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

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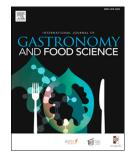
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## Italians' behavior when dining out: main drivers for restaurant selection and customers segmentation

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

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## 4 Abstract

This study investigates which attributes drive Italian customers while choosing a restaurant, how 5 many of these attributes correspond to intrinsic and extrinsic characteristics of restaurants and which 6 7 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 8 statistics and exploratory factor analysis were applied to infer information. A distance-based 9 10 ordination technique (Principal Component Analysis) was implemented to display patterns in 11 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 12 and accessibility', 'aesthetic-based requisites', 'fine dining and renowned eating places', 'average 13 standard requirements', 'traditional cuisine', 'feedbacks and personal experience'. A cluster analysis 14 was performed and four different profiles of restaurant customers were found, with specific socio-15 demographic characteristics and attitudes towards intrinsic and extrinsic attributes of restaurants. The 16 homogenous features customers have within each segment can be used by foodservice operators as 17 an information to orientate their strategies. 18

19

#### 20 Keywords

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

22

## 23 Introduction

## 24 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, 27 28 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% 29 of Italian municipalities (Federazione Italiana Pubblici Esercizi, 2019). According to the Italian 30 31 National Institute of Statistics (ISTAT, 2021a), the domestic expense for foodservices passed from 79.2 billion  $\in$  in 2016 to 85.5 billion  $\notin$  in 2019, with a positive trend of +8%. Because of the CoViD-32 19 pandemic, this trend has reversed, with a decrease of -31.5%, in 2020 compared to the previous 33 year. Pairwise, the average monthly household expenditure remained almost unvaried in the period 34 2018-2019 (approx. 110 € per family), while in 2020 it has decreased by -40% (ISTAT, 2021b). From 35 36 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 37 socioeconomic importance of the foodservice sector for the Italian economy is also confirmed in 38 terms of total added value, which was about 24,015.00 billion € in 2018, and in terms of occupation, 39 with a total of 1,305.00 billion people involved (ISTAT, 2021). 40

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).

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## 53 Research needs in the Italian foodservice sector: filling a gap

54 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 55 segments, target offerings, and position the restaurant correctly. A tailored marketing strategy can be 56 57 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. 58 59 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 60 such as lifestyle variables (Jang et al., 2011). Also intrinsic and extrinsic characteristics of restaurants, 61 62 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 63 to the restaurant, (e.g., food quality and quantity, ambience, cleanliness, menu, service). Extrinsic 64 65 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, 66 quality certifications). Therefore, this study aims to verify how customers, in the process of selecting 67 a restaurant, are influenced (driven) by several attributes, not only inherent to intrinsic characteristics 68 of the restaurant but also relative to extrinsic features, that can also have different significance 69 70 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 71 process?". 72

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.

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## 79 Literature review and hypotheses development

## 80 *Customers' behaviour in restaurant choice: selection attributes*

There is an extensive body of scientific literature relating to customers' behaviour, customers' 81 satisfaction, consumption patterns and behavioural intentions, all fields of study rooted in applicative 82 disciplines that systematically study, describe and understand the consumption behaviours in a 83 multidisciplinary perspective, involving at the same time economics, psychology, sociology and even 84 anthropology (Mowen, 1988; Grunert et al., 2007). Relevance of these fields of study is particularly 85 strong in business management, because repurchase intentions, positive experiences, and patronage 86 are of utmost importance to build customer loyalty and enhance companies' durability and long-term 87 88 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 89 hospitality and tourism (Johns and Pine, 2002). Nevertheless, as foodservice activities (namely, 90 91 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 92 consumer behaviour science and deserve specific attention (Johns and Pine, 2002). 93

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 105 106 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 107 Chambers, 2016), among others. This also undermines the generalisability of restaurant choice 108 behaviour, and therefore further developments in scientific research are needed to understand trends 109 and motivations in consumer restaurant selection (Chua et al., 2020). Furthermore, understanding 110 how and why customers choose their food consumption locations in different geographical areas, and 111 how the criteria for choice vary according to socio-demographic and personal characteristics, is 112 essential for foodservice operators and managers to maintain the economic viability of their 113 114 businesses over time (Filimonau et al., 2018).

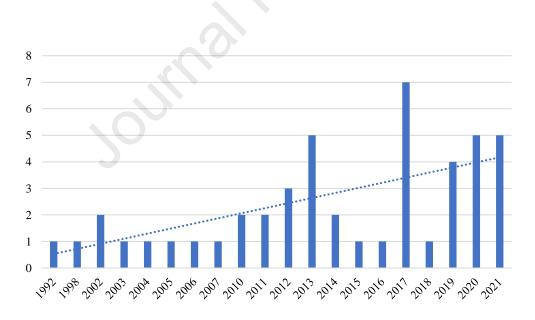
A literature review (Fig. 1) conducted on contributions published in scientific peer-reviewed journals, found only 47 studies published since 1992 to date exploring the drivers of customers' decision process in selecting restaurants, as showed in Figure 2. In particular, concerning the nations where 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).

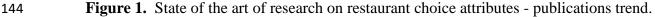
122 Confirming the findings by Filimonau et al. (2018), the scientific research on consumer choice architecture in foodservice provision is promptly growing and developing. Indeed, concerning the 123 consumer behaviour in the foodservice sector, while preferences on food typologies, consumption 124 125 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 126 choice of one restaurant over another. Moreover, the scientific research on restaurant selection 127 attributes is geographically restricted and limited in the scope of analysis (Filimonau et al., 2018): 128 34% of studies reviewed were researches conducted on United States customers, 11% analysed 129

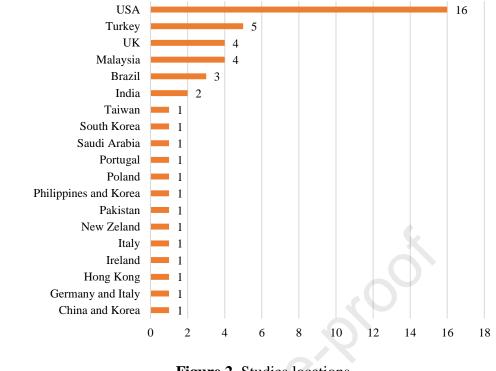
customers or tourists dining in Turkish restaurants, the 9% of studies were conducted in UK, and thesame percentage of studies in Malaysia.

Only two studies focused on Italian customers or were conducted in Italy. Scozzafava et al. (2017) 132 defined customers' preferences in choosing a restaurant answering the question if local, organic, and 133 GMO-free attributes are significant in the selection of a restaurant and for which consumer segments. 134 The authors found that there is a segment of customers, representing 30% of the demand, that is 135 willing to pay a premium price for green products and their likelihood of choosing a restaurant 136 offering local products is three times higher than a restaurant without certified raw materials. Contini 137 et al. (2017) studied the relationship between certified local foods and eating out consumption 138 139 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 140 price for certified locally grown products across both countries. 141

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Figure 2. Studies locations.

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A little-explored theme in the restaurant choice literature is that of the distinction between intrinsic 148 149 and extrinsic attributes. This kind of classification can slightly vary according to the theoretical reference (Olson and Jacoby, 1972; Acebron and Dopico, 2000; Albari and Dewi, 2016; Espejel et 150 al., 2007; Brečić et al., 2017). Table 1 refers the studies, found among those reviewed, that made 151 some kind of distinction about the factors or characteristics of restaurants, or the motivations that 152 drive customers' choice. However, among the papers reviewed, none of them applied this distinction 153 154 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, 155 linked to internal motivations; in the second case, they referred to derived variety-seeking triggered 156 157 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 158 characteristics such as price and brand. Likewise, Junior et al. (2019) describe the phase of need 159 identification as driven by internal and external stimuli, being the first ones arising from customers' 160 inherent needs, and the latter influenced by marketing strategies of companies. Cha et al. (2019) 161

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

170 particular, three dimensions of gratification that explain how customers adopt social media for their

171 restaurant decision-making process.

172 It is also important to highlight that consumers' behaviour is the result a combination of factors linked 173 to customers' characteristics, not to the product 'restaurant', i.e., internal factors related to 174 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).

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

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

194 *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).

200 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

202 gender, income, occupation, and education level: well-educated and high-income customers are the

203 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

211 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.

226 Contini et al. (2017) described different restaurant customers' segments according to socio-227 demographic variables, motivations of choice, product qualities linked to the local origin, and 228 Schwarts values. They found that young people are most likely to prefer local origin food, willing to

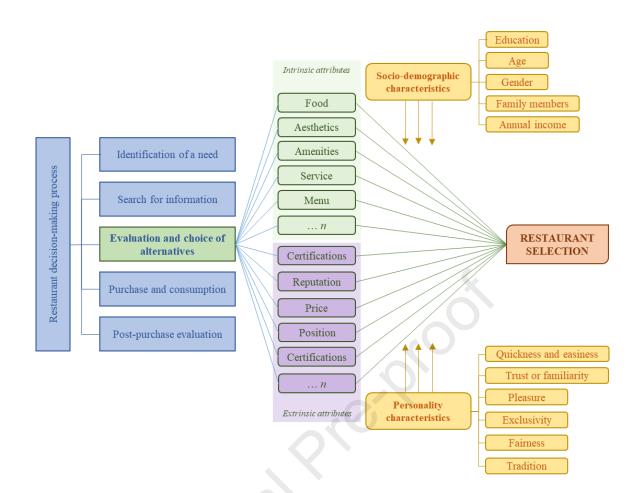
pay a plus for certificated local products ('locavores'), while people aged between 45 and 54 were
less interested ('non-choosers'), and elderly people give more importance to the price ('savers').

The interest in segmentation analysis has attracted the interest of researchers across all disciplines, 231 such as consumer behaviour, customer decision-making and satisfaction, culinary tourism, and 232 management science in general. Knowing the significance and values that specific customers' groups 233 attach to attributes, characteristics, items, and variables is of utmost importance for businesses (Koo 234 235 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. 236 Customers assign to each attribute implicit utilities that allow them to make decisions; restaurateurs 237 238 need to know these attributes and how their importance vary under different situations, occasions, demographic characteristics, geographical areas, etc. 239

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 analysisapplied in this study and described in the following paragraphs.



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Figure 3. Conceptual framework of the analysis.

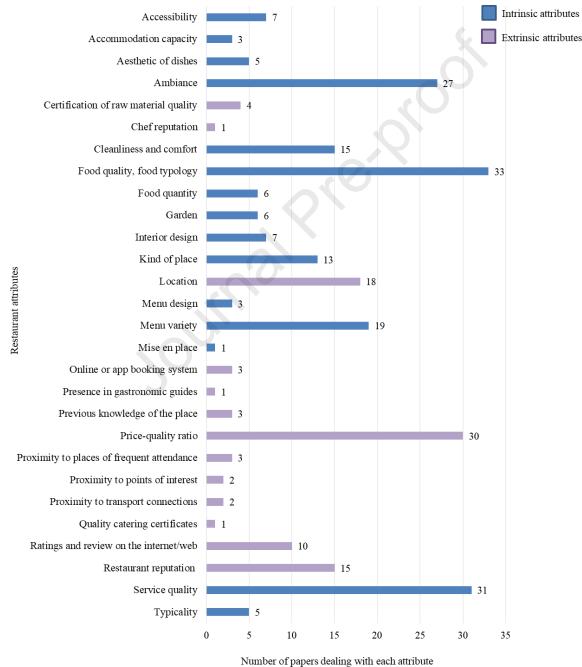
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## 250 Methodology

## 251 Survey instrument and data collection

Data were collected from May to September 2021 using a multi-section and structured questionnaire, 252 with a specific set of predefined questions, developed through the interactive support of Google 253 Forms<sup>®</sup> to allow the compilation via web to reach a higher number of Italian customers in less time. 254 To overcome the difficulty of reaching a population geographically dispersed, the sampling technique 255 chosen is snowball sampling (Goodman, 1961), i.e., a targeted, exponential, non-discriminatory, non-256 probabilistic sampling technique, also known as 'chain referencing', which allows acquiring data 257 258 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 259 target subpopulation (such as direct acquaintances), who are asked to involve other participants for 260

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.



Number of papers dealing with each and

**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 268 it was found that further observations (responses) did not add new or discordant opinions, but 269 confirmed previous responses, in percentage terms (Guest et al., 2006; Ferro Allodola, 2014; 270 Saunders et al., 2018). For this study, the procedure of data saturation by Grady (1998:26) was taken 271 into account: "New data tend to be redundant of data already collected. In interviews, when the 272 researcher begins to hear the same comments again and again, data saturation is being reached... It 273 274 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 275 stopped. Furthermore, a number of more than 500 questionnaires is considered a suitable quantity for 276 277 multivariate analysis (Di Vita et al., 2021a, Taherdoost et al., 2014). The practical procedure through 278 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 279 280 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 281 through online social networks and e-mails, and finally, 513 questionnaires were completed, of which 282 13 were discarded, representing a valid response rate of 97%. 283

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.

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

Variables	Categories	Frequency	%
	Younger Generations	263	52.60
Age Cohort	Generation X	175	35.00
	Older Generations	62	12.40
Candan	Male	194	38.80
Gender	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
	Up to 10.000 €	135	27.00
	10.001-20.000 €	126	25.20
Annual income	20.001-30.000 €	127	25.40
	30.001-40.000 €		10.20
	Over 40.000 €	61	12.20
	1-2	175	35.00
Family members	3-4	275	55.00
2	>4	50	10.00

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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 = notimportant and 5 = very important. The mean scores obtained by each attribute and its relative standard deviation (SD) are reported in Appendix B.

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## 310 Data analysis

To test the first hypothesis and thus identify what drivers move costumers in the restaurants' selection 311 process, an explorative factorial analysis based on Principal Component Analysis was carried out. 312 The model aims to reduce the number of predictors into factorial dimensions by minimizing the loss 313 of variance (Gewers et al., 2018). Starting from an original pool of correlated variables, the analysis 314 highlights latent relationships (Capitello et al., 2016) and produces a new sub-set of orthogonal 315 variables called Principal Components (PCs) (Di Vita et al., 2021c). The reliability of the model was 316 evaluated by two different tests: Kaiser-Meyer-Olkin (KMO) and Bartlett's test of sphericity. The 317 first one produces an index included between 0 and 1 by comparing the observed correlation and the 318 319 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 0.7 320 (Kaiser and Rice, 1974). Bartlett's test evaluates the hypothesis that the correlation of the model is 321 322 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 323 significant (Kumara and Canhua, 2010). 324

To deal with the second hypothesis, the analysis of clusters was performed using the factorial 325 dimensions obtained by the PCA model (Di Vita et al., 2021c). The method of clustering applied was 326 327 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 328 the groups (Steinley, 2006). The issue of the best cluster solution, which is particularly important in 329 330 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, 331 silhouette width compares for each case the mean distance observed with other respondents within 332 the cluster and the mean distance with the nearest cluster. This computation provides a goodness of 333 fit index for each respondent ranging from -1 to +1 where higher scores indicate better fit (Rousseeuw, 334 1987). Several hypotheses were tested and by observing the graphs generated, the four-cluster 335

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).

343

#### 344 **Results**

## 345 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** 352 353 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 354 strictly interrelated with the restaurant location easy to reach. Proximity to usual places of attendance 355 356 (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 357 sights, has also importance in this first component, and contributes to select a restaurant. Hospitality 358 359 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 360 361 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 365 as Aesthetic-based requisites (Factor 2), since many attributes included in this component are 366 directly or indirectly related more to the image of the restaurant environment than substance even if 367 the visual quality of a restaurant is able to provide satisfying both aesthetic and sensory experience. 368 In this case, the appearance linked to *External location* such as the urban context in which the 369 restaurant is located (0.48) and the eventual Presence of garden or outdoor spaces (0.58) contributes 370 371 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 372 (0.71). The prominent role of hedonism linked to high-end decor within this component is also 373 underlined by the importance of Aesthetic of dishes (0.77) and Mise en place (0.70). 374

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 392 **Traditional cuisine (Factor 5)** such as *Typicality* (0.72) and *Food quantity* (0.71). The *Menu variety* 393 394 (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. 395 The last component is quite small, but it seems quite interesting since this component based on 396 397 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 398 restaurants provided by specialized websites in which ratings and rankings are reported or that are 399 400 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). 401 402

Table 3. Rotated factor loadings.	Table 3.	Rotated	factor	loadings.
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Variables	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5	Factor 6
	Geographic proximity and accessibility	Aesthetic- based 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			

Certification of						
raw material			0.706			
quality						
Restaurant			0.617			
reputation						
Chef reputation			0.765			
Presence in			0.670			
gastronomic guides			0.070			
Previous knowledge of the						0.483
place						0.465
Ratings and review						0.627
on the internet/web						0.637
Garden		0.586				
Interior design		0.716				
Location		0.487				
'Mise en place'		0.696				
Aesthetic of dishes		0.768				
Menu design		0.709				
Proximity to places						
of frequent	0.733					
attendance						
Proximity to points of interest	0.689					
Restaurant						
capacity	0.735					
Accessibility	0.743					
Online or app	0.500					
booking system	0.599					
Proximity to						
transport	0.723					
connections						
Variance explained	0.139	0.135	0.124	0.122	0.067	0.056
Bartlett test of sphericity	7679.95**					
KMO test	0.908					

\*\* = significant p-value 0.01

404

## 405 *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.

409 The first segment of customers shows a certain propensity towards homemade cuisine; these demand

410 meals with basic quality standards of food and service. They are also insensitive to information

411 seeking and averse to fine dining and sophisticated restaurants. In addition, this first segment, which

412 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.

419 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, 420 traditional cuisine and food variety and are not influenced by subjective knowledge and information 421 422 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 423 spaces. At the same time, respondents belonging to this group are attracted by dish presentation (mise 424 en place) and menu design. On a smaller scale, they are also interested in the highest standards of 425 food and take into account the restaurant reputation, and certification but they negatively consider 426 medium standard restaurants. Women and older users are the most representative socio-demographic 427 characteristics of this segment. 428

The third group includes informed, refined, and elite customers (Cluster 3) who associate 429 430 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 431 new and original way. They are strongly attracted by renowned and certified restaurants as well as 432 433 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 434 proximity and medium standard restaurant. A small difference among gender is observable within the 435 cluster but, compared with the others, the male gender slightly prevails in this group, while young 436 individuals and generation X are the classes more represented. 437

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.

444

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

Factors	Cluster1	Cluster2	Cluster3	Cluster4	<b>F-value</b>
	Local tavern lovers	Aesthetic enthusiasts	Informed, refined and elite customers	Average standard 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

## 445

Table 5.	Cluster	analysis	results	(Frequencies).
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Variables	Categories	Cluster1	Cluster2	Cluster3	Cluster4	Chi- square statistics
	5	Local tavern lovers	Aesthetic enthusiasts	Informed, refined and elite customers	Average standard customers	
	Younger generations	43.27	50.31	54.04	67.57	
Age Cohort	Generation X	44.23	33.54	36.65	21.62	14.84*
	Older generations		16.15	9.32	10.81	
	Male	45.19	33.54	45.34	27.03	10.00*
Gender	Female	54.81	66.46	54.66	72.97	10.89*
	Elementary and middle school	3.85	3.73	1.24	4.05	
Education	High school	31.73	37.27	26.71	37.84	12.84
	University	52.88	54.66	62.73	48.65	
	PhD and Specializations	11.54	4.35	9.32	9.46	
	Up to 10,000.00 €	31.73	22.36	30.43	22.97	
	10,001.00-20,000.00 €	23.08	24.84	24.22	31.08	
Annual income	20.001-30.000 €	23.08	27.33	28.57	17.57	14.30
	30.001-40.000 €	12.5	9.32	8.07	13.51	
	Over 40.000 €	9.62	16.15	8.70	14.86	

	Journal Pre-proof					
	.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	

447

\* = significant p-value 0.05

448

## 449 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.

## 456 Significance of results

In the literature review propaedeutic to this study, the limits highlighted by Filimonau et al. (2018) 457 were confirmed, *i.e.*, that most of the studies on restaurant selection attributes are very specific and 458 limited in the scope of analysis, focusing often on specific segments of the population. For example, 459 some studies focused on restaurant selection attributes important for senior tourists (Kim et al., 2010), 460 461 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; 462 Okumus et al., 2021). Other authors focused on specific meals such as dinner (Junior et al., 2019), or 463 464 specific cities (Cullen, 2005; Lima Filho et al., 2013), among others. In other cases, questionnaires 465 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 466 467 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 468 habits of Italian customers in the restaurant selection process, and no studies discriminating intrinsic 469 470 and extrinsic attributes for restaurant selection have been found. Therefore, this study deserves the

471 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.

473 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

475 typologies of Italian customers, and what they concern in the process of selecting a restaurant.

476

Table 6.	Main	insights	from	this	study.
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Segment of customers	Principal components	Preferred restaurant attributes	Typology of attributes	Prevalent personal characteristics	
	Traditional	Menu variety Typicality	Intrinsic Intrinsic		
	cuisine	Food quantity	Intrinsic		
		Proximity to places of frequent attendance	Extrinsic	Generation X	
		Proximity to points of interest	Extrinsic	Women	
	Geographical	Accommodation capacity	Intrinsic	University-level	
	proximity and	Accessibility	Intrinsic	education	
Local tavern	accessibility	Online or app booking system	Extrinsic	Income up to 10,000.0	
lovers		Proximity to transport connections	Extrinsic	€	
		Price-quality ratio	Extrinsic	- Families of 3-4	
		Kind of place	Intrinsic	members	
	Average	Ambiance	Intrinsic		
	standard	Cleanliness and comfort	Intrinsic		
	requirements	Service quality	Intrinsic		
		Food quality, food typology	Intrinsic		
		Garden	Intrinsic		
	Aesthetic-based requisites	Interior design	Intrinsic	¥7	
		Location	Extrinsic	Younger generations Women	
		'Mise en place'	Intrinsic	Women University-level education	
Angelantin		Aesthetic of dishes	Intrinsic		
Aesthetic enthusiasts		Menu design	Intrinsic	- Income between	
eninusiusis		Quality foodservice certificates	Extrinsic	10,001.00 - 20,000.00	
	Fine dining and	Certification of raw material quality	Extrinsic	10,001.00 - 20,000.00 Families of 3-4	
	renowned	Restaurant reputation	Extrinsic	members	
	eating places	Chef reputation	Extrinsic	members	
		Presence in gastronomic guides	Extrinsic		
	Feedbacks and	Previous knowledge of the place	Extrinsic		
	personal	Ratings and review on the internet/web	Extrinsic	Younger generations	
	experience			- Women	
Informed,	Traditional	Menu variety	Intrinsic	University-level	
refined and	cuisine	Typicality	Intrinsic	education	
elite		Food quantity	Intrinsic	- Income up to 10,000.0	
customers		Quality foodservice certificates	Extrinsic	€	
	Fine dining and	Certification of raw material quality	Extrinsic	Families of 3-4	
	renowned	Restaurant reputation	Extrinsic Extrinsic	members	
	eating places	Chef reputation			
		Presence in gastronomic guides	Extrinsic		

	Price-quality ratio	Extrinsic	
A 110400 00	Kind of place	Intrinsic	Younger generations
U	Ambiance	Intrinsic	Women
requirements	Cleanliness and comfort	Intrinsic	University-level
	Service quality	Intrinsic	education
	Food quality, food typology	Intrinsic	Income between
	Previous knowledge of the place	Extrinsic	10,001.00 - 20,000.00 €
personal	Ratings and review on the internet/web	Extrinsic	Families of 3-4
			members
experience			
	Feedbacks and	Average standard requirementsKind of place Ambiance Cleanliness and comfort Service quality Food quality, food typologyFeedbacks and personalPrevious knowledge of the place Ratings and review on the internet/web	Average standard requirementsKind of place AmbianceIntrinsic IntrinsicFeedbacks and personalPrevious knowledge of the place Ratings and review on the internet/webExtrinsic Extrinsic

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479 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 480 (mean 4.51, SD 0.79), Service quality (mean 4.31, SD 0.83), and Price-quality ratio (mean 4.11, SD 481 0.92). Secondly, the results of the study suggest that certain demographic variables (among gender, 482 age, education, income) may moderate restaurant choice intentions. Scholars agree that good market 483 484 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 485 as good discriminators between groups of customers who react differently to restaurant attributes 486 487 (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.

496 *Implications for gastronomy* 

Knowing information about the main drivers for restaurant choice is of utmost importance forbusinesses, 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 theexpectations of targeted customers (Harrington et al., 2011).

Restaurateurs that chose the segment of local tavern lovers must consider that this kind of customers 501 is probably middle-aged and low income. Communicating effectively the link with the territory and 502 traditions, and offering a varied, abundant and typical menu at affordable prices would attract these 503 customers. Choosing a location close to busy centres or easily accessible would be an advantage, as 504 505 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 506 should put efforts into building a pleasant ambiance, paying attention to the minor details, looking 507 508 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 509 particularly sensitive to this typology of restaurants, and they can afford higher prices thanks to a 510 middle income. 511

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.

520 Communication appeared to be of vital importance in marketing processes, that needs to identify the 521 attributes that are important to customers, but it is above all the classification variables that enable 522 businesses to better identify and reach target customers (Harrington et al., 2011). Because it has been 523 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.

532 *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 538 investigation that is national and therefore it could be interesting to enlarge the geographical 539 boundaries of survey by including, for example, other European countries to verify if significant 540 541 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 542 recommended for additional analysis. A stratified sample could be adopted for greater 543 544 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 545 studies might regroup customers based on their health concerns and sustainability-related behaviours. 546 Moreover, future research could be directed to analyse in depth most important drivers for each 547 category of restaurant identified, by segmenting customers' personal traits and behaviours. It could 548

s49 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.

551

552 **Declaration of competing interest** 

553 The authors declare no conflict of interest.

554

555 Appendix A. Supplemental Data.

- 556 Appendix B. Supplemental Data.
- 557 Appendix C. Supplemental Data.
- 558

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## **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 ٠ 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.

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