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Italians' behavior when dining out: Main drivers for restaurant selection and customers segmentation

Nathalie lofrida, Anna Irene De Luca, Raffaele Zanchini, Mario D'amico, Marco Ferretti, Giovanni Gulisano, Giuseppe Di Vita


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## Authorship contributions

Conceptualization and design of the study: A.I. De Luca, G. Di Vita, N. Iofrida.

Methodology: A.I. De Luca, G. Di Vita. N. Iofrida, R. Zanchini
Acquisition of data: M. Ferretti.

Analysis and/or interpretation of data: A.I. De Luca, G. Di Vita, N. Iofrida, R. Zanchini.
Writing - Original Draft: A.I. De Luca, G. Di Vita, N. Iofrida, R. Zanchini.

Writing - Review \& Editing: M. D’Amico, A.I. De Luca, N. Iofrida, R. Zanchini.
Supervision: M. D’Amico, A.I. De Luca, G. Di Vita, G. Gulisano.

Funding acquisition: A.I. De Luca, G. Gulisano.

# Italians' behavior when dining out: main drivers for restaurant selection and customers segmentation 

Iofrida Nathalie ${ }^{\mathrm{a}}$, De Luca Anna Irene ${ }^{\mathrm{a}^{*}}$, Raffaele Zanchini ${ }^{\mathrm{b}}$, Mario D'amico ${ }^{\mathrm{c}}$, Marco Ferretti ${ }^{\mathrm{a}}$, Giovanni Gulisano ${ }^{\text {a }}$, Giuseppe Di Vita ${ }^{\text {b }}$
${ }^{\text {a }}$ Department of Agriculture (AGRARIA), Mediterranean University of Reggio Calabria, Feo di Vito, Reggio Calabria, 89122, Italy
${ }^{\mathrm{b}}$ Department of Agricultural, Forest and Food Science (Disafa), University of Turin, Largo Braccini, 2, Grugliasco, 10095, Torino, Italy
${ }^{\mathrm{c}}$ Department of Agriculture, Food and Environment (Di3A), University of Catania, Via S. Sofia 98-100, Catania, 95123, Italy

Corresponding author: DE LUCA Anna Irene, Department of Agriculture (AGRARIA), Mediterranean University of Reggio Calabria, Feo di Vito, Reggio Calabria, 89122, Italy; anna.deluca@unirc.it

# ITALIANS' BEHAVIOR WHEN DINING OUT: MAIN DRIVERS FOR RESTAURANT SELECTION AND CUSTOMERS SEGMENTATION 


#### Abstract

This study investigates which attributes drive Italian customers while choosing a restaurant, how many of these attributes correspond to intrinsic and extrinsic characteristics of restaurants and which are the main segments of customers. A structured online questionnaire was used to reach 513 respondents through the snowball sampling technique (valid response rate of $97 \%$ ). Descriptive statistics and exploratory factor analysis were applied to infer information. A distance-based ordination technique (Principal Component Analysis) was implemented to display patterns in multivariate data. The reliability of the model was evaluated through the Kaiser-Meyer-Olkin (KMO) test and Bartlett's test of sphericity. Six components were extracted, namely: 'geographic proximity and accessibility', 'aesthetic-based requisites', 'fine dining and renowned eating places', 'average standard requirements', 'traditional cuisine', 'feedbacks and personal experience'. A cluster analysis was performed and four different profiles of restaurant customers were found, with specific sociodemographic characteristics and attitudes towards intrinsic and extrinsic attributes of restaurants. The homogenous features customers have within each segment can be used by foodservice operators as an information to orientate their strategies.


## Keywords

Restaurant, customers' segmentation, intrinsic and extrinsic attributes, cluster analysis.

## Introduction

The importance of the foodservice sector in Italy
The foodservice sector is one of the most important for the Italian economy, represented by $184,587.00$ restaurants and $148,274.00$ bars in 2019; a total consumption expense of more than 84
billion $€$ places the Italian market at the third place in Europe after the United Kingdom and Spain, and $35.7 \%$ of national food consumption take place at restaurants (Federazione Italiana Pubblici Esercizi, 2019). Restaurants are the most common type of venue for dining, with a presence in $93.2 \%$ of Italian municipalities (Federazione Italiana Pubblici Esercizi, 2019). According to the Italian National Institute of Statistics (ISTAT, 2021a), the domestic expense for foodservices passed from 79.2 billion $€$ in 2016 to 85.5 billion $€$ in 2019 , with a positive trend of $+8 \%$. Because of the CoViD19 pandemic, this trend has reversed, with a decrease of $-31.5 \%$, in 2020 compared to the previous year. Pairwise, the average monthly household expenditure remained almost unvaried in the period 2018-2019 (approx. $110 €$ per family), while in 2020 it has decreased by $-40 \%$ (ISTAT, 2021b). From the side of restaurant marketers, the total turnover in the sector has been $64,354.00$ billion $€$ in 2018, which meant, approximatively, an average of 200 thousand $€$ per local unit (ISTAT, 2021c). The socioeconomic importance of the foodservice sector for the Italian economy is also confirmed in terms of total added value, which was about $24,015.00$ billion $€$ in 2018 , and in terms of occupation, with a total of 1,305.00 billion people involved (ISTAT, 2021).

Understanding the preferences of customers and how they address the decision-making process is of utmost importance for restaurant managers. Identifying their characteristics and potential homogeneity or heterogeneity when valuing different restaurant attributes is critical to effectively address customers' needs and ensure the economic viability of businesses. Customers' preferences and purchasing intentions are always evolving, influenced by several aspects such as personal characteristics, needs, food fashions, and information availability.

The typologies of foodservice activities considered in this study are those identified by ISTAT with the ATECO (Classification of Economic Activities) code 56.10.1 "Full restaurant service; foodservice connected to farms and fish farms" (ISTAT, 2022).

Research needs in the Italian foodservice sector: filling a gap
Therefore, it is necessary to recurrently study and identify which values customers attach to different restaurant attributes, and how these values are influenced by personal characteristics, to identify segments, target offerings, and position the restaurant correctly. A tailored marketing strategy can be more effective to meet customers demand, creating loyalty and increasing returns on investments. Understanding how to satisfy target customers allows restaurateurs to successfully market to them. Demographic segmentation is important for targeting purposes, but attention should be paid to many other attributes useful for marketers because of the insight they can provide about the target market such as lifestyle variables (Jang et al., 2011). Also intrinsic and extrinsic characteristics of restaurants, can have different importance depending on stakeholders' desiderata: for the purpose of this study (see Section 2), the intrinsic attributes are those internal qualities and characteristics directly linked to the restaurant, (e.g., food quality and quantity, ambience, cleanliness, menu, service). Extrinsic attributes are related to the restaurant but are physically not part of it, nor under the control of the restaurateurs (e.g., reputation, ratings on social networks, position, proximity to points of interest, quality certifications). Therefore, this study aims to verify how customers, in the process of selecting a restaurant, are influenced (driven) by several attributes, not only inherent to intrinsic characteristics of the restaurant but also relative to extrinsic features, that can also have different significance according to customers' personality. Based on this backdrop, the following research question is proposed: "Which are the principal attributes that drive Italian customers in the restaurant selection process?".

In answer to that question, two hypotheses have been formulated according to the insight retrieved from the literature review, which is presented in the next section. Section 3 illustrates the methodologies applied for data gathering and analysis; Section 4 presents the results obtained, then discussed in Section 5, along with concluding remarks.

## Literature review and hypotheses development

## Customers' behaviour in restaurant choice: selection attributes

There is an extensive body of scientific literature relating to customers' behaviour, customers' satisfaction, consumption patterns and behavioural intentions, all fields of study rooted in applicative disciplines that systematically study, describe and understand the consumption behaviours in a multidisciplinary perspective, involving at the same time economics, psychology, sociology and even anthropology (Mowen, 1988; Grunert et al., 2007). Relevance of these fields of study is particularly strong in business management, because repurchase intentions, positive experiences, and patronage are of utmost importance to build customer loyalty and enhance companies' durability and long-term profitability (Frank, 2012). On the contrary, consumer behaviour in the foodservice industry is a more recent studied area, since it has long been subsumed into the research of wider topics such as hospitality and tourism (Johns and Pine, 2002). Nevertheless, as foodservice activities (namely, restaurants) are more volatile, changeable, and fashion-dependent than other typologies of hospitality and tourism businesses, they have specific peculiarities that represent a particular area of study of consumer behaviour science and deserve specific attention (Johns and Pine, 2002).

Like the consumer decision-making process theorized by Dewey (1910), the restaurant choice process begins with the identification of a need, which is followed by the search of information - if available - and the search for the consumption places, the evaluation of alternatives, the purchase decision making, and the post-purchase behaviour (outcome) (Clemes et al., 2013). In all these phases, rationality, passivity, personal problem-solving and emotionality play a crucial role (Gregory and Kim, 2004).

Food choice, as a general topic, has long been conceptualised and yet it remains research areas to be explored, such as how these choices are related to sustainability impacts (Chen and Antonelli, 2020; Cicia et al., 2021; Sgroi et al., 2022), or how the process of choosing a restaurant takes place. Food choice decisions are complex actions and recurrent, multifaceted, situational, dynamic practices (Sobal and Bisogni, 2009): these processes become even more complex when it comes to choosing
the restaurant. Customers take into account many criteria with different meanings for them, varying according to internal and external stimuli (Junior et al., 2019), the information available (Junior et al., 2019), previous experiences (Namkung and Jang, 2007), the occasion of consumption (Phan and Chambers, 2016), among others. This also undermines the generalisability of restaurant choice behaviour, and therefore further developments in scientific research are needed to understand trends and motivations in consumer restaurant selection (Chua et al., 2020). Furthermore, understanding how and why customers choose their food consumption locations in different geographical areas, and how the criteria for choice vary according to socio-demographic and personal characteristics, is essential for foodservice operators and managers to maintain the economic viability of their businesses over time (Filimonau et al., 2018).

A literature review (Fig. 1) conducted on contributions published in scientific peer-reviewed journals, found only 47 studies published since 1992 to date exploring the drivers of customers' decision process in selecting restaurants, as showed in Figure 2. In particular, concerning the nations where the reviewed studies were conducted, $34 \%$ of them concerned the USA and $11 \%$ Turkey, followed by Malaysia and UK (4\%); the other studies were implemented in other countries from all the continents, except for Africa for which no studies were found. Relating to the Italian context only two studies focused on restaurant customers' choice (i.e., Scozzafava et al., 2017; Contini et al., 2017). Confirming the findings by Filimonau et al. (2018), the scientific research on consumer choice architecture in foodservice provision is promptly growing and developing. Indeed, concerning the consumer behaviour in the foodservice sector, while preferences on food typologies, consumption patterns and customer satisfaction are widely explored, there are few studies on how the characteristics of consumption venues practically influence and determine the actual behaviour of choice of one restaurant over another. Moreover, the scientific research on restaurant selection attributes is geographically restricted and limited in the scope of analysis (Filimonau et al., 2018): $34 \%$ of studies reviewed were researches conducted on United States customers, $11 \%$ analysed
customers or tourists dining in Turkish restaurants, the $9 \%$ of studies were conducted in UK, and the same percentage of studies in Malaysia.

Only two studies focused on Italian customers or were conducted in Italy. Scozzafava et al. (2017) defined customers' preferences in choosing a restaurant answering the question if local, organic, and GMO-free attributes are significant in the selection of a restaurant and for which consumer segments. The authors found that there is a segment of customers, representing $30 \%$ of the demand, that is willing to pay a premium price for green products and their likelihood of choosing a restaurant offering local products is three times higher than a restaurant without certified raw materials. Contini et al. (2017) studied the relationship between certified local foods and eating out consumption behaviours comparing Italian and German customers; the authors found that, despite a marked heterogeneity of preferences, there was a consistent segment of customers willing to pay a premium price for certified locally grown products across both countries.


Figure 1. State of the art of research on restaurant choice attributes - publications trend.


Figure 2. Studies locations.

A little-explored theme in the restaurant choice literature is that of the distinction between intrinsic and extrinsic attributes. This kind of classification can slightly vary according to the theoretical reference (Olson and Jacoby, 1972; Acebròn and Dopico, 2000; Albari and Dewi, 2016; Espejel et al., 2007; Brečić et al., 2017). Table 1 refers the studies, found among those reviewed, that made some kind of distinction about the factors or characteristics of restaurants, or the motivations that drive customers' choice. However, among the papers reviewed, none of them applied this distinction to explore analytically how it influences customers' choices. Ha and Jang (2013) distinguished intrinsic and extrinsic motivations referring in the first case to direct variety-seeking by the customers, linked to internal motivations; in the second case, they referred to derived variety-seeking triggered by changes in the environment. Azevedo et al. (2017) used the terms intrinsic to indicate tangible characteristics of a product (such as design, durability) and extrinsic to indicate intangible characteristics such as price and brand. Likewise, Junior et al. (2019) describe the phase of need identification as driven by internal and external stimuli, being the first ones arising from customers' inherent needs, and the latter influenced by marketing strategies of companies. Cha et al. (2019)
mention the variety of internal and external motivations that drive the choice of a restaurant, grouping them into hedonic and utilitarian motivations. Hedonic motivations are subjective and commonly relates to positive experiences in terms of enjoyment, satisfaction, and pleasure (Becker et al., 2019; Cha et al., 2019). Utilitarian values are functional, instrumental, concerning fulfilling the instrumental expectations that customers may have for the product or service and positively related to buying intentions (Kertasunjaya et a., 2020; Cha et al., 2019).

Hwang et al. (2021), analysing the impact of social media on customers' restaurant experiences, remark intrinsic and extrinsic factors describing the process, content, and social gratifications, and in particular, three dimensions of gratification that explain how customers adopt social media for their restaurant decision-making process.

It is also important to highlight that consumers' behaviour is the result a combination of factors linked to customers' characteristics, not to the product 'restaurant', i.e., internal factors related to behavioural control, skills, abilities, will power, emotions, stress, and compulsions; and external factors linked to time constraints, opportunity and dependence on others (Fink et al., 2021).

Table 1. Classification of restaurant attributes according to the reviewed literature.

| Terms | Definitions | References |
| :--- | :--- | :--- |
|  | Extrinsic factors relates to process gratification, which is users' <br> satisfaction with the experience of employing social media (e.g., <br> convenience, speedy decision making, GPS, portability, ease of use and <br> Intrinsic and extrinsic <br> factors | Hwang et al. (2021) |
|  | Intrinsic factors relates to content gratification, that arises from <br> acquiring information and users' satisfaction with the ability of a <br> medium to convey messages | Hed |
| A combination of factors linked to customers' characteristics, not to the | Fink et al (2021) |  |
| Internal and external |  |  |
| factors | product 'restaurant'. Internal factors: behavioral control, skills, <br> abilities, will power, emotions, stress and compulsions. External <br> factors: time, opportunity and dependence on others. | Cha et al. (2019) |
| Internal and external <br> motivations | Motivations that drive the choice of restaurant, grouping them into <br> hedonic and utilitarian motivations. | Junior et al. (2019) |
| Internal and external <br> stimuli | Internal stimuli: arising from customers' inherent needs. <br> External stimuli: influenced by marketing strategies of companies. | Azevedo et al. |
| Intrinsic and extrinsic <br> characteristics | Intrinsic: tangible characteristics of a product (such as design, <br> durability). <br> Extrinsic: intangible characteristics such as price and brand. | (2017) |
| Intrinsic and extrinsic <br> motivations | Derived varied behaviour refers to variety-seeking that is triggered by <br> changes in the external environment rather than internal motivation. <br> Direct variety-seeking is intrinsically motivated. | Ha and Jang (2013) |

For the purpose of this study, the distinction proposed by Olson (1972) and Steenkamp (1990) when referring to quality cues is taken into account and therefore:

- intrinsic attributes are those internal qualities and characteristics directly linked to the physical product (in this case, the restaurant), they identify the product, such as food quality and quantity, the ambience, the cleanliness, the menu, the service, etc.
- extrinsic attributes are related to the product but are physically not part of it; they are external qualities, less dependent on internal factors, and therefore cannot be directly linked to the restaurant, such as reputation, ratings on social networks, position, proximity to points of interest, quality certifications, among others.

This study aims to fill this gap of knowledge about the preferences of Italian customers by investigating which are the intrinsic and extrinsic attributes driving Italian customers in restaurant selection. To explore in-depth all the possible preferences of customers in restaurant choice, the attributes brought to the attention of the respondents were drawn from the literature review (see Appendix A). Based on these notions and premises, the following hypothesis is proposed: H1. Italian customers' restaurant selection drivers include a set of intrinsic and extrinsic attributes, and the relation among them can be found and explained.

The importance of restaurant selection criteria for different customers' segments
As highlighted by many authors, the degree of importance of each attribute can vary according to the typology of customers, because different customer segments behave according to judgements on different service attributes: the structure of predictor variables can vary across segments (Yüksel and Yüksel, 2003). Knowing the customers' segments of the target market is of vital importance to businesses, to develop more focused and effective marketing efforts (Yüksel and Yüksel, 2003). Demographic variations are useful to identify segments of customers: Clemes et al. (2013) found that the likelihood of attending ethnic restaurants decrease with customers' age, and varies according to gender, income, occupation, and education level: well-educated and high-income customers are the most loyal customers.

It has been found that the typology of ambiance, style and atmosphere of a restaurant attracts a clientele with specific age and income according to the occasion of dining out; some restaurants try to succeed in attracting people of all ages and income by accepting all kinds of dress and behaviour, and therefore being acceptable for every occasion (Auty, 1992).

Moreover, within the same age group, restaurants attributes can have the most diverse importance and meaning for customers according to different lifestyle clusters. Jang et al. (2011), described the new generation of 'millennials' (generation Y) finding the presence of different lifestyles, by means of cluster analysis:

- the 'adventurous consumer', who loves to discover new meals;
- the 'convenience-oriented consumer', who cares more for cheapness and less for healthiness;
- the 'health-conscious consumer', who pays attention to health aspects;
- the 'uninvolved consumer', who is less likely to place value on food.

Kleinhans et al. (2019) found that demographics, reasons for dining, dining companions, dining experience and choice of restaurant variables allow describing three different types of segments, i.e., 'young family diners', 'time savers', and 'experience seeker diners'.

Situational factors, such as the eating-out occasion and restaurant typology, can also vary the importance that customers attach to restaurants attributes. For example, menu price is important in case of a quick meal and social occasion; brand reputation is more important in case of business necessity; word of mouth recommendation is more important in case of a celebration (Chua et al., 2020). On the contrary, the same study found that online reviews were less important in the case of quick meals, and sales promotions had no importance in the case of social occasions, business dining or celebrations.

Contini et al. (2017) described different restaurant customers' segments according to sociodemographic variables, motivations of choice, product qualities linked to the local origin, and Schwarts values. They found that young people are most likely to prefer local origin food, willing to
pay a plus for certificated local products ('locavores'), while people aged between 45 and 54 were less interested ('non-choosers'), and elderly people give more importance to the price ('savers').

The interest in segmentation analysis has attracted the interest of researchers across all disciplines, such as consumer behaviour, customer decision-making and satisfaction, culinary tourism, and management science in general. Knowing the significance and values that specific customers' groups attach to attributes, characteristics, items, and variables is of utmost importance for businesses (Koo et al., 1999). Acquiring this information enables, for example, restaurant operators to develop suitable business strategies to gain specific market segments and build customer loyalty and satisfaction. Customers assign to each attribute implicit utilities that allow them to make decisions; restaurateurs need to know these attributes and how their importance vary under different situations, occasions, demographic characteristics, geographical areas, etc.

Based on these considerations, the second hypothesis of this study concerns clustering the Italian customers to reveal which groups attach the same importance to specific attributes, and it is formulated as follows:

H2. Italian customers' perceived importance on restaurant selection attributes varies according to the different socio-demographic characteristics and personalities.

To verify the hypotheses, the conceptual model represented in Figure 3 frames the statistical analysis applied in this study and described in the following paragraphs.


Figure 3. Conceptual framework of the analysis.

## Methodology

## Survey instrument and data collection

Data were collected from May to September 2021 using a multi-section and structured questionnaire, with a specific set of predefined questions, developed through the interactive support of Google Forms ${ }^{\circledR}$ to allow the compilation via web to reach a higher number of Italian customers in less time. To overcome the difficulty of reaching a population geographically dispersed, the sampling technique chosen is snowball sampling (Goodman, 1961), i.e., a targeted, exponential, non-discriminatory, nonprobabilistic sampling technique, also known as 'chain referencing', which allows acquiring data through existing social structures, where each study subject recruits future subjects from among their acquaintances (Heckathorn and Cameron, 2017). It consists of involving a small sample from the target subpopulation (such as direct acquaintances), who are asked to involve other participants for

the study, as in a kind of chain reaction. Usually, this technique is used to explore topics that are difficult to investigate directly or publicly (such as drug use); however, where there is no need for a probabilistic population sample, snowball sampling, together with the use of social networks, allows to reach quickly and exponentially a large number of users, and in this case customers. The communication channels used were social networks, i.e., the virtual platforms currently most in use.


Figure 4. Literature review findings concerning intrinsic and extrinsic restaurant attributes.

Data collection lasted until the point of information saturation (or redundancy) was reached, i.e., until it was found that further observations (responses) did not add new or discordant opinions, but confirmed previous responses, in percentage terms (Guest et al., 2006; Ferro Allodola, 2014; Saunders et al., 2018). For this study, the procedure of data saturation by Grady (1998:26) was taken into account: "New data tend to be redundant of data already collected. In interviews, when the researcher begins to hear the same comments again and again, data saturation is being reached... It is then time to stop collecting information and to start analysing what has been collected". Therefore, when questionnaires returned with information confirming the average data, the collection has been stopped. Furthermore, a number of more than 500 questionnaires is considered a suitable quantity for multivariate analysis (Di Vita et al., 2021a, Taherdoost et al., 2014). The practical procedure through which the statistical units were selected to study the target population (the Italian population), was therefore configured as non-probabilistic. The choice of this type of sampling is justified by reasons related to the time and costs of the survey and it is aimed at limiting the risk of obtaining excessive rejections or non-contacts, too. The questionnaire was relaunched and publicised several times through online social networks and e-mails, and finally, 513 questionnaires were completed, of which 13 were discarded, representing a valid response rate of $97 \%$.

The questions of the survey were addressed taking into account the attributes that scholars studied most about restaurant selection processes, and therefore variables were retrieved from current scientific literature (see Appendix A). Furthermore, the attributes have been divided into two groups, following the already-mentioned definition of intrinsic and extrinsic attributes by Olson (1972) and Steenkamp (1990).

The first section of the questionnaire concerned the socio-demographic characteristics of respondents collected using multiple choice and binary questions. Table 2 reports the descriptive statistics about the sample. Regarding the age cohort segmentation used in this study, the proposal by Brosdahl and Carpenter (2011) was considered; therefore, customers were divided into the following classes: Millennials (born from 1982 to 2000), Generation X (1961-1981); Baby Boomers (1943-1960), and

Silent Generation (1925-1942) and subsequently adapted on the basis of a previous study (Di Vita et al., 2021b). We included Millennials in the 'Younger Generations' given the difficulty to generate a robust age cohort for people born after 2000 because those responsible for purchasing are only a small fraction. For the same reason, the category 'Older Generations' was adopted by including Baby Boomers and Silent Generation.

Table 2. Socio-demographic characteristics of the sample ( $n=500$ ).

| Variables | Categories | Frequency | \% |
| :---: | :---: | :---: | :---: |
| Age Cohort | Younger Generations | 263 | 52.60 |
|  | Generation X | 175 | 35.00 |
|  | Older Generations | 62 | 12.40 |
| Gender | Male | 194 | 38.80 |
|  | Female | 306 | 61.20 |
| Education | Elementary and middle school | 15 | 3.00 |
|  | High school | 164 | 32.80 |
|  | University | 280 | 56.00 |
|  | PhD and Specialities | 41 | 8.20 |
| Annual income | Up to 10.000 $€$ | 135 | 27.00 |
|  | $10.001-20.000 €$ | 126 | 25.20 |
|  | $20.001-30.000 €$ | 127 | 25.40 |
|  | $30.001-40.000 €$ | 51 | 10.20 |
|  | Over $40.000 €$ | 61 | 12.20 |
| Family members | $1-2$ | 175 | 35.00 |
|  | $3-4$ | 275 | 55.00 |
|  | $>4$ | 50 | 10.00 |

In the second section of the questionnaire related to restaurant attributes, the importance attached by customers to the different features was investigated asking interviewees: "How important are the following elements when choosing a restaurant?" followed by the list of attributes founded in the literature. The importance degree was expressed using a five-point Likert scale, where $1=$ not important and 5 = very important. The mean scores obtained by each attribute and its relative standard deviation (SD) are reported in Appendix B.

## Data analysis

To test the first hypothesis and thus identify what drivers move costumers in the restaurants' selection process, an explorative factorial analysis based on Principal Component Analysis was carried out. The model aims to reduce the number of predictors into factorial dimensions by minimizing the loss of variance (Gewers et al., 2018). Starting from an original pool of correlated variables, the analysis highlights latent relationships (Capitello et al., 2016) and produces a new sub-set of orthogonal variables called Principal Components (PCs) (Di Vita et al., 2021c). The reliability of the model was evaluated by two different tests: Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity. The first one produces an index included between 0 and 1 by comparing the observed correlation and the partial correlation between couple of variables, starting from the original pool of variables. To be considered reliable, the value of KMO test should be higher than 0.7 or at least between 0.5 and 0.7 (Kaiser and Rice, 1974). Bartlett's test evaluates the hypothesis that the correlation of the model is equal to 0 by comparing the correlation matrix with the identity matrix. The test should be significant to indicate that the matrices are not coincident and thus the correlation between the variables is significant (Kumara and Canhua, 2010).

To deal with the second hypothesis, the analysis of clusters was performed using the factorial dimensions obtained by the PCA model (Di Vita et al., 2021c). The method of clustering applied was k -mean that is a non-hierarchical classification approach that permits to found clusters and generate groups through an iterative process by minimizing the Euclidean distance between the centroids of the groups (Steinley, 2006). The issue of the best cluster solution, which is particularly important in non-hierarchical classification (Rousseeuw, 1987), was addressed by using silhouette width index as indicator of cluster adequacy that provides information about each respondent (Halpin, 2016). In fact, silhouette width compares for each case the mean distance observed with other respondents within the cluster and the mean distance with the nearest cluster. This computation provides a goodness of fit index for each respondent ranging from -1 to +1 where higher scores indicate better fit (Rousseeuw, 1987). Several hypotheses were tested and by observing the graphs generated, the four-cluster
solution was deemed as the most suitable. The graph showing the distribution of the silhouette width, i.e., the index obtained for each respondent for the solution adopted is given in Appendix C. Once the cluster solution was obtained, ANOVA tests were performed to evaluate significant differences among clusters in terms of principal components score (Di Vita et al., 2021c).

Finally, to assess the frequency distribution of socio-demographic characteristics, chi-square tests were performed by testing the null hypothesis that the obtained distribution is derived from the causality rather than variables-dependent (Franke and Christie, 2012).

## Results

## Principal component analysis results

The PCA was applied to the 28 variables selected from literature and proposed to the attention of interviewees, related to intrinsic and extrinsic attributes of restaurants. At the end of this first analysis, six components, explaining the $64.3 \%$ of total variance, were extracted. Table 3 reports the rotated components loadings that allow to describe synthesized predictive models of restaurant by reducing the multi-dimensionality of variables; thus, it was possible to associate each component to the main drivers of customers' restaurant choice.

As regards the first component ( $13.9 \%$ of the explained variance), it can be identified as Geographic proximity and accessibility (Factor 1), and therefore the closeness to restaurants and the ease of getting to the place characterize this set of variables. Indeed, both daily and working activities are strictly interrelated with the restaurant location easy to reach. Proximity to usual places of attendance ( 0.73 ) and to the public transport connections ( 0.72 ), such as bus, metro station, etc., promotes the restaurant choice. The proximity to points of interest $(0.68)$, such as touristic places and cultural sights, has also importance in this first component, and contributes to select a restaurant. Hospitality and attraction of restaurant is also favoured by accessibility ( 0.74 ) and accommodation capacity (0.73). Within this first component, restaurants are preferred if they provide comfortable requirements for guests with special needs by offering, for instance, an easy access for people with disabilities or
dedicated parking places. Finally, this component also includes the preference for booking easiness, thus highlighting how Online or app booking systems are appreciated as quickly ways for reaching restaurants, a further attribute of accessibility, in a sense.

The second factor, which accounts for $13.5 \%$ of the total variance explained, can be clearly described as Aesthetic-based requisites (Factor 2), since many attributes included in this component are directly or indirectly related more to the image of the restaurant environment than substance even if the visual quality of a restaurant is able to provide satisfying both aesthetic and sensory experience. In this case, the appearance linked to External location such as the urban context in which the restaurant is located (0.48) and the eventual Presence of garden or outdoor spaces $(0.58)$ contributes to give more appeal to the restaurant. Equally important in this component are the internal elements such as Interior design (0.71) of the environment as well as the Menu package and menu design (0.71). The prominent role of hedonism linked to high-end decor within this component is also underlined by the importance of Aesthetic of dishes $(0.77)$ and Mise en place (0.70).

The third component, whose explained variance is $12.4 \%$, can be defined as Fine dining and renowned eating places (Factor 3). It is strongly characterized by chef renown and foodstuff certification since Restaurant reputation (0.62) and Chef reputation (0.76) jointly to the Certification of raw materials (0.71) and Quality foodservice (0.74) resulted in significant variables. This restaurant typology includes mainly Gourmet restaurants and high-end restaurants run by starred and celebrity chefs.

The fourth component accounts for 12.2 explained variance and describes Average standard requirements (Factor 4). It is characterized by a selectivity based on a generic and undifferentiated quality. This component conveys information according to a twofold direction: food quality at affordable prices and comfortable environment. As concern food quality, the most significant variables were those directed to get a quality standard prerequisite being directly linked to Service quality ( 0.73 ), and Food quality and typology ( 0.71 ). This implies a restaurant category that, offering a medium-high quality table service, allowing a better enjoyment of all basic prerequisites of a good
restaurant. In addition, this component also includes a refined but not exclusive décor and low-key atmosphere as shown by significant loadings of Kind of place (0.69), Ambiance (0.67), Cleanliness and comfort ( 0.79 ). All this at moderately-priced menu given the importance of Price-quality ratio (0.53).

The fifth component describes the $6 \%$ of the variability and includes variables linked to the Traditional cuisine (Factor 5) such as Typicality (0.72) and Food quantity (0.71). The Menu variety (0.61). This component is marked by a joined local identity and could be reasonably ascribed to taverns and restaurants offering typical regional dishes, homemade cuisine and large food portions. The last component is quite small, but it seems quite interesting since this component based on Feedbacks and personal experience (Factor 6) of people visiting restaurants, often characterizes the reason to choose. This component is distinguished by randomly obtained information about restaurants provided by specialized websites in which ratings and rankings are reported or that are provided through word of mouth. This component has only two following significant variables and namely, Previous knowledge of the place (0.48) and Ratings and review on the internet/web (0.66).

Table 3. Rotated factor loadings.

| Variables | Factor 1 | Factor 2 | Factor 3 | Factor 4 | Factor 5 | Factor 6 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Geographic proximity and accessibility | Aestheticbased requisites | Fine dining and renowned eating places | Average standard requirements | Traditional cuisine | Feedbacks and personal experience |
| Price-quality ratio |  |  |  | 0.532 |  |  |
| Kind of place |  |  |  | 0.686 |  |  |
| Ambiance |  |  |  | 0.667 |  |  |
| Cleanliness and comfort |  |  |  | 0.787 |  |  |
| Service quality |  |  |  | 0.732 |  |  |
| Food quality, food typology |  |  |  | 0.711 |  |  |
| Menu variety |  |  |  |  | 0.608 |  |
| Typicality |  |  |  |  | 0.716 |  |
| Food quantity |  |  |  |  | 0.706 |  |
| Quality foodservice certificates |  |  | 0.739 |  |  |  |



## Cluster analysis results

The second step of the analysis was based on a clusterization carried out on the factor scores derived from PCA (Tables 4 and 5). It allowed to identify four different profiles of restaurant customers based on their socio-demographic characters and their attitudes towards different attributes of restaurants.

The first segment of customers shows a certain propensity towards homemade cuisine; these demand meals with basic quality standards of food and service. They are also insensitive to information seeking and averse to fine dining and sophisticated restaurants. In addition, this first segment, which is strongly linked to traditional cuisine and typical raw materials, attaches importance to geographic
proximity. This group seeks genuineness and authenticity during meals consumption almost like in a family context, possibly in a place that is close to one's home. For these reasons, this typology of customers can be named as local tavern lovers (Cluster 1). As regards the socio-demographic components, this group is fairly distributed among the genders, but by comparing frequencies across clusters, it is possible to identify women as the more represented gender. Concerning age class, middle-aged customers (generation X) prevail over other classes.

The second cluster is mainly characterized by users who enjoy aesthetics and in a lesser extent are engaged in sophisticated food quality. This group of customers do not consider important typicality, traditional cuisine and food variety and are not influenced by subjective knowledge and information available on the web. This cluster can be summarized as aesthetic enthusiasts (Cluster 2). These customers are fascinated by amazing location such as the setting up of the hall or elegant outdoor spaces. At the same time, respondents belonging to this group are attracted by dish presentation (mise en place) and menu design. On a smaller scale, they are also interested in the highest standards of food and take into account the restaurant reputation, and certification but they negatively consider medium standard restaurants. Women and older users are the most representative socio-demographic characteristics of this segment.

The third group includes informed, refined, and elite customers (Cluster 3) who associate sophisticated dining with traditional cuisine. This association is not surprising, because often exclusive and elitist restaurants combine high standard cuisine with regional culinary tradition in a new and original way. They are strongly attracted by renowned and certified restaurants as well as starred and awarded chefs, being also active and renowned on those social networks specialized in providing information and ratings on restaurants. This segment of customers avoids geographic proximity and medium standard restaurant. A small difference among gender is observable within the cluster but, compared with the others, the male gender slightly prevails in this group, while young individuals and generation X are the classes more represented.

| Factors | Cluster1 | Cluster2 | Cluster3 | Cluster4 | F-value |
| :---: | :---: | :---: | :---: | :---: | :---: |
|  | Local tavern <br> lovers | Aesthetic <br> enthusiasts | Informed, <br> refined and elite <br> customers | Average <br> standard <br> customers |  |
| Factor 1 | 0.200 | 0.021 | -0.060 | -0.195 | 2.57 |
| Factor 2 | -0.840 | 0.779 | 0.001 | -0.517 | $102.47^{* *}$ |
| Factor 3 | -0.217 | 0.168 | 0.288 | -0.688 | $21.68^{* *}$ |
| Factor 4 | 0.113 | -0.354 | -0.078 | 0.782 | $25.98^{* *}$ |
| Factor 5 | 0.587 | -0.345 | 0.498 | -1.159 | $105.51^{* *}$ |
| Factor 6 | -0.922 | -0.462 | 0.854 | 0.443 | $172.29^{* *}$ |

,${ }^{* *}=$ significant p-value, respectively 0.1 and 0.01
Finally, the fourth cluster is characterized by those who we called the average standard customers (Cluster 4), i.e., those who are sufficiently aware and knowledgeable, who have information coming from several personal sources, such as friends, acquaintances and social media. They are not interested in purely aesthetic and sophisticated restaurants, nor in traditional ones, but they demand an overall average quality standard both in terms of service and food quality. In this group, women are the prevailing gender, while young users are the most common age class.

Table 4. Results of k-means cluster analysis based on factor scores.

Table 5. Cluster analysis results (Frequencies).

| Variables | Categories | Cluster 1 | Cluster2 | Cluster3 | Cluster 4 | Chisquare statistics |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | * | Local tavern lovers | Aesthetic enthusiasts | Informed, refined and elite customers | Average standard customers |  |
| Age Cohort | Younger generations | 43.27 | 50.31 | 54.04 | 67.57 | 14.84* |
|  | Generation X | 44.23 | 33.54 | 36.65 | 21.62 |  |
|  | Older generations | 12.5 | 16.15 | 9.32 | 10.81 |  |
| Gender | Male | 45.19 | 33.54 | 45.34 | 27.03 | 10.89* |
|  | Female | 54.81 | 66.46 | 54.66 | 72.97 |  |
| Education | Elementary and middle school | 3.85 | 3.73 | 1.24 | 4.05 | 12.84 |
|  | High school | 31.73 | 37.27 | 26.71 | 37.84 |  |
|  | University | 52.88 | 54.66 | 62.73 | 48.65 |  |
|  | PhD and Specializations | 11.54 | 4.35 | 9.32 | 9.46 |  |
| Annual income | Up to 10,000.00 € | 31.73 | 22.36 | 30.43 | 22.97 | 14.30 |
|  | 10,001.00-20,000.00 € | 23.08 | 24.84 | 24.22 | 31.08 |  |
|  | 20.001-30.000 € | 23.08 | 27.33 | 28.57 | 17.57 |  |
|  | 30.001-40.000 € | 12.5 | 9.32 | 8.07 | 13.51 |  |
|  | Over $40.000 €$ | 9.62 | 16.15 | 8.70 | 14.86 |  |
|  |  | 22 |  |  |  |  |


|  | $.1-2$ | 29.81 | 36.65 | 36.02 | 36.49 |  |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Family members | $.3-4$ | 57.69 | 55.28 | 52.17 | 56.76 | 3.98 |
|  | $>4$ | 12.5 | 8.07 | 11.80 | 6.76 |  |

* = significant p-value 0.05


## Discussion and conclusion

This study aimed to address the objective of understanding which are the most important restaurant attributes that lead Italian customers to make a choice. The results obtained not only provided a wide set of attributes and variables that influence customers' choice but also confirmed the two hypotheses previously formulated, i.e.: H1. Italian customers select restaurants according to a set of intrinsic and extrinsic preferred attributes; H2. Italian customers' perceived importance on restaurant selection attributes varies according to the different socio-demographic characteristics and personalities.

## Significance of results

In the literature review propaedeutic to this study, the limits highlighted by Filimonau et al. (2018) were confirmed, i.e., that most of the studies on restaurant selection attributes are very specific and limited in the scope of analysis, focusing often on specific segments of the population. For example, some studies focused on restaurant selection attributes important for senior tourists (Kim et al., 2010), travelling tourists transiting by an airport (Yüksel and Yüksel, 2003), senior customers (Moschis et al., 2003), college students (Baek et al., 2006), young generations (Jang et al., 2011; Liew et al., 2021; Okumus et al., 2021). Other authors focused on specific meals such as dinner (Junior et al., 2019), or specific cities (Cullen, 2005; Lima Filho et al., 2013), among others. In other cases, questionnaires for data gathering were distributed in very specific occasions or places, such as academics from two universities (Clark and Wood, 1998), the spectators at the sports' arena gates at university basketball games (Duarte Alonso et al., 2013), shoppers visiting shopping malls (Heung, 2002; Gregory and Kim, 2004), leisure meals (Longart et al., 2016). Furthermore, there was a research gap about the habits of Italian customers in the restaurant selection process, and no studies discriminating intrinsic and extrinsic attributes for restaurant selection have been found. Therefore, this study deserves the
merit to have tried to statistically and analytically fill this research gap, also extending the scope of analysis to a wider public, thanks to the snowball sampling technique.

The findings obtained by this study are discussed in Table 6. Comparing the results from the PCA and the cluster analysis, important information has been obtained about which are the principal typologies of Italian customers, and what they concern in the process of selecting a restaurant.

Table 6. Main insights from this study.

| Segment of customers | Principal components | Preferred restaurant attributes | Typology of attributes | Prevalent personal characteristics |
| :---: | :---: | :---: | :---: | :---: |
| Local tavern lovers | Traditional cuisine | Menu variety Typicality Food quantity | Intrinsic Intrinsic Intrinsic | Generation X Women <br> University-level education <br> Income up to $10,000.00$ $€$ |
|  | Geographical proximity and accessibility | Proximity to places of frequent attendance Proximity to points of interest Accommodation capacity <br> Accessibility <br> Online or app booking system <br> Proximity to transport connections | Extrinsic <br> Extrinsic <br> Intrinsic <br> Intrinsic <br> Extrinsic <br> Extrinsic |  |
|  | Average standard requirements | Price-quality ratio Kind of place Ambiance Cleanliness and comfort Service quality Food quality, food typology | Extrinsic Intrinsic Intrinsic Intrinsic Intrinsic Intrinsic | members |
| Aesthetic enthusiasts | Aesthetic-based requisites | Garden <br> Interior design <br> Location <br> 'Mise en place' Aesthetic of dishes Menu design | Intrinsic <br> Intrinsic <br> Extrinsic <br> Intrinsic <br> Intrinsic <br> Intrinsic | Younger generations Women <br> University-level education <br> Income between <br> 10,001.00-20,000.00 € <br> Families of 3-4 members |
|  | Fine dining and renowned eating places | Quality foodservice certificates Certification of raw material quality Restaurant reputation Chef reputation Presence in gastronomic guides | Extrinsic Extrinsic Extrinsic Extrinsic Extrinsic |  |
| Informed, refined and elite customers | Feedbacks and personal experience | Previous knowledge of the place Ratings and review on the internet/web | Extrinsic Extrinsic | Younger generations Women University-level education <br> Income up to $10,000.00$ $€$ <br> Families of 3-4 members |
|  | Traditional cuisine | Menu variety <br> Typicality <br> Food quantity | Intrinsic Intrinsic Intrinsic |  |
|  | Fine dining and renowned eating places | Quality foodservice certificates Certification of raw material quality Restaurant reputation Chef reputation Presence in gastronomic guides | Extrinsic <br> Extrinsic <br> Extrinsic <br> Extrinsic <br> Extrinsic |  |


| Average standard customers | Average standard requirements | Price-quality ratio Kind of place Ambiance Cleanliness and comfort Service quality Food quality, food typology | Extrinsic <br> Intrinsic <br> Intrinsic <br> Intrinsic <br> Intrinsic <br> Intrinsic | Younger generations Women <br> University-level education <br> Income between 10,001.00-20,000.00 € <br> Families of 3-4 members |
| :---: | :---: | :---: | :---: | :---: |
|  | Feedbacks and personal experience | Previous knowledge of the place Ratings and review on the internet/web | Extrinsic <br> Extrinsic |  |

First, the findings confirmed the results of previous studies, i.e., that the overall most important attributes for customers are Food quality and typology (mean 4.62, S 0.68), Comfort and cleanliness (mean 4.51, SD 0.79), Service quality (mean 4.31, SD 0.83), and Price-quality ratio (mean 4.11, SD 0.92 ). Secondly, the results of the study suggest that certain demographic variables (among gender, age, education, income) may moderate restaurant choice intentions. Scholars agree that good market segments should consist of customers with homogeneous product needs, attitudes, and responses linked to marketing variables; the segment should be clearly defined by specific key variables to serve as good discriminators between groups of customers who react differently to restaurant attributes (Yüksel and Yüksel, 2002).

Therefore, four customers' segments have been found, whose preferences and consumption patterns as resumed in the already mentioned Table 6: 'local tavern lovers', 'aesthetic enthusiasts', 'informed, refined and elite customers', and 'average standard customers'.

A third consideration upon results is that for each segment of customers, there is a mix of intrinsic and extrinsic attributes that shapes the corresponding enjoyment patterns. This means that customers pay attention not only to the inherent characteristics of restaurants but also to related aspects that not are fully under the control of restaurateurs (such as the proximity to points of interest), confirming and transposing some insights by Brečić et al. (2017) to the foodservice sector.

## Implications for gastronomy

Knowing information about the main drivers for restaurant choice is of utmost importance for businesses, especially in order to understand how to orient their marketing strategies. Considering
key target market characteristics is necessary to ensure a fit between restaurants' attributes and the expectations of targeted customers (Harrington et al., 2011).

Restaurateurs that chose the segment of local tavern lovers must consider that this kind of customers is probably middle-aged and low income. Communicating effectively the link with the territory and traditions, and offering a varied, abundant and typical menu at affordable prices would attract these customers. Choosing a location close to busy centres or easily accessible would be an advantage, as would an easy booking system. Typical and themed evenings and special offers could attract customers of this segment. If restaurateurs are interested in the segment of aesthetic enthusiasts, they should put efforts into building a pleasant ambiance, paying attention to the minor details, looking for high-quality raw materials, obtaining external quality certifications, improving the reputation of hiring renowned chefs and ensuring the presence in gastronomic guides. Young people are particularly sensitive to this typology of restaurants, and they can afford higher prices thanks to a middle income.

Restaurateurs interested in the segment of informed, refined and elite customers, should take into account that these customers love the typicality, the variety and the quantity of food. They pay particular attention to rating and reviews, want to be sure of the quality by means of certifications (foodservice quality, raw materials) and the presence in gastronomic guides, despite being young and low-income people.

Finally, restaurateurs targeting the segment of average standard customers should ensure a pleasant, clean, and comfortable ambiance, and high-quality food at a reasonable price. Customers belonging to this target want to spend their money well, and if well impressed their loyalty will be ensured.

Communication appeared to be of vital importance in marketing processes, that needs to identify the attributes that are important to customers, but it is above all the classification variables that enable businesses to better identify and reach target customers (Harrington et al., 2011). Because it has been found that customers who experience service inefficiencies and expressed negative feelings tend to
telling about the negative aspects rather than talk about other restaurant characteristics (Park et al., 2021).

Preferences and attitudes of customers towards restaurants are rapidly changing as it was demonstrated, the importance they give to restaurants attributes can vary according to their age, purchasing power, education level, as well as their personal characteristics and desiderata. Restaurateurs need to know their target markets to better address their management strategies and loyal their customers, improving the intrinsic attributes of their restaurants and leveraging the extrinsic attributes.

## Limitations and future studies

This study filled a gap concerning Italian customers and the typologies of attributes they matter most. While there is, since a long time, a wide literature about how intrinsic and extrinsic cues of food impact customers' choice (Szybillo and Jacoby, 1974), few studies investigated how these variables influence restaurant selection processes and how they are helpful to identify customers' segments (Kim et al., 2020).

However, this study is not free from limitations. One of these can be discerned in the limited area of investigation that is national and therefore it could be interesting to enlarge the geographical boundaries of survey by including, for example, other European countries to verify if significant differences exist. In addition, this investigation has other limitation due to the snowball sampling method that lacks external validity, a study based on an Italian representative sample could be recommended for additional analysis. A stratified sample could be adopted for greater representativeness, collecting interviews through the face-to-face method or by relying on specialised companies to collect data. Results obtained in present study certainly deserves further research, future studies might regroup customers based on their health concerns and sustainability-related behaviours. Moreover, future research could be directed to analyse in depth most important drivers for each category of restaurant identified, by segmenting customers' personal traits and behaviours. It could
also be interesting to analyse the role of information in restaurant selection and explore the role of raw materials origin and provenance in customers' choice.

## Declaration of competing interest

The authors declare no conflict of interest.

## Appendix A. Supplemental Data.

## Appendix B. Supplemental Data.

## Appendix C. Supplemental Data.

## References

Acebrón, L. B., Dopico, D. C. (2000). The importance of intrinsic and extrinsic cues to expected and experienced quality: An empirical application for beef. Food Quality and Preference, 11(3), 229238. doi: 10.1016/S0950-3293(99)00059-2.

Albari, Dewi, S., 2016. Impact of customer loyalty in mediating of intrinsic and extrinsic attributes quality on purchase intention. J. Manag. Bus. 15, 10-23. doi:10.24123/jmb.v15i2.67.

Auty, S., 1992. Consumer choice and segmentation in the restaurant industry. Serv. Ind. J. 12, 324339. doi:10.1080/02642069200000042.

Azevedo, L. das G.M.R.P.P. de, Moura, L.R.C., Souki, G.Q., 2017. Choosing a Restaurant: important attributes and related features of a consumer's decision making process. Rev. Tur. em Análise 28, 224-244. doi:10.11606/issn.1984-4867.v28i2p224-244.

Baek, S.H., Ham, S., Yang, I.S., 2006. A cross-cultural comparison of fast food restaurant selection criteria between Korean and Filipino college students. Int. J. Hosp. Manag. 25, 683-698. doi:10.1016/j.ijhm.2005.07.001.

Becker, S., Bräscher, A., Bannister, S., Bensafi, M., Calma-Birling, D., Chan, R. C., Wang,
Y. et al. (2019). The Role of Hedonics in the Human Affectome. Neuroscience \& Biobehavioral Reviews, 102, 221-241. https://doi.org/10.1016/j.neubiorev.2019.05.003

Brečić, R., Mesić, Ž., Cerjak, M., 2017. Importance of intrinsic and extrinsic quality food characteristics by different consumer segments. Br. Food J. 119, 845-862. doi:10.1108/BFJ-06-2016-0284.

Brosdahl, D. J., \& Carpenter, J. M. (2011). Shopping orientations of US males: A generational cohort comparison. Journal of retailing and consumer services, 18(6), 548-554. doi: 10.1016/j.jretconser.2011.07.005.

Capitello, R., Agnoli, L., \& Begalli, D. (2016). Drivers of high-involvement customers' intention to buy PDO wines: Valpolicella PDO case study. Journal of the Science of Food and Agriculture, 96(10), 3407-3417. doi: 10.1002/jsfa. 7521 .

Cha, S., Park, C., Wang, X. (2019). A cross-national study on restaurant attributes between Korea and China. International Journal of Culture, Tourism and Hospitality Research, 13(2), 167-182. doi:10.1108/ijcthr-06-2018-0076.

Chen, P.J., Antonelli, M., 2020. Conceptual Models of Food Choice: Influential Factors Related to Foods, Individual Differences, and Society. Foods, 9(12), 1-21. doi: 10.3390/foods9121898.

Chua, B.L., Karim, S., Lee, S., \& Han, H. (2020). Customer restaurant choice: an empirical analysis of restaurant types and eating-out occasions. International Journal of Environmental Research and Public Health, 17(17), 6276. doi: 10.3390/ijerph17176276.

Cicia, G., Russo Spena A., \& Mennella, L. (2021). Il movimento Slow Food: Narrative di un fenomeno postmoderno. Italian Review of Agricultural Economics 76(3): 61-70. https://doi.org/10.36253/rea-13376.

Clark, M.A., Wood, R.C., 1998. Consumer loyalty in the restaurant industry - a preliminary exploration of the issues. Int. J. Contemp. Hosp. Manag. 10, 139-144. doi:10.1108/09596119810222104.

Clemes, M.D., Gan, C., Sriwongrat, C., 2013. Customers’ Choice Factors of an Upscale Ethnic Restaurant. J. Food Prod. Mark. 19, 413-438. doi:10.1080/10454446.2013.724364.

Contini, C., Romano, C., Boncinelli, F., Scozzafava, G., Casini, L., 2017. Does 'local' matter in restaurant choice? Results of a discrete choice experiment targeting German and Italian customers. Agric. Food Econ. 5, 21. doi:10.1186/s40100-017-0092-y.

Cullen, F. (2005). Factors influencing restaurant selection in Dublin. Journal of Foodservice Business Research, 7(2), 53-85. doi: 10.1300/J369v07n02_05.

Dewey, J. (1910). How We Think. Lexington, MA: D.C. Heath and Company. https://doi.org/10.1037/10903-000.

Di Vita, G., Zanchini, R., Gulisano, G., Mancuso, T., Chinnici, G., \& D'Amico, M. (2021a). Premium, popular and basic olive oils: mapping product segmentation and consumer profiles for different classes of olive oil. British Food Journal, 123(13), 178-198.

Di Vita, G., Vecchio, R., Borrello, M., Zanchini, R., Maesano, G., Gulisano, G., ... \& D'Amico, M. (2021b). Oh my darling clementine: heterogeneous preferences for sustainable citrus fruits. Renewable Agriculture and Food Systems, 36(6), 557-568. doi: 10.1017/S174217052100017X.

Di Vita, G., Zanchini, R., Gulisano, G., Mancuso, T., Chinnici, G., \& D'Amico, M. (2021c). Premium, popular and basic olive oils: mapping product segmentation and consumer profiles for different classes of olive oil. British Food Journal, 123(13), 178-198. doi:10.1108/BFJ-08-2020-0677.

Duarte Alonso, A., O'neill, M., Liu, Y., \& O'shea, M. (2013). Factors driving consumer restaurant choice: An exploratory study from the Southeastern United States. Journal of Hospitality Marketing \& Management, 22(5), 547-567.

Espejel, J., Fandos, C., Flavián, C., 2007. The role of intrinsic and extrinsic quality attributes on consumer behaviour for traditional food products. Manag. Serv. Qual. 17, 681-701. doi:10.1108/09604520710835000.

Ferro Allodola, V. (2014). Metodi di ricerca qualitativa in Medical Education: approcci, strumenti e considerazioni sul rigore scientifico. Education Sciences and Society, 5(1), 121-144.

Filimonau, V., Matute, J., Durydiwka, M., Faracik, R., Mika, M., Zajadacz, A., 2018. The determinants of more responsible restaurant food choice in Poland. J. Sustain. Tour. 26, 13981416. doi:10.1080/09669582.2018.1456542.

Fink, L., Strassner, C., Ploeger, A., 2021. Exploring External Factors Affecting the IntentionBehavior Gap When Trying to Adopt a Sustainable Diet: A Think Aloud Study. Front. Nutr. 8, 1-20. doi:10.3389/fnut.2021.511412

Federazione Italiana Pubblici esercizi (2019). Ristorazione. Rapporto Annuale 2019. Ufficio Studi. Retrieved from: https://www.fipe.it/comunicazione-nps/note-per-lastampa/item/download/2243_6fd37ddf3bbb324561af20bc96a8f9b3.html; accessed on December $13^{\text {th }} 2021$.

Frank, B. (2012). The formation of consumer attitudes and intentions towards fast food restaurants: How do teenagers differ from adults? Managing Service Quality, 22(3), 260-280. https://doi.org/10.1108/09604521211230987.

Franke, T.M., Ho, T. and Christie, C.A. (2012), "The chi-square test", American Journal of Evaluation, Vol. 33 No. 3, pp. 448-458.

Gewers, F. L., Ferreira, G. R., de Arruda, H. F., Silva, F. N., Comin, C. H., Amancio, D. R., \& Costa, L. D. F. (2018). Principal component analysis: A natural approach to data exploration. arXiv preprint arXiv:1804.02502.

Goodman, L.A. (1961) Snowball Sampling. Annals of Mathematical Statistics, 32, 148-170. doi: 10.1214/aoms/1177705148.

Grady, M.P. (1998) Qualitative and Action Research: A Practitioner Handbook. Bloomington: Phi Delta Kappa Educational Foundation, USA.

Gregory, S., Kim, J., 2004. Restaurant Choice: The Role of Information. J. Foodserv. Bus. Res. 7, 81-95. doi:10.1300/J369v07n01.

Grunert, K.G. (2007). How consumers perceive food quality, in Frewer L. \& Van Trijp H. (eds.) Understanding Consumers of Food Products, $1^{\text {st }}$ Edition. Woodhead Publishing.

Guest, G., Bunce, A. \& Johnson, L. (2006). How many interviews are enough? An experiment with data saturation and variability. Field Methods, 18:59-82. doi: 10.1177/1525822X05279903.

Ha, J., Jang, S. (2013). Variety seeking in restaurant choice and its drivers. International Journal of Hospitality Management, 32, 155-168. doi:10.1016/j.ijhm.2012.05.007.

Halpin, B. (2016). SILHOUETTE: Stata module to calculate and graph silhouette width for cluster analysis. Statistical Software Components S458165, Boston College Department of Economics, revised 27 Jun 2016.

Harrington, R.J., Ottenbacher, M.C., \& Kendall, K.W. (2011). Fine-Dining Restaurant Selection: Direct and Moderating Effects of Customer Attributes. Journal of Foodservice Business Research, 14(3), 272-289. doi:10.1080/15378020.2011.594388.

Harrington, R.J., Ottenbacher, M.C., \& Way, K. A. (2013). QSR choice: Key restaurant attributes and the roles of gender, age and dining frequency. Journal of quality assurance in hospitality \& tourism, 14(1), 81-100.

Heckathorn, D.D., Cameron, C.J., (2017). Network sampling: From snowball and multiplicity to respondent-driven sampling. Annu. Rev. Sociol. 43, 101-119. doi:10.1146/annurev-soc-060116053556.

Heung, V.C.S., 2002. American theme restaurants: A study of consumer's perceptions of the important attributes in restaurant selection. Asia Pacific J. Tour. Res. 7, 19-28. doi:10.1080/10941660208722106.

Hwang, J., Eves, A., \& Stienmetz, J.L. (2021). The Impact of Social Media Use on Consumers’ Restaurant Consumption Experiences: A Qualitative Study. Sustainability, 13(12), 6581. doi:10.3390/su13126581.

ISTAT (2021a). Dataset:Principali aggregati annuali di contabilità nazionale. Retrieved from http://dati.istat.it/Index.aspx?DataSetCode=DCCN_ANA (accessed on November 29th 2021).

ISTAT (2021b). Dataset: Spese per consumi. Retrieved from http://dati.istat.it/Index.aspx?DataSetCode=DCCV_SPEMEFAM (accessed on November 29th 2021).

ISTAT (2021c). Dataset: Risultati economici delle imprese. Retrieved from http://dati.istat.it/Index.aspx?DataSetCode=DCSP_SBSREG (accessed on November 29th 2021).

ISTAT (2022). Classificazione delle attività economiche Ateco versione 2007, aggiornamento 2022. Retrievied from: https://www.istat.it/it/files//2021/12/Allegato-Ateco2007-aggiornamento2022Struttura.pdf (accessed on 16.03 .2022 ).

Jang, Y.J., Kim, W.G., Bonn, M.A. (2011). Generation Y customers' selection attributes and behavioral intentions concerning green restaurants. Int. J. Hosp. Manag. 30, 803.811. doi:10.1016/j.ijhm.2010.12.012.

Johns, N., Pine, R., 2002. Consumer behaviour in the food service industry: A review. Int. J. Hosp. Manag. 21, 119-134. doi:10.1016/S0278-4319(02)00008-7.

Junior, A.C., de Godoy Moreira, A., Gonsalves de Souza, C., Gonçalves De Oliveira, S.P., de Oliveira, S.L.I., (2019). Buying Decision: The Choice of Restaurants to Have Dinner. e-Review Tour. Res. 16, 457-488.

Kaiser, H.F. and Rice, J. (1974), "Little jiffy, mark IV", Educational and Psychological Measurement, Vol. 34 No. 1, pp. 111-117.

Kertasunjaya, T.K., Mediasari, T.D., Manaf, P.A., 2020. The Relation between Hedonic and Utilitarian Values on Satisfaction and Behavior Intention among Casual-Dining Restaurants Customers. Open J. Bus. Manag. 08, 2480-2492. doi:10.4236/ojbm.2020.86154

Kim, Y.S., Rahman, I., \& Bernard, S. (2020). Comparing online reviews of hyper-local restaurants using deductive content analysis. International Journal of Hospitality Management, 86(March 2019), 102445. https://doi.org/10.1016/j.ijhm.2019.102445.

Kleinhans, E.H., Van Heerden, C.H., Kleynhans, I.C., 2019. A dining experience typology of Middle of the Pyramid (MOP) customers in Gauteng. African J. Hosp. Tour. Leis. 8, 1-17.

Koo, L.C., Tao, F.K. c., Yeung, J.H.C., 1999. Preferential segmentation of restaurant attributes through conjoint analysis. Int. J. Contemp. Hosp. Manag. 11, 242-253. doi:10.1108/09596119910272784.

Kumara, P.S. and Canhua, K. (2010), "Perceptions of country of origin: an approach to identifying expectations of foreign products", Journal of Brand Management, Vol. 17 No. 5, pp. 343-353.

Liew, J.Y., Razali, N.A.W., Ng, K.H., Boon, J.G., Sui, C.F., 2021. Generation Z's purchase intention of fast food: Influential factors unveiled in Kluang, Johor. AIP Conf. Proc. 2347. doi:10.1063/5.0051565.

Lima Filho, D., Quevedo Silva, F., Ewerling, S., Ogatha, L., Mesquita e Silva, N., Dos Santos, R., 2013. Influencia de la limpieza de los baños en restaurantes sobre la decisión de escogencia y retorno de los consumidores de Campo Grande (Mato Grosso do Sul, Brasil). Agroalimentaria 19, 135-146.

Longart, P., Wickens, E., Bakir, A., 2016. Consumer decision process in restaurant selection: An application of the stylized ekb model. Market-Trziste 28, 173-190. doi:10.22598/mt/2016.28.2.173

Moschis, G., Curasi, C.F., Bellenger, D. (2003), "Restaurant-selection preferences of mature customers", The Cornell Hotel and Restaurant Administration Quarterly, Vol. 44 No. 4, pp. 5160.

Mowen, J. C. (1988). Beyond consumer decision making. Journal of Consumer Marketing, 5(1), 1525.

Namkung, Y., Jang, S.C., 2007. Does Food Quality Really Matter in Restaurants? Its Impact On Customer Satisfaction and Behavioral Intentions. J. Hosp. Tour. Res. 31, 387-409. doi:10.1177/1096348007299924

Okumus, B. (2021). A qualitative investigation of Millennials' healthy eating behavior, food choices, and restaurant selection. Food, Cult. Soc. 24, 509-524. doi:10.1080/15528014.2021.1882168.

Olson, J.C., Jacoby, J. (1972). Cue utilization in the quality perception process. Proceedings of the $2^{\text {nd }}$ Annual Convention of the Association for Consumer Research, 1972, 2, 167-179.

Phan, U.T.X., Chambers, E. (2016). Application of An Eating Motivation Survey to Study Eating Occasions. J. Sens. Stud. 31, 114-123. doi:10.1111/joss. 12197.

Park, E., Kwon, J., Chae, B., \& Kim, S.-B. (2021). What Are the Salient and Memorable GreenRestaurant Attributes? Capturing Customer Perceptions From User-Generated Content. SAGE Open, 11(3), 215824402110315. doi:10.1177/21582440211031546.

Rousseeuw, P. J. (1987). Silhouettes: a graphical aid to the interpretation and validation of cluster analysis. Journal of computational and applied mathematics, 20, 53-65.

Saunders, B., Sim, J., Kingstone, T., Baker, S., Waterfield, J., Bartlam, B., Burroughs, H., \& Jinks, C. (2018). Saturation in qualitative research: exploring its conceptualization and operationalization. Quality \& quantity, 52(4), 1893-1907. https://doi.org/10.1007/s11135-017-0574-8.

Scozzafava, G., Contini, C., Romano, C., Casini, L., 2017. Eating out: which restaurant to choose? Br. Food J. 119, 1870-1883. doi:10.1108/eb011683.

Sgroi, F., Modica, F., Fusté-Forné, F. (2022). Street food in Palermo: Traditions and market perspectives. International Journal of Gastronomy and Food Science, 27, 100482. https://doi.org/10.1016/j.ijgfs.2022.100482.

Sobal, J., Bisogni, C.A., (2009). Constructing food choice decisions. Ann. Behav. Med., 38 (Suppl 1):S37-S46, doi:10.1007/s12160-009-9124-5.

Steenkamp, J.B.E.M. (1990). Conceptual model of the quality perception process. Journal of Business Research, 21(4), 309-333. doi:10.1016/0148-2963(90)90019-a.

Steinley, D. (2006). "K-means clustering: a half-century synthesis", British Journal of Mathematical and Statistical Psychology, 59(1), 1-34.

Szybillo, G.J., Jacoby, J. 1974. Intrinsic versus extrinsic cues as determinants of perceived product quality. Journal of Applied Psychology, 59(1), 74-78.

Taherdoost, H., Sahibuddin, S., Jalaliyoon, N. (2014). Exploratory Factor Analysis; Concepts and Theory. Advances in Applied and Pure Mathematics, 27, 375-382.

Yüksel A., Yüksel F. (2002). Market Segmentation Based on Tourists' Dining Preferences. Journal of Hospitality \& Tourism Research, 26(4), 315-331. doi:10.1177/109634802237482.

Yüksel A., Yüksel F. (2003). Measurement of tourist satisfaction with restaurant services: A segmentbased approach. Journal of Vacation Marketing, 9(1):52-68. doi:10.1177/135676670200900104.

## Highlights

- Several discriminating intrinsic and extrinsic attributes for restaurant selection have been found, linked to the following principal components: geographic proximity and accessibility, aesthetic-based requisites, fine dining and renowned eating places, average standard requirements, traditional cuisine, feedbacks and personal experience.
- Customers pay attention not only to the inherent characteristics of restaurants but also to related aspects that not are fully under the control of restaurateurs
- Certain demographic variables, such as gender, age, education and income, influence restaurant choice intentions
- For each segment of customers, there is a mix of intrinsic and extrinsic attributes that shapes the corresponding enjoyment patterns


## Implications for gastronomy

Taking into account this information is of utmost importance for businesses, especially in order to understand how to orient their marketing strategies. Considering key target market characteristics is necessary to ensure a fit between restaurants' attributes and the expectations of targeted customers (Harrington et al., 2011).

Restaurateurs that chose the segment of local tavern lovers must take into account that this kind of customers is probably middle-aged and low income. Communicating effectively the link with the territory and traditions, and offering a varied, abundant and typical menu at affordable prices would attract these customers. Choosing a location close to busy centres or easily accessible would be an advantage, as would an easy booking system. Typical and themed evenings and special offers could attract customers of this segment. If restaurateurs are interested in the segment of aesthetic enthusiasts, they should put efforts into building a pleasant ambiance, paying attention to the minor details, looking for high-quality raw materials, obtaining external quality certifications, improving the reputation of hiring renowned chefs and ensuring the presence in gastronomic guides. Young people are particularly sensitive to this typology of restaurants, and they can afford higher prices thanks to a middle income.

Restaurateurs interested in the segment of informed, refined and elite customers, should take into account that these customers love the typicality, the variety and the quantity of food. They pay particular attention to rating and reviews, want to be sure of the quality by means of certifications (catering quality, raw materials) and the presence in gastronomic guides, despite being young and low-income people.

Finally, restaurateurs targeting the segment of average standard customers should ensure a pleasant, clean and comfortable ambiance, and high-quality food at a reasonable price. Customers belonging to this target want to spend their money well, and if well impressed their loyalty will be ensured. Communication appeared to be of vital importance in marketing processes, that needs to identify the attributes that are important to customers, but it is above all the classification variables that enable
businesses to better identify and reach target customers (Harrington et al., 2011). Because it has been found that customers who experience service inefficiencies and expressed negative feelings tend to telling about the negative aspects rather than talk about other restaurant characteristics (Park et al., 2021).

Preferences and attitudes of customers towards restaurants are rapidly changing: as it was demonstrated, the importance they give to restaurants attributes can vary according to their age, purchasing power, education level, as well as their personal characteristics and desiderata. Restaurateurs need to know their target markets to better address their management strategies and loyal their customers, improving the intrinsic attributes of their restaurants and leveraging the extrinsic attributes.

