1: 109–124.

Adler, M. 1985. "Stardom and Talent." *American Economic Review* 75, no. 1: 208–212.

Allen, H., and M. Mac Con Iomaire. 2017. "Secrets of a Head Chef: Exploring Factors Influencing Success in Irish Kitchens." *Journal of Culinary Science & Technology* 15, no. 3: 187–222.

Angelini, F., and M. Castellani. 2019. "Cultural and Economic Value: A Critical Review." *Journal of Cultural Economics* 43: 173–188.

Angelini, F., M. Castellani, and P. Pattitoni. 2023. "Artist Names as Human Brands: Brand Determinants, Creation and Co-Creation Mechanisms." *Empirical Studies of the Arts* 41, no. 1: 80–107.

Aubke, F. 2014. "Creative Hot Spots: A Network Analysis of German Michelin-Starred Chefs." *Creativity and Innovation Management* 23, no. 1: 3–14.

Balazs, K. 2002. "Take one Entrepreneur: The Recipe for Success of France's Great Chefs." *European Management Journal* 20, no. 3: 247–259.

Barrère, C., Q. Bonnard, and V. Chossat. 2012. "Food, Gastronomy and Cultural Commons." In *Cultural Commons: A New Perspective on the Production and Evolution of Cultures*, edited by E. E. Bertacchini, G. Bravo, M. Marrelli, and W. Santagata, 129–150. Edward Elgar Publishing.

Basuroy, S., A. S. Ravid, R. T. Gretz, and B. J. Allen. 2020. "Is Everybody an Expert? An Investigation Into the Impact of Professional Versus User Reviews on Movie Revenues." *Journal of Cultural Economics* 44, no. 1: 57–96.

Baumert, T., and M. M. de Obesso. 2021. "Brand Antiquity and Value Perception: Are Customers Willing to Pay Higher Prices for Older Brands?."*Journal of Business Research* 123: 241–254.

Berry, S., and J. Waldfogel. 2010. "Product Quality and Market Size." *Journal of Industrial Economics* 58, no. 1: 1–31.

Bosch, J., and J. Wilbert. 2023. "The Impact of Social Comparison Processes on Self-Evaluation of Performance, Self-Concept, and Task Interest." *Frontiers in Education* 8: 1033488.

Bourdieu, P. 1984. *Distinction: A Social Critique of the Judgement of Taste*. Routledge.

Bryant, W., and D. Throsby. 2006. "Creativity and the Behaviour of Artists." In *Handbook of the Economics of Art and Culture*, edited by V. Ginsburgh and D. Throsby, 507–528. Amsterdam: North Holland.

Cameron, S. 1995. "On the Role Of Critics in the Culture Industry." *Journal of Cultural Economics* 19: 321–331.

Candela, G., M. Castellani, P. Pattitoni, and F. M. Di Lascio. 2016. "On Rosen's and Adler's Hypotheses in the Modern and Contemporary Visual Art Market." *Empirical Economics* 451, no. 1: 415–437.

Chen, A., and N. Peng. 2018. "Examining Consumers' Intentions to Dine at Luxury Restaurants While Traveling." *International Journal of Hospitality Management* 71: 59–67.

Chong, B. Z., and M. Z. Chong. 2022. "Familiarity and Race Bias: Evidence FROM A TELEvision Competition (and the Case for More Women Judges?)." *B.E. Journal of Economic Analysis & Policy* 22, no. 2: 389–398.

Chong, A., and M. Z. Chong. 2023. "Feeling the Heat? Fear of Failure and Performance." *Kyklos* 76, no. 1: 3–17.

Chossat, V., and O. Gergaud. 2003. "Expert Opinion and Gastronomy: The Recipe for Success." *Journal of Cultural Economics* 27, no. 2: 127–141.

Clarke, T. B., J. Murphy, and J. Adler. 2016. "Celebrity Chef Adoption and Implementation of Social Media, Particularly Pinterest: A Diffusion of Innovations Approach." *International Journal of Hospitality Management* 57: 84–92.

Clauzel, A., H. Delacour, and S. Liarte. 2019. "When Cuisine Becomes Less Haute: The Impact of Expert Ratings on Consumers' Legitimacy Judgments." *Journal of Business Research* 105: 395–404.

Cotter, M., and W. Snyder. 1998. "How Guide Books Affect Restaurant Behavior." *Journal of Restaurant & Foodservice Marketing* 3, no. 1: 69–75.

Craig, L. A., J. Treme, and T. J. Weiss. 2023. "The (Menu) Price Effect of a Michelin Star." *Applied Economics Letters*. https://doi.org/10.1080/13504851.2023.2276076.

Crook, T. R., S. Y. Todd, J. G. Combs, D. J. Woehr, and D. J. J. Ketchen. 2011. "Does Human Capital Matter? A Meta-Analysis of the Relationship Between Human Capital and Firm Performance." *Journal of Applied Psychology* 96, no. 3: 443.

Debenedetti, S. 2006. "The Role of Media Critics in the Cultural Industries." *International Journal of Arts Management* 8, no. 3: 30–42.

Deloitte. 2021. "Foodservice Market Monitor." Retrieved February, 10 2022. https://www2.deloitte.com/content/dam/Deloitte/it/Documents/consumer-business/Deloitte_FoodserviceMarketMonitor.pdf.

Drew, K. 1987. "The Work and Education of Chefs." *International Journal of Hospitality Management* 6, no. 1: 52–55.

Durand, R., H. Rao, and P. Monin. 2007. "Code and Conduct in French Cuisine: Impact of Code Changes on External Evaluation." *Strategic Management Journal* 28: 455–472.

Ehrmann, T., B. Meiseberg, and C. Ritz. 2009. "Superstar Effects in Deluxe Gastronomy—An Empirical Analysis of Value Creation in German Quality Restaurants." *Kyklos* 62, no. 4: 526–541.

Ekelund, R. B., and J. K. Watson. 1991. "Restaurant Cuisine, Fast Food and Ethnic Edibles: An Empirical Note on Household Meal Production." *Kyklos* 44, no. 4: 613–627.

Eren, S., and O. Güldemir. 2017. "Factors Affecting the Success of Internationally Awarded Turkish Chefs." *Journal of Human Sciences* 14, no. 3: 2409–2416.

Fang, L. 2022. "The Effects of Online Review Platforms on Restaurant Revenue, Consumer Learning, and Welfare." *Management Science* 68, no. 11: 7793–8514.

Feruzzi, M. 2017. "Il valore degli chef fenomeno ed il taste tourism." http://www.jfc.it/ricerche-istituzionali/. JFC Tourism & Management.

Fogarty, J. J. 2012. "Expert Opinion and Cuisine Reputation in the Market for Restaurant Meals." *Applied Economics* 44, no. 31: 4115–4123.

Folloni, G., and G. Vittadini. 2010. "Human Capital Measurement: A Survey." *Journal of Economic Surveys* 24, no. 2: 248–279.

Frey, B. S., and J. Gallus. 2017. "Towards an Economics of Awards." *Journal of Economic Surveys* 31, no. 1: 190–200.

Ganzaroli, A., I. De Noni, and P. van Baalen. 2017. "Vicious Advice: Analyzing the Impact of TripAdvisor on the Quality of Restaurants as Part of the Cultural Heritage of Venice." *Tourism Management* 61: 501–510.

Garcia-del-Barrio, P., and F. Pujol. 2007. "Hidden Monopsony Rents in Winner-Take-All Markets—Sport and Economic Contribution of Spanish Soccer Players." *Managerial and Decision Economics* 28, no. 1: 57–70.

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Gergaud, O., L. M. Guzman, and V. Verardi. 2007. "Stardust Over Paris Gastronomic Restaurants." *Journal of Wine Economics* 2, no. 1: 24–39.

Gergaud, O., H. Schumacher, V. Smeets, and F. Warzynski. 2020. "A French Recipe to Become a Top Chef: Assortative Matching and Gradual Human Capital Accumulation in Creative Industries." Mimeo.

Gergaud, O., V. Smeets, and F. Warzynski. 2011. "Learning by Cooking and Reputation Building: A French Recipe to Become a Top Chef." AAWE Working Paper No. 81.

Gergaud, O., K. Storchmann, and V. Verardi. 2015. "Expert Opinion and Product Quality: Evidence From New York City Restaurants." *Economic Inquiry* 53, no. 2: 812–835.

Ginsburgh, V. 2003. "Awards, Success and Aesthetic Quality in the Arts." *Journal of Economic Perspectives* 17, no. 2: 99–111.

Ginsburgh, V., A.-S. Radermecker, and D. Tommasi. 2019. "The Implicit Value of Art Experts: The Case of Klaus Ertz and Pieter Brueghel the Younger." *Journal of Economic Behavior & Organization* 159: 36–50.

Giousmpasoglou, C., L. Brown, and J. Cooper. 2019. "The Role of the Celebrity Chef." *International Journal of Hospitality Management* 85: 102358.

Gomez, M., I. Bouty, and C. Drucker-Godard. 2003. "Developing Knowing in Practice: Behind the Scene of Haute Cuisine." In *Knowing in Organizations: A Practice-Based Approach*, edited by D. Nicolini, S. Gherardi, and D. Yanow, 100–125. Armonk, NY: M. E. Sharpe.

Goode, R. B. 1959. "Adding to the Stock of Physical and Human Capital." *American Economic Review* 49, no. 2: 147–155.

Goodsir, W., L. Neill, D. Williamson, and A. Brown. 2014. "Journalistic Integrity or Arbiter of Taste? The Case Study of Restaurant Critic Peter Calder." *Journal of Hospitality and Tourism Management* 21: 127–133.

Harrington, R. J., S. G. Fauser, M. C. Ottenbacher, and A. Kruse. 2013. "Key Information Sources Impacting Michelin Restaurant Choice." *Journal of Foodservice Business Research* 16, no. 3: 219–234.

Hegarty, J. A., and G. B. O'Mahony. 2001. "Gastronomy: A Phenomenon of Cultural Expressionism and an Aesthetic for Living." *International Journal of Hospitality Management* 20, no. 1: 3–13.

Henderson, J. C. 2011. "Celebrity Chefs: Expanding Empires." *British Food Journal* 113, no. 5: 613–624.

Jones, M. T. 2009. "A Celebrity Chef Goes Global: The Business of Eating." *Journal of Business Strategy* 30, no. 5: 14–23.

Kim, W. G., J. J. Li, and R. A. Brymer. 2016. "The Impact of Social Media Reviews on Restaurant Performance: The Moderating Role of Excellence Certificate." *International Journal of Hospitality Management* 55: 41–51.

Lane, C. 2013. "Taste Makers in the "Fine-Dining" Restaurant Industry: The Attribution of Aesthetic and Economic Value by Gastronomic Guides." *Poetics* 41, no. 4: 342–365.

Laukkanen, T., S. Tuominen, H. Reijonen, and S. Hirvonen. 2016. "Does Market Orientation Pay Off Without Brand Orientation? A Study of Small Business Entrepreneurs." *Journal of Marketing Management* 32, no. 7–8: 673–694.

Leone, L. 2020. "The Ratatouille Paradox. An Inductive Study of Creativity in Haute Cuisine." *Technovation* 92–93: 102060.

Liu, C.-R., T. M. Kuo, Y.-C. Wang, Y.-J. Shen, S.-P. Chen, and J.-W. Hong. 2022. "Perceived Luxurious Values and Pay a Price Premium for Michelin-Starred Restaurants: A Sequential Mediation Model With Self-Expansion and Customer Gratitude." *International Journal of Hospitality Management* 103: 103185.

McKenzie, J. 2023. "The Economics of Movies (Revisited): A Survey of Recent Literature." *Journal of Economic Surveys* 37, no. 2: 480–525.

Menger, P.-M. 2014. *The Economics of Creativity. Art and Achievement Under Uncertainty*. Harvard University Press.

Messeni Petruzzelli, A., and T. Savino. 2014. "Search, Recombination, and Innovation: Lessons From Haute Cuisine." *Long Range Planning* 47, no. 4: 224–238.

Messeni Petruzzelli, A., and T. Savino. 2015. "Reinterpreting Tradition to Innovate: The Case of Italian Haute Cuisine." *Industry and Innovation* 22, no. 8: 677–702.

Nishijima, M., M. Rodrigues Jr, and T. L. D. Souza. 2022. "Is Rotten Tomatoes Killing the Movie Industry? A Regression Discontinuity Approach." *Applied Economics Letters* 29, no. 13: 1187–1192.

Oberholzer-Gee, F. 2006. "A Market for Time Fairness and Efficiency in Waiting Lines." *Kyklos* 59, no. 3: 427–440.

Olders, P. 2014. "Acquired Taste or Acquired Knowledge? Experience, Talent and Popularity in Creating French Superstar Cuisine." In *DRUID Society Conference 2014*.

Onorati, M. G., and P. Giardullo. 2020. "Social Media as Taste Re-Mediators: Emerging Patterns of Food Taste on TripAdvisor." *Food, Culture & Society* 23, no. 3: 347–365.

Opazo, M. P. 2012. "Discourse as Driver of Innovation in Contemporary Haute Cuisine: The Case of elBulli Restaurant." *International Journal of Gastronomy and Food Science* 1, no. 2: 82–89.

Paris, T., and F. Leroy. 2014. "Managing Transition in an Artistic Company With Entrepreneurial Management: A Case Study of Groupe Bernard Loiseau." *International Journal of Arts Management* 16, no. 2: 42–54.

Phillipov, M., and F. Gale. 2020. "Celebrity Chefs, Consumption Politics and Food Labelling: Exploring the Contradictions." *Journal of Consumer Culture* 20, no. 4: 400–418.

Piano, E. E. 2021. "Organizing High-End Restaurants." *Economics of Governance* 22: 165–192.

Presenza, A., T. Abbate, G. L. Casali, and M. Perano. 2017. "An Innovative Approach to the Intellectual Property in Haute Cuisine." *International Journal of Hospitality Management* 65: 81–88.

Presenza, A., and A. Messeni Petruzzelli. 2019. "Haute Cuisine and Country of Origin." *British Food Journal* 122, no. 1: 136–150.

Presenza, A., and A. Messeni Petruzzelli. 2019. "Investigating Business Model Innovation in Haute Cuisine. Role and Behavior of Chef-Entrepreneurs." *International Journal of Hospitality Management* 82: 101–111.

Rejeb, A., A. Abdollahi, K. Rejeb, and M. M. Mostafa. 2023. "Tracing Knowledge Evolution Flows in Scholarly Restaurant Research: A Main Path Analysis." *Quality & Quantity* 57: 2183–2209.

Richardson, P. S., A. S. Dick, and A. K. Jain. 1994. "Extrinsic and Intrinsic Cue Effects on Perceptions of Store Brand Quality." *Journal of Marketing* 58, no. 4: 28–36.

Rosen, S. 1981. "The Economics of Superstars." *American Economic Review* 71, no. 5: 845–858.

Rosen, S. 1987. "Human capital." In *The New Palgrave: A Dictionary of Economics*, edited by J. Eatwell, M. Milgate, and P. Norman, 681–689. London and Basingstoke: Macmillan Press.

Scheidt, S., C. Gelhard, and J. Henseler. 2020. "Old Practice, but Young Research Field: A Systematic Bibliographic Review of Personal Branding." *Frontiers in Psychology* 11: 1809.

Slavich, B., R. Cappetta, and S. Salvemini. 2014. "Creativity and the Reproduction of Cultural Products: The Experience of Italian Haute Cuisine Chefs." *International Journal of Arts Management* 16, no. 2: 29–41.

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

Snyder, W., and M. Cotter. 1998. "The Michelin Guide and Restaurant Pricing Strategies." *Journal of Restaurant & Foodservice Marketing* 3, no. 1: 51–67.

Stierand, M., V. Dörfler, and P. Lynch. 2008. "Haute Cuisine Innovations: The Role of the Master–Apprentice Relationship." In *British Academy of Management Annual Conference 2008*.

Surlemont, B., D. Chantrain, F. Nlemvo, and C. Johnson. 2005. "Revenue Models in Haute Cuisine: An Exploratory Analysis." *International Journal of Contemporary Hospitality Management* 17, no. 4: 286–301.

Surlemont, B., and C. Johnson. 2005. "The Role of Guides in Artistic Industries: The Special Case of the "Star System" in the Haute-Cuisine Sector." *Managing Service Quality* 15, no. 6: 577–590.

Svejenova, S., C. Mazza, and M. Planellas. 2007. "Cooking Up Change in Haute Cuisine: Ferran Adrià as an Institutional Entrepreneur." *Journal of Organizational Behavior* 28, no. 5: 539–561.

Svejenova, S., M. Planellas, and L. Vives. 2010. "An Individual Business Model in the Making: A Chef's Quest for Creative Freedom." *Long Range Planning* 43, no. 2-3: 408–430.

Throsby, D. 2001. *Economics and Culture*. Cambridge: Cambridge University Press.

Towse, R. 2001. "Partly for the Money: Rewards and Incentives to Artists." *Kyklos* 54, no. 2/3: 473–490.

Towse, R. 2006. "Human Capital and Artists' Labour Markets." In *Handbook of the Economics of the Arts and Culture*, edited by V. Ginsburgh, and D. Throsby, 865–894. Amsterdam: Elsevier.

Towse, R. 2010. "Creativity, Copyright and the Creative Industries Paradigm." *Kyklos* 63, no. 3: 461–478.

Waldfogel, J. 2020. "Dining Out as Cultural Trade." *Journal of Cultural Economics* 44, no. 2: 309–338.

Wijnberg, N. M. 2003. "Awards." In *A Handbook of Cultural Economics*, edited by R. Towse, 63–66. Cheltenham: Edward Elgar Publishing.

Yang, W. 2018. "Star Power: The Evolution of Celebrity Endorsement Research." *International Journal of Contemporary Hospitality Management* 30, no. 1: 389–415.

Yi, S., J. Zhao, and H.-W. Joung. 2018. "Influence of Price and Brand Image on Restaurant Customers' Restaurant Selection Attribute." *Journal of Foodservice Business Research* 21, no. 2: 200–217.

Zopiatis, A. 2010. "Is It Art or Science? Chef's Competencies for Success." *International Journal of Hospitality Management* 29, no. 3: 459–467.

Appendix A

The Italian Guides

In this section, we present the guides we used in our dataset.

Michelin

Michelin guide is based on the famous Red Stars and is the most important guide in the world, covering over 15 European countries with the same restaurant ranking system. Since the 2000s, Michelin has expanded outside Europe, publishing guides for the United States, Japan, and other Asian countries. Michelin's quality ranking system is organized along several attributes, such as cuisine quality and comfort. Regarding cuisine quality, Michelin's ranking is based on the quality of the ingredients, mastery in controlling flavors and cooking techniques, chef's personality and creativity, cooking regularity, and consistency in the various tests. This ranking ranges from no star to three stars. One star indicates very good restaurants in their categories, a two-star rating means an excellent-cooking restaurant worth a detour, and a three-star rating means an exceptional cuisine worth a special journey. In addition to the star ranking system, the Michelin Guide also reviews restaurants that did not obtain a star but are worth visiting because of the quality of their food through the use of two symbols: the Big Gourmand and the Plate. Recently, Michelin has introduced the Green Star as an annual award highlighting restaurants at the forefront of the industry regarding their sustainable practices.[27]

Espresso's Ristoranti d'Italia

Ristoranti d'Italia by L'Espresso is a guide founded in December 1978 by Federico Umberto d'Amato and then directed by the gastronomic journalists Edoardo Raspelli and Enzo Vizzari. L'Espresso's Ristoranti d'Italia follows the evaluation method of the French guide Gault & Millau. Over 2000 restaurants, trattorias, and inns have been judged and voted on by the inspectors of this guide. Still, only 800 top restaurants are awarded the "toques," the symbol representing the level of quality, ranging from 0 to 4 up to 2017. As for the evaluation before 2017, the maximum score was 20, and the best restaurants, reaching a score from 19 to 20, were awarded four toques. Three torques were assigned to the restaurants with a score of 17 or 18, two torques to those with 15 or 16 points, and one torque to those with 13 or 14 points. Restaurants above 10/20 were awarded a "good cuisine" badge but no toques. Therefore, the minimum score to enter the guide was 10/20. The threshold of excellence was 13/20 for those restaurants that offered excellent cuisine but lacked great inventions. Above 15 points, restaurants offered innovative cuisine, while above 17 points, there were only great restaurants. From 19 points, we have only the best restaurants with leaders and master chefs. In October 2007, Enzo Vizzari published a decalogue for the new Italian cuisine with the criteria that the guide would have followed to evaluate the quality of the restaurants. In 2017, the guide introduced the five toques as the highest restaurant rating, abolishing the score out of 20. Starting from the 40th edition of the guide, the Golden toques were awarded to the restaurants that have made the history of Italian gastronomy in recent years.[28]

Gambero Rosso Ristoranti d'Italia

Gambero Rosso Ristoranti d'Italia is a guide started in November 1990 thanks to the gastronomic experts Francesco Arrigoni, Stefano Bonilli, and Daniele Cernilli. Since the first year of publication, a complex evaluation system was introduced, consisting of the inspectors' evaluation of the cooking quality and other restaurants' features, such as the cellar, the service, and the environment. These latter features were not evaluated in other guides before. The greatest weight was assigned to the kitchen (up to 60 points), while up to 20 points were assigned to the cellar, up to 10 to the service, and up to 10 to the environment. In some cases, an extra score was added to the evaluation limit. This bonus was an index of pleasantness assigned to various factors (such as the owner's kindness, the place's extreme pleasantness, and the overall atmosphere) whose value could vary from 1 to 5 points. The best restaurants were distinguished by one, two, or three forks, depending on the degree of excellence: 70 points were the minimum threshold for obtaining a fork, 80 points to get the second fork, and 90 points were needed to get the third fork. In 1991, only around a thousand restaurants passed the inspectors' examination, while nowadays, there are almost 2500 venues reviewed. Since 2013, the guide has also rewarded breweries, ethnic restaurants, wine bars, and trattorias with ratings ranging from one to three jugs, globes, bottles, and prawns, respectively.

Appendix B

Data and Questionnaires

This section presents some stylized facts on the Italian fine dining sector, the data sources, and the questionnaire design.

B.1 | Stylized Facts About the Fine Dining Sector

In 2016, Feruzzi (2017) estimated the economic value of a starred chef for Italian restaurants, considering both the economic externalities locally generated in Italy and restaurant revenues. From the first point of view, about 6318 customers visited a starred restaurant in 2016, of which 1015 were foreign customers and 870 were Italian guests staying at least one night in the destination of the restaurant. Being the average overnight, equal to 1.2 and 1.7 for foreign and Italian customers,

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

each starred restaurant generated about 2770 overnight stays in its destination. As regards the restaurant revenues for the main restaurant business (excluding the catering and banqueting), the average expenditure of a customer in these restaurants was equal to 112.00 euros for restaurants with one star, 178.00 euros for restaurants with two stars, and 243.80 euros for restaurants with three stars. The average revenues of the three groups of restaurants were 708,247.80 euros, 1,124,604.00 euros, and 1,540,328.00 euros, respectively. In 2016, the total revenues of 334 starred restaurants in Italy were 259 million Euros. The total expenditure of tourists visiting a starred restaurant during their trips was 282 million euros. The value brand for a destination hosting a three-starred restaurant with a famous chef was between 76 and 214 million Euros. The value brand for a destination hosting a two-starred restaurant with an emerging chef has been estimated between 7 and 32 million euros. The value brand for a destination hosting a one-starred restaurant with a rising chef has been estimated between 3 and 12 million euros. Finally, obtaining the first star is worth about 212,000 euros for a restaurant without a star, with an increase in turnover of 53.2%, while the increase in turnover for the second and third star would be 18.7% and 25.6%, respectively.

B.2 | Data Sources

Our information comes from three Italian restaurant guides (Michelin Italy, Gambero Rosso Restaurants, and Ristoranti d'Italia L'Espresso), from three websites of customers' reviews (Facebook, Google, and Tripadvisor), from restaurants, chefs' websites, and restaurants and chefs' memberships (Relais & ChÃ%teaux: Boutique hotels and gourmet restaurants, JRE-Jeunes Restaurateurs, AIAG - Associazione Italiana Ambasciatori del Gusto, CHIC - Charming Italian Chef, Le Soste). We build our dataset with personal information about chefs on the web, such as biographies and interviews (Identitagolose.it, Alimentipedia.it, Dissapore.com, scattidigusto.it, reportergourmet.com, etc.). Furthermore, in 2019, we surveyed by administering a questionnaire to a sample of over 100 chefs, and we collected data by Google search on the names of chefs and restaurants to estimate their digital exposure (Garcia-del-Barrio and Pujol 2007; Candela et al. 2016; Angelini et al. 2023). In particular, we selected 107 top chefs working in 108 starred restaurants reviewed by expert guides and users of social media.[29] To complete our dataset, we also collected data from ISTAT (e.g., tourist arrivals and inhabitants per Italian province in 2011–2019).

In 2019, Italian restaurants with three stars were 10, those with two stars were 39, and those with one star were 318, while in our sample, we have two restaurants with three stars, 22 with two stars, and 84 with one star. Regarding the distribution of starred restaurants in the Italian territory, in 2019, they were located in all 20 Italian regions. Following the Nomenclature of Territorial Units for Statistics (NUTS), we aggregated all Italian regions in 5 macroregions following NUTS 1 level, so in North West (NW), there were 113 restaurants, in North East (NE), there were 96 restaurants, in Center-Center (CC), there were 72 restaurants, in South-South (SS), there were 61 restaurants, and in Insular (IN), there were 19 restaurants. In our sample, only 17 regions are represented (small regions such as Valle d'Aosta, Umbria, and Basilicata are excluded). The distribution of the starred restaurants over the five macroregions is the following: 28 restaurants in NW, 28 restaurants in NE, 25 restaurants in CC, 18 restaurants in SS, and eight restaurants in IN.

B.3 | Questionnaire Design

Through the administration of our questionnaire, we wanted to find out the skills and competencies of the chefs as well as the chefs' intentions and motivations using a comparative self-assessment process. Furthermore, we aimed to extract the chefs' choices, such as chefs' education and experiences (Balazs 2002; Zopiatis 2010; Allen and Mac Con Iomaire 2017). The final objective of the questionnaire was to identify valuable measures to reconstruct the chefs' creative talent and human capital. For this reason, the questionnaire was divided into three sections. In the first section, we asked the chefs to self-evaluate their creative talent compared to the other starred chefs along four dimensions: innovation, mutation, adaptation, and imitation. Thanks to their answers, we have constructed measures of a chef's talent as self-assessed creativity.

The second section of the questionnaire was dedicated to self-evaluating the chef's technical (culinary-specific) competencies, interpersonal and communication skills, and professional capacity compared to the other starred chefs. This part of the survey was aimed at building measures of a chef's human capital as self-assessed knowledge.

The third section collected some general information about the chefs' education, training, and job experiences to check the reliability of public information.

Direct interviews with a representative sample of 108 Italian-starred chefs were conducted in the autumn-winter and spring-summer seasons of 2019. We interviewed the chefs using computer-assisted telephone interviewing (CATI), so the interviewer could educate the respondents on the importance of timely and accurate data, following a script provided by a software application. In addition, the interviewer annotated the degree of comprehension, interest, and facility in answering questions (the level of comprehension and interest was high, and the answers were easy enough). Each interview took an average of 15 min.[30]

Appendix C

Additional Tables

Table A1 reports the measurement part of the model, as in Equation (1), estimated under the hypotheses of model 1. Table A2 reports the same measurement part of the model, estimated under the hypotheses of model 2.

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE A1 | Estimated coefficients of the SEM measurement equations in model 1.

Measure	Constant	Human
Operations	6.192***	0.853***
	(0.734)	(0.043)
Techniques	5.694***	0.798***
	(0.695)	(0.055)
Recipes	5.492***	0.653***
	(0.571)	(0.069)
Ingredients	5.797***	0.746***
	(0.659)	(0.052)
Measure	Constant	Talent
Innovations	4.496***	0.538***
	(0.234)	(0.101)
Adaptation	4.391***	0.707***
	(0.293)	(0.084)
Mutation	4.156***	0.874***
	(0.402)	(0.069)
Measure	Constant	Fame
Googleclick	5.771***	0.584***
	(0.952)	(0.141)
Membership	0.547	0.598***
	(1.039)	(0.175)
Measure	Constant	Brand
Review	8.421***	0.463***
	(1.055)	(0.155)
Googlehit	3.104***	0.623***
	(0.523)	(0.162)
Measure	Constant	Expert
Stars	0.345	0.702***
	(0.941)	(0.113)
Forks	3.262***	0.403***
	(0.826)	(0.134)
Toques	0.194	0.605***
	(0.670)	(0.110)
Measure	Constant	Customer
Triprate	19.350***	0.465***
	(1.798)	(0.161)
Facerate	28.371***	0.465***
	(3.952)	(0.158)
Googlerate	22.361***	0 .567***
	(2.532)	(0.163)

Note: The table shows ML estimates of the measurement part of an SEM model to test the hypotheses of model 1. Robust standard errors are in parentheses. Values are rounded to the third digit.
*$p < 0.10$.
**$p < 0.05$.
***$p < 0.01$.

(Continues)

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License

TABLE A2 | Estimated coefficients of the SEM measurement equations in model 2.

Measure	Constant	Human
Operations	6.394***	0.851***
	(0.715)	(0.044)
Techniques	5.895***	0.800***
	(0.692)	(0.054)
Recipes	5.667***	0.659***
	(0.566)	(0.067)
Ingredients	5.988***	0.750***
	(0.661)	(0.051)
Measure	Constant	Talent
Innovation	4.470***	0.539***
	(0.367)	(0.102)
Adaptation	4.357***	0.714***
	(0.531)	(0.076)
Mutation	4.475***	0.857***
	(0.675)	(0.074)
Measure	Constant	Fame
Googleclick	5.866***	0.598***
	(0.968)	(0.164)
Membership	0.657	0.584***
	(1.017)	(0.190)
Measure	Constant	Brand
Review	8.445***	0.466***
	(0.999)	(0.151)
Googlehit	3.156***	0.618***
	(0.495)	(0.158)
Measure	Constant	Expert
Stars	0.531	0.691***
	(0.991)	(0.134)
Forks	3.334***	0.409***
	(0.836)	(0.131)
Toques	0.290	0.619***
	(0.626)	(0.126)
Measure	Constant	Customer
Triprate	19.346***	0.464***
	(1.819)	(0.161)
Facerate	28.366***	0.474***
	(3.939)	(0.157)
Googlerate	22.363***	0 .568***
	(2.544)	(0.164)

Note: The table shows ML estimates of the measurement part of an SEM model to test the hypotheses of model 2. Robust standard errors are in parentheses. Values are rounded to the third digit.
*$p < 0.10$.
**$p < 0.05$.
***$p < 0.01$.

(Continues)

14676435, 0, Downloaded from https://onlinelibrary.wiley.com/doi/10.1111/kykl.12446 by CochraneItalia, Wiley Online Library on [12/03/2025]. See the Terms and Conditions (https://onlinelibrary.wiley.com/terms-and-conditions) on Wiley Online Library for rules of use; OA articles are governed by the applicable Creative Commons License