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**Article**

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## Article

# Ethnocentrism Effects on Consumers' Behavior during COVID-19 Pandemic

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**Abstract:** The COVID-19 pandemic has upset everyone's normal daily activities, generating psychiatric disorders and changing consumers' preferences. Among others, the agri-food sector has experienced strong changes and, during the lockdown period, Italian consumers modified their purchasing habits in response to the fear and uncertainty generated by the spread of the virus. In order to find out the main consequences of the shock suffered during the period and to understand which factors have affected purchasing choices, an online survey was conducted on 286 Italian consumers. The results show that ethnocentrism has been the factor that most has influenced consumers' behavior during the lockdown period and that consumers will continue to prefer national agri-food products when pandemic will be over, constituting a deep change to future eating habits.

**Keywords:** agri-food products; Italian consumers; lockdown; neuropsychological effects



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## 1. Introduction

In March 2020, the WHO issued a pandemic alert due to the infectious disease COVID-19 (CoronaVirus Disease-2019) (United Nations 2020; World Health Organization 2020). In an attempt to stop and combat the spread of the virus, stringent containment measures were adopted in many countries with severe restrictions on the normal course of daily activities, such as the compulsory use of medical masks, social distancing and the closure of public buildings in favour of distance learning and smart working.

These restrictions have overturned the normal course of economic activities in every production sector, including the agri-food one (United Nations 2020). The pandemic has revealed the vulnerabilities of food market to shocks and crises (Power et al. 2020). On the supply side, restrictions on people's mobility have contributed to labour shortages and crop failures (OECD 2020). At the same time, frightened by the ongoing pandemic, consumers have changed their values and their purchasing choices, giving preference to food of national origin (Cappelli and Cini 2020).

Consumers, who have become more attentive to their health and more careful in their hygienic behaviours to avoid infection by COVID-19, have changed their eating habits, preferring often local and domestic food products (Končar et al. 2021).

During a pandemic, in fact, a very important problem is that limitations, fear and panic, drastically reduce both the consumers' displacements and the food distribution through global supply chains, increasing the consumption of local products that provide a rapid response to local needs while reducing food contamination as well as the infection of employees during transport (Hamadani et al. 2020; Sarkis 2020). For example, in Italy,

a national survey carried out by Nomisma ([Nomisma 2021](#)) showed that in the first seven months of 2020 there was a 3.3% increase in retail sales of Italian foodstuffs compared to the previous year. The same survey showed a re-channelling of consumption, with a strong domestic consumption component, indicating that the Italian agri-food sector was able to respond to the needs of the moment and that domestic food is a guarantee of food safety for the Italian consumer.

Thus, the shock of the current situation has further emphasised the preconceived notion in the consumer that the assessment of food quality can be based, among other things, on its national identity ([Končar et al. 2021](#)). Previous literature showed, in fact, that the country of origin of the food is important to consumers who perceive it as an attribute of quality ([Kaynak et al. 2000](#); [Schnettler et al. 2011](#); [Insch and McBride 2004](#); [Chiou 2003](#); [Leonidou et al. 1999](#)). In addition, some studies ([Ricci et al. 2019](#); [Massa and Testa 2012](#); [Moser et al. 2011](#)) have shown how the concept of “Made in Italy” has evolved to the characteristics of a brand with a defined identity, synonymous with quality and reliability not only in Italy but also worldwide.

Taking into account the above, the hypothesis of this study is that the growing interest of Italian consumers in domestic products during the COVID-19 pandemic may also were influenced by ethnocentric consumption values. The latter refer to the tendency to judge their own culture and products as superior to that of others, refusing what comes from other countries ([Liu et al. 2006](#)). However, to the best of our knowledge, this thesis has not yet been tested in the literature. In order to fill the existing gap, the aim of this paper is to assess exactly whether food purchases during the COVID-19 pandemic period were also driven by ethnocentric consumption values.

In order to achieve this goal, a survey on the purchasing behaviour of 286 Italian consumers during the second phase of the pandemic was carried out.

The paper is organized as follows: after this introduction, there follow two sections that explore the neurological and psychological aspects that surfaced in the consumer during the pandemic and the literature on consumer ethnocentrism. It has been chosen to develop a section devoted to neurological and psychological aspects because addressing the issue from a medical perspective provides a more complete overview of the conditions that led to the development of ethnocentric attitudes in consumers during the pandemic. Subsequently, after explaining the adopted methodology, the results of the survey are reported. Finally, discussion section and conclusions are discussed.

## 2. Neuropsychological Effects of COVID 19 Pandemic

An increasing number of studies has investigated the psychological impact of the COVID-19 pandemic on adults, adolescents and children ([Mukaetova-Ladinska and Kronenberg 2021](#); [Stamu-O'Brien et al. 2020](#)).

The prolongation of the COVID-19 pandemic can lead to dysfunctional psychological dynamics that activate anxiety, depression and post-traumatic stress disorder ([Roccella 2020](#)).

Among the main stress factors determining widespread emotional distress and an increase of psychiatric disorders associated to COVID-19 (Table 1), there have been measures and actions taken by authorities limiting personal freedom, increasing financial difficulties, changes in daily routine, fear of getting sick, relational flattening and feelings of loneliness ([Pietrabissa and Simpson 2020](#)). The constant feelings of discomfort and tension increased by lockdown and by restrictive measures can lead, in fragile subjects, to develop into social anxiety ([Zheng et al. 2020](#)).

Recent studies have been carried out through online surveys in the United Kingdom on the general population and on vulnerable groups including people with pre-existing mental or physical health issues in order to investigate the alterations of the mental health and the actions and behaviors implemented to maintain the state of well-being during COVID-19 pandemic. The results of the survey underlined interviewees' widespread concerns about social isolation and distancing, an increase of anxiety-depressive disorders,

and negative feelings and concerns related to the effects of the pandemic, especially financial (Holmes et al. 2020).

**Table 1.** Main symptoms of emotional distress during the COVID-19 pandemic.

Symptoms of Anxiety-Depression Spectrum
Obsessive-compulsive symptoms
Symptoms of post-traumatic stress disorder
Insomnia
Insecurity
Confusion
Emotional isolation
Feeling of guilt of infecting others
Being isolated for fear of the infection

The population surviving previous pandemics or very dangerous life events has an elevated risk of developing a post-traumatic stress disorder. Therefore, one of the main consequences of the COVID-19 pandemic is the social isolation leading to an increased risk of depression, alcohol and drug abuse, suicide, and increased stress for financial concerns and job loss (Turecki et al. 2019; Elovainio et al. 2017).

The aforementioned studies analyze the psychological and social factors involved by the epidemic and which affect people's psychological and physical well-being. Other studies have underlined the positive or negative role that media can play during a pandemic in reassuring and informing the population or, on the contrary, in spreading fake news and, therefore, influencing people's psychophysical balance (Venegas-Vera et al. 2020).

It should be remembered that for people with previous mental or physical problems or hospitalizations, isolation emphasizes their vulnerability, causing an increase of anxiety, depression, eating disorders, or breaking the fragile psychological stability of those fragile subjects (Vetri et al. 2021). The closing of schools can have serious effects at this developmental age, especially on those with special needs, leading to the onset of psychological disorders. Especially for those on the anxiety disorder spectrum, therefore, it is recommended to implement preventative measures in order to protect the mental health of children and adolescents (Loades et al. 2020).

The spread of the pandemic has also affected the food choice behaviors of the population with consequences on lifestyles often causing depression, anxiety, hypochondria, insomnia and food choice behaviors with frequent dysfunctional use of food, for example for consolatory purposes (Savarese et al. 2021; Di Renzo et al. 2020a).

Conversely, has been observed that spending the majority of time at home, people tend to eat more nutritious food in the first part of the day, to make healthy choices in line with the correct nutritional guidelines, to have more time to devote to personal care and therefore to put on weight less and sleep better. Similarly, it has also been observed an increased use of supplements, especially containing substances which, according to the public opinion, strengthen the immune system (vitamin A, C, D and the vitamins of group B, Zn, curcumin, probiotics, selenium, lactoferrin, quercetin, omega-3 fatty acid) (Hamulka et al. 2020).

Fear of death and of illness changed usual habits and eating lifestyles, turning them, in the majority of cases, towards healthier behaviors. For example, a recent study involving 3533 respondents aged between 12 and 86 years has underlined in the interviewed subjects a greater adhesion to the Mediterranean diet, purchase of local products, purchase of organic fruits and vegetables, increase of homemade food (bread, pizza, desserts), smoking reduction, slight increase of physical activity and lower body mass index (BMI) (Di Renzo et al. 2020b). According to an online survey administered by the Engage Minds Hub (a research center of the Università Cattolica, in Cremona, Campus of Santa Monica, Italy) of more than 1000 Italian citizens, it has been underlined that the COVID-19 pandemic is changing the eating habits and values of the Italians, moving them towards local and

certified products. Especially people with more anxiety and depression symptoms tend to choose national high-quality products because they distrust everything that comes from abroad, also showing closure behaviors in the eating field. This shows how, during this pandemic, Italian consumers have modified their dietary regime in favor of healthier and domestic products. However, it turns out that 40% of the Italian population does not perceive that strengthening the immune system through food consumption could help them to limit the contagion of COVID-19 disease. Among these, those who attach less importance to food as prevention differ in their psychological attitude towards health and food, which seems to represent a different approach to food consumption (Savarese et al. 2021).

Regarding the increased preference of Italian consumers for foods of local or national origin, it is not clear if this change in food consumption habits, and as a consequence, the distrust toward foreign food products, is also driven by ethnocentric values. Thus, analyzing consumers' preferences during the COVID-19 pandemic can help clarify which factors, health or ethnocentric considerations, have effects on Italian consumers changing habits.

### 3. Consumer Ethnocentrism Literature

This study is based on ethnocentrism theory (Sumner 1906). The concept of ethnocentrism dates back to the early 1900s, when social psychologist William G. Sumner first addressed the subject, defining it as "a conception whereby the group to which one belongs is considered the center of everything, and all others are classified and evaluated in relation to it".

On the basis of this definition, the main characteristic of ethnocentric individuals is their tendency to judge their own culture as superior to that of others, to the point of rejecting cultures dissimilar to their own (Liu et al. 2006). From this perspective, ethnocentric values can influence individuals' preference for any product category (Kaynak and Kara 1998); even when there are no objective reasons for preferring domestic over foreign products (Sharma et al. 1995).

Applying the concept of ethnocentrism to consumption practices, in 1987, Shimp and Sharma coined the concept of consumer ethnocentrism, defining it as "the beliefs held by (American) consumers about the appropriateness, indeed morality, of purchasing foreign-made products." More specifically, by analyzing the beliefs of consumers and corporate buyers about domestic and foreign products in the United States, the authors stated that ethnocentric consumers believe that buying domestic products is right because they are of better quality and help the local economy and workers (Zeithaml 1988; Shimp and Sharma 1987).

Indeed, ethnocentric consumers tend to perceive the quality of domestic products as superior to foreign ones (Šmaižienė and Vaitkienė 2015; Chryssochoidis et al. 2007), while at the same time in thinking that they are acting morally correct only by purchasing domestic products, they are inclined to maintain a high degree of self-control in order to meet their own moral standards (Baumeister and Exline 1999). Baumeister. In this regard, Tuk and colleagues (Tuk et al. 2015) have shown that self-control instigates positive spillover effects from the domain in which it is exercised into other domains in which it was not initially exercised, and state that, for example, increased attentional or emotional control can reduce unhealthy food consumption. Consumer ethnocentrism, in this sense, should therefore not only lead consumers to perceive national food as higher quality, but also incite them to perceive it as healthier (Uzdavinyte et al. 2019; Dogi 2015).

Since Shimp and Sharma's study, numerous researches around the world have investigated the role of ethnocentrism with regard to consumers' intention or willingness to buy domestic and/or foreign products (Zeren et al. 2020).

It has been shown that ethnocentric values can be influenced by several antecedents that increase or decrease the propensity towards domestic or foreign products, including socio-psychological, political, and demographic factors (Ricci et al. 2019; Shankarmahesh et al. 2004).

As regards socio-psychological factors, some studies reveal that who likes to travel have a low ethnocentrism level, because these consumers are open towards new cultures



and experiences (Kottasz and Bennett 2006; Nijssen and Douglas 2004). This highlights that cultural background and individual values play a key role in ethnocentrism, especially in a more and more globalized market (Sharifonnasabi et al. 2020). Farah and Mehdi (Farah and Mehdi 2021) affirm that, among individual factors, animosity positively affects consumer ethnocentrism. According to these authors, in fact, the hate towards other groups for cultural, historical, political or economic factors makes consumers more ethnocentric, and it often flows into forms of nationalism or patriotism. In this regard, several studies (He and Wang 2015) have shown that ethnocentrism is positively affected by nationalism (asserting the economic superiority and national dominance of a country) and patriotism (pure love and attachment to a country). However, ideological value can vary from country to country, inasmuch it is closely linked to history, culture, economic and political context of a specific territory, because it depends on individual behavior as well as on governmental policies (Maksan et al. 2019; Makanyeza and Toit 2017). Finally, demographic characteristics have a significant influence on consumer ethnocentrism. Several studies show that consumers with a more ethnocentric behavior are often women or older people, with a lower education level (Sharma 2015; Aziz et al. 2014; Alsughayir 2013) and lower income (Mockaitis et al. 2013). In this regard, a recent study by Aljukhadar and colleagues (Aljukhadar et al. 2021) among a US and Canadian sample, affirms that lower-class consumers, characterized by a low level of income and education, tend to not buy foreign products, regardless of their ethnocentrism. However, findings from the literature have returned inconsistent outcomes, in fact, some studies have shown that younger and pre-degree holding people are more ethnocentric (Guo and Özding 2021) while other studies do not reveal a statistically significant influence of gender (Nadiri and Tümer 2010).

However, all above-mentioned antecedents often not are independent among them, but they can be connected according to the different issues for which ethnocentrism has been adopted.

In economic literature the consumer ethnocentrism has been analyzed, especially for country-of-origin (COO) or local products, negatively affecting the purchase of foreign products (Hustvedt et al. 2013; Orth and Firtasova 2003). Several studies highlight that the COO knowledge is a key factor for ethnocentric consumers and, normally, COO knowledge is higher than the ethnocentrism level. In particular, a recent study by Ortega-Egea and García-de-Frutos (Ortega-Egea and García-de-Frutos 2021) shows that COO knowledge increases consumers' risk perception of Chinese products among Spanish consumers, while previous usage experience affects positively purchasing non-domestic products. For their parts, Lewis and Grebitus (Lewis and Grebitus 2016) have highlighted that, by analyzing the US consumers, the more they are ethnocentric and pessimistic about the safety of their food, the more they would like the sugar content in COO food and beverages to be mandatory. The importance of COO labelling is also reported by Van Loo and colleagues (Van Loo et al. 2019) who affirm that in higher consumer ethnocentrism, greater is attention paid to product information by US cheese consumers. Conversely, consumers often avoid buying foreign products when they do not have sufficient information about them (Farah and Mehdi 2021). Moreover, some studies (Fernández-Ferrín et al. 2020; Bianchi and Mortimer 2015), have shown that consumer ethnocentrism can vary among different regions of the same country and that it has a strong influence in purchasing local or regional products, because consumers want to support local economy. This is particularly evident when consumers buy regional or local labelled products, such as Protected Designation of Origin, Protected Geographical Indications and Traditional Specialty Guaranteed (Oleniuch and Cichocka 2015) products or local sustainable fruits and vegetables (Boca 2021), because, by means of their consumption, they contribute to the sustainable development or rural areas.

#### 4. Materials and Methods

In order to achieve the set objective, data were collected by an online survey, which was previously tested on ten consumers to identify possible errors or misunderstanding in

the items meaning. Later, the questionnaire was delivered through the Google Forms web platform, during the Italian lockdown period (March–April 2020) and advertised via social networks, e-mail and university websites. Through initial screening, only adult Italian consumers were included in the survey.

The questionnaire was divided into three sections. The first part investigated consumers' choice about Italian food products during the COVID-19 pandemic; in this section, the questions were designed to find out whether the amount of Italian products purchased during the pandemic had decreased or increased, and to investigate the intention to purchase Italian products in the future.

The aim of the second section was to investigate consumers' ethnocentric attitudes and their responsible approach to food shopping.

Firstly, in order to measure consumer ethnocentrism, an adapted version of the CETSCALE (consumer ethnocentrism tendencies scale), developed by Shimp and Sharma in 1987 (Shimp and Sharma 1987), was used. It was chosen to use this psycho-attitudinal scale because it succeeds in explaining the attitudes that strongly influence food choice behavior. It follows that by using it, it is possible to infer the food choices of consumers regarding Italian products. The diffusion of the CETSCALE is due to the fact that it does not analyze ethnocentrism exclusively from sociological or psychological perspectives, but also from an economic perspective, by analyzing the reactions consumers have when they purchase foreign products. However, although the CETSCALE represents the most widely adopted tool, several studies have shown the need for modifying it because consumers can have different ethnocentrism behaviors according to specific cultural and geographical contexts. In line with other authors (Shimp and Sharma 1987), a reduced version (7 items) of the scale was adopted to make it easier for consumers to complete the online questionnaire. In it, for each item, consumers indicated their opinion on a five-point scale (from totally disagree to totally agree).

Secondly, with regard to responsible consumer behavior, consumer attention to food labelling, the quality-price ratio of Italian products and food safety have been investigated.

Finally, socio-demographics variables, such as age, gender, family income, and education were collected. A total of 300 responses were gathered, but 14 observations were wrong and, for this reason, the final sample was composed of 286 Italian consumers. Descriptive analyses were carried out to describe the profile of the sample, the psycho-attitudinal scale used, and the preferences of consumers towards Italian products.

Initially, the socio-demographic variables and all the single covariates were analyzed, obtaining the mean, the standard deviation and the maximum and minimum values. Subsequently, in order to verify the internal validity of the CETSCALE, Cronbach's alpha was calculated. This coefficient is a statistical indicator used to measure the consistency or reliability of a score in psychological tests for a sample of subjects examined.

Finally, two dependent variables were studied through two Logit models, estimating first the possible increase in the purchase of Italian products during the pandemic, and then the intention to purchase Italian products in the future.

Logit regression, in statistics, is a non-linear regression model used when the dependent variable is of a dichotomous type, with values of 0 or 1. The aim of the model is to establish the probability with which an observation can generate one or the other value of the dependent variable.

$$Y = \ln(P/1 - P) = a + bX \quad (1)$$

In particular, the function takes the value 1 with probability  $p$ , and the value 0 with probability  $1 - p$ . The coefficient  $b$  represents the change in  $Y$  (dependent variable) as  $X$  (independent variable) changes. After regression, odds ratios (OR) were determined. An OR represents the change in the next category compared to the change in the previous category. By increasing the covariate by one unit, the probability of moving from the previous class to the next class increases by what the coefficient indicates.

All analyses were conducted using Stata/SE 15.0 software.

## 5. Results

### 5.1. Descriptive Statistics

Table 2 has described socio-demographics variables of the sample. The share of males was lower (122 man) than females (164 women). The mean age was 42 years, ranging from 19 to 76. The average education was medium-high, as 172 respondents were at least university graduates. Finally, the sample was characterized by a good-to-average income, identified by the statement “With my salary, I have no difficulty in making ends meet (middle income)”.

**Table 2.** Descriptive statistics of the sample ( $n = 286$ ).

	Mean	Std. Dev.	Min	Max
Gender <sup>1</sup>	0.57	0.49	0	1
Age <sup>2</sup>	41.66	13.38	19	76
Level of education <sup>3</sup>	4.44	1.31	1	6
Monthly income <sup>4</sup>	2.91	0.80	1	4

<sup>1</sup>: Dummy variable, 1 = male and 0 = female; <sup>2</sup>: continuous variable; <sup>3</sup>: categorical variable, 1 = elementary school, 2 = junior high school, 3 = high school, 4 = bachelor's degree, 5 = master's degree, 6 = PhD; <sup>4</sup>: categorical variable, 1 = very low income, 2 = low income; 3 = middle income, 4 = high income.

Considering attitudes of individuals, Table 3 shows the mean values and the standard deviations of the consumer ethnocentrism items.

**Table 3.** Descriptive statistics of CETSCALE.

Consumer Ethnocentrism Tendencies Scale	Mean	Std. Dev	Min	Max
Buying Italian goods helps me maintain my Italian identity	3.16	1.29	1	5
I believe that purchasing Italian goods should be a moral duty of every Italian citizen	3.31	1.33	1	5
Italian people should always consider Italian workers when making their purchase decisions	3.94	1.17	1	5
Buying foreign products is a threat to the domestic economy	3.18	1.32	1	5
Increased imports result in greater levels of unemployment in this country	3.78	1.21	1	5
Job losses in this country are the result of increased importation of foreign goods	3.24	1.25	1	5
When it comes to Italian products, I do not need further information to assess their quality, the country of origin is sufficient signal of high quality for me	2.62	1.31	1	5

Attitudes were shown in the literature to strongly influence food choice behavior (Tuorila 1997). So, the psycho-attitudinal scale can be used to explain consumers' food choices regarding Italian products.

The analysis of Cronbach's alpha has obtained a score of 0.89. Since, in general, high reliability values are considered to be those greater than or equal to 0.65, it was possible to confirm the satisfactory reliability of the scale. Therefore, CETSCALE items were summarized in a single value using their mean score as an overall measure of consumer ethnocentrism.

With regard to responsible consumer behavior, the questionnaire included three sentences. The first one investigated the consumer's attention to the label and stated: “I always look on the label if the ingredients with which the Italian branded product is made are of Italian origin.” The second concerned food safety, stating that “Italian products are more controlled and therefore safer.” The third took into account the quality-price ratio of Italian products: “They have a better quality-price ratio than imported products.”

For each of these, the respondents responded with a value from 1 (totally false) to 5 (totally true). Table 4 below shows the statistical values obtained.



**Table 4.** Descriptive statistics of responsible consumer behavior sentences.

Responsible Consumer Behavior	Mean	Std. Dev	Min	Max
Attention to food label	3.38	1.10	1	5
Food safety	3.67	0.98	1	5
Quality-price ratio	3.18	0.96	1	5

### 5.2. Determinants of Consumer Choice for Italian Foods

In order to investigate what factors determined both the increase of Italian food purchase during the COVID-19 pandemic and purchase intention, two Logit models were developed.

The first step was to test whether the observed sample actually has changed its purchasing habits regarding Italian products during the pandemic. It has emerged that as many as 40.91% of the sample increased the quantity of Italian products purchased.

It is interesting to note, however, that the whole sample purchased a high quantity of Italian foods. In fact, the first subgroup, which did not increase its purchase of Italian products during the pandemic, declared that, while shopping, they purchased between 50 and 75% of Italian products anyway (mean 4.95); while the group whose expenditure of Italian products has increased expressed an average percentage between 75 and 90% (mean 5.26). These data show a clear preference for Italian products, which was partially accentuated during the pandemic.

The dependent variable of the first logit regression model was “Increased consumption of Italian products,” a dichotomous question expressing whether or not the purchase of Italian products had increased (0 = not increased; 1 = increased). Table 5 shows the results of the model.

**Table 5.** Results of Logit regression model—Increased consumption of Italian products.

Variable	Coef.	Std. Err.	z	$p >  z $
Gender	−0.457662	0.2769019	−1.65	0.098
Age	0.0201646	0.1665636	1.12	0.094
Monthly income	0.0748634	0.3281449	0.23	0.820
Education	0.0904993	0.1042466	0.87	0.385
Quality-price ratio	0.1191098	0.1513424	0.79	0.431
Food safety	−0.1049167	0.1551573	−0.68	0.490
CETSCALE_MEAN	0.7704500	0.1705371	4.52	0.000
Attention to food label	0.3012379	0.1358030	2.22	0.027
_cons	−3.8882310	1.0029270	−3.88	0.000

Dependent variable: increased purchase of Italian products; limits: lower = 0 and upper = 1; number obs = 286; LR chi2(8) = 44.88; prob > chi2 = 0.0000; pseudo R2 = 0.0116.

The unit increase of the variables gender, age, CETSCALE\_MEAN and attention to food label positively influenced the probability of buying more Italian products. To understand which of these variables has a greater influence, odds ratios were then analyzed in Table 6.

The factors that most influenced preferences towards Italian products were (in decreasing order) ethnocentrism, attention to food label, age and gender. Furthermore, the value of gender was less than 1, so this means that the covariate negatively influenced the dependent variable; being dichotomous, the probability of increasing the amount of Italian food products was higher in women.

Having studied which variables can explain the increase in consumption of Italian products during the COVID-19 pandemic, it was finally interesting to investigate the evolution of consumer behavior in relation to the shock caused by the pandemic. Respondents, therefore, were asked about the future intentions to further increase the amount of Italian food products purchased. From the analysis of the data, it emerged that, as soon as the pandemic is over, 39.16% of the sample would not change their habits (which are, however,

represented by high percentages) and 60.84% will further increase the quantity of Italian products bought. A logit regression model was then applied again to see which determinants influenced the consumer intention to purchase Italian products in the future (Table 7). This new regression model included as a covariate the variable “Increased consumption of Italian products,” which was the dependent variable in the first regression.

**Table 6.** Results of odds ratio—Increased consumption of Italian products.

Variable	Odds Ratio	Std. Err.	z	$p >  z $
Gender	0.6327613	0.1752128	−1.65	0.098
Age	1.020369	0.1699564	1.12	0.094
Monthly income	1.077737	0.3536538	0.23	0.820
Education	1.094721	0.114099	0.87	0.385
Quality-price ratio	1.126494	0.1704863	0.79	0.431
Food safety	0.9003995	0.1397036	−0.68	0.490
CETSCALE mean	2.160738	0.368486	4.52	0.000
Attention to food label	1.351531	0.1835415	2.22	0.027
_cons	0.0204815	0.205415	−3.88	0.000

Dependent variable: increased purchase of Italian products; limits: lower = 0 and upper = 1; number obs = 286; LR chi2(8) = 44.88; prob > chi2 = 0.0000; pseudo R2 = 0.0116.

**Table 7.** Results of the logit regression model—Consumer intention to purchase Italian products in the future.

Variable	Coef.	Std. Err.	z	$p >  z $
Gender	0.3740623	0.2904829	1.29	0.198
Age	−0.1047915	0.1730264	−0.61	0.545
Monthly income	0.1419314	0.3344044	−0.42	0.671
Education	0.0436386	0.1112234	−0.39	0.695
Quality-price ratio	0.6214065	0.3066961	2.03	0.043
Food safety	0.198162	0.2858763	0.69	0.488
Increased consumption of Italian products	0.9097279	0.2960363	3.07	0.002
CETSCALE_MEAN	0.547945	0.1674986	3.27	0.001
Attention to food label	0.2436995	0.1341053	1.82	0.069
_cons	−3.057032	0.9249917	−3.30	0.001

Dependent variable: consumer intention to purchase Italian products in the future; limits: lower = 0 and upper = 1; number obs = 286; LR chi2(9) = 61.18; prob > chi2 = 0.0000; pseudo R2 = 0.0159.

Socio-demographic variables did not affect the intention to buy more Italian food in the future. On the contrary, the statistically significant variables were: quality-price ratio, having bought more Italian products during the pandemic, ethnocentric values and attention to food label. Odds ratios are developed in Table 8.

**Table 8.** Results of odds ratio—Consumer intention to purchase Italian products in the future.

Variable	Odds Ratio	Std. Err.	z	$p >  z $
Gender	1.453628	0.4222541	1.29	0.198
Age	0.9005123	0.1558124	−0.61	0.545
Monthly income	0.8676808	0.2901563	−0.42	0.671
Education	0.9572999	0.1064742	−0.39	0.695
Quality-price ratio	1.861544	0.5709284	2.03	0.043
Food safety	1.21916	0.3485289	0.69	0.488
Increased consumption of Italian products	2.483647	0.7352494	3.07	0.002
CETSCALE_MEAN	1.729695	0.2897215	3.27	0.001
Attention to food label	1.275961	0.1711131	1.82	0.069
_cons	0.0470271	0.0434997	−3.30	0.001

Dependent variable: consumer intention to purchase Italian products in the future; limits: lower = 0 and upper = 1; number Obs = 286; LR chi2(9) = 61.18; Prob > chi2 = 0.0000; pseudo R2 = 0.0159.

The odds ratios show the positive influence of all four significant covariates. In descending order, the greatest influence was given by having already increased the amount of Italian food purchased during the pandemic, followed by the quality-price ratio of Italian products, ethnocentrism and attention to food label.

## 6. Discussion

Our results have shown that the Italian consumers' choices during the lockdown imposed in response to COVID-19 pandemic were closely related to their ethnocentrism level. This is in line with a recent study conducted on Italian consumers showing that during the lockdown period they chose to buy national and certified foods because they have a mistrust of everything that comes from abroad and tended to manifest closure behaviors even in the food sector (Savarese et al. 2021). Several studies, in fact, have highlighted that, during the pandemic, consumers have changed their eating habits due to the displacement limitations, fear and panic, increasing the consumption of local or domestic products in order to avoid food contamination or infection during transport (Hamadani et al. 2020). Consumers, in fact, are pushed by the panic purchasing behavior induced by psychological factors such as uncertainty, perceptions of severity, perceptions of scarcity, and anxiety (Di Renzo et al. 2020b). Therefore, during the lockdown they tried to accumulate as many food supplies as possible, reducing the number of shopping trips, limiting food waste, increasing online purchases and shifting towards a healthier diet (Ben Hassen et al. 2021; Goddard 2020). The pandemic has changed also the lifestyles of consumers to be more attentive towards healthier foods, increasing the purchase of both organic products and supplements that strengthen the immune system, preparing homemade foods and, often, also doing physical activity (Hamulka et al. 2020).

These results show also that the knowledge of what we eat and what we buy becomes fundamental in a period characterized by uncertainty and fear, which causes a closure towards foreign products. According to our findings, in fact, the more consumers are ethnocentric, the more they purchase Italian agri-food products and the more the knowledge of the product information reported in the label plays a key role in their decision-making process. In economic literature, this is in line with several studies on local or COO products showing that, normally, COO knowledge is higher at higher ethnocentrism levels. In particular, some researchers have highlighted that consumers' knowledge increases the risk perception of foreign products (Orth and Firtasova 2003) and that label information represents a very important issue for ethnocentric consumers as they consider local or COO products safer, healthier or better than non-domestic products (Lewis and Grebitus 2016). On the other hand, a low knowledge level also induces consumers not to buy foreign products and increases their ethnocentrism, as they prefer to purchase well-known local or COO products (Farah and Mehdi 2021).

Moreover, despite the pandemic having reshaped the agri-food supply chain, leading to delays and errors in delivers or an increase in market prices from the strong imbalance between demand and supply (Khan et al. 2020), respondents affirm that they will continue to buy Italian products when the pandemic is over and the majority of them will increase their purchase rate.

This on the one hand highlights as the pandemic has deeply changed the eating habits of respondents who, through domestic products, try to overcome the psychological aspects that the lockdown has created (anxiety, depression and post-traumatic stress disorder) (Savarese et al. 2021; Omar et al. 2021).

On the other hand, because Italy is a country whose brand image is connected to millennial gastronomic values, thanks to its numerous culinary specialties and being the first EU country to legislate for quality labels (Protected Designation of Origin, Protected Geographical Indications and Traditional Specialty Guaranteed), "Made in Italy" products are synonymous with quality worldwide, especially in the agri-food sector (Testa et al. 2019; Fortis and Sartori 2016).

However, despite the purchase of Italian products in the future by consumers strongly depending on having increased their consumption during the lockdown, respondents declare that they will pay more attention to the quality-price ratio, which assumes a relevance very similar to ethnocentrism level. Consumers indicated, in fact, that, after lockdown, they will maintain their ethnocentric behavior towards foreign products, but they will try to buy food products paying attention also to their prices, highlighting how COVID-19 has led to an economic and social crisis as well as a health crisis (Belot et al. 2021; Dimian et al. 2021).

Finally, with regard to the socio-demographic variables, our results indicate that older people and women are more likely to buy Italian products, in agreement with the results reported in other studies on consumer ethnocentrism (Sharma 2015), while in the future these variables appear not to be statistically significant.

## 7. Conclusions

The COVID-19 pandemic has produced an increase of psychiatric disorders during the lockdown period from limitations of personal freedom, social distancing and the financial difficulties. In this context, Italian consumers, as well as others, have changed their eating habits in favor of domestic, home-made and healthier products. Although “Made in Italy” has always been recognized for its quality, today national agri-food products have gained even more prestige and trust in the eyes of Italian consumers. This is due to the phenomenon of ethnocentrism, which seems to occur in response to the fear and uncertainty generated during the lockdown period. Moreover, our findings show that Italian consumers will also continue to prefer national agri-food products also when the pandemic is over and the majority of them will increase their purchasing, highlighting that the pandemic has deeply changed the consumers’ behavior.

The results of the study could have theoretical, managerial and policy implications. From a theoretical point of view, more information about the phenomenon of ethnocentrism and the factors that influence consumer preferences towards domestic products is needed to enrich current knowledge on the effect of COVID-19 pandemic on consumer behavior, helping to fill the gap still present in the literature.

From a managerial point of view, the survey aims to provide entrepreneurs with useful information to evaluate the opportunity to further enhance the value of national products and to operate accordingly the most appropriate marketing and commercialization strategies for their products.

Finally, at the political level, a clear picture of the factors underlying the dynamics of the choice process would allow for a more effective calibration of economic policy interventions in support of the Italian agri-food sector and, therefore, of the recovery of the entire supply chain from the COVID crisis.

However, although interesting results were obtained from this study, it deals with some limitations. A convenience sample was used. Therefore, these results do not have a conclusive effect on the overall Italian population; they can be referred only to a specific target, composed of consumers with a medium-high level of education and income (as shown by Table 2). Moreover, the data of the study were collected through an online survey, therefore they are subject to the phenomenon of social desirability bias, which is the tendency of respondents to answer questions in a manner that will be viewed favorably by others. For further research, it could be interesting consider a representative sample of the Italian population, and applying economic experimental methods to overcome the problem of social desirability bias. Moreover, one could also hypothesize that imported products of local origin (such as those with DOP, IGP, STG certificates) could compete in terms of quality with local Italian products; it would therefore be interesting to find out what Italian consumers think about this.

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