

Article

Sharing and Sustainable Consumption in the Era of COVID-19

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Abstract: The pandemic triggered by the spread of the coronavirus disease 2019 (COVID-19) has had a major impact on numerous collective behaviors, while also changing individuals' consumption choices. Thus, social researchers dealing with consumption patterns need to reflect on the changes of individual practices, also in view of the growing centrality in the public debate of issues related to sustainability and responsible consumption. The presented paper takes its cue from a quantitative research project aiming at understanding the proneness of Italian people towards sustainable products in COVID-19 era, aiming to test whether and how the coronavirus pandemic has changed that attitude. Data have been collected through an online self-completion questionnaire from October to December 2020, using a snowball procedure to collect the purposive sample of approximately 500 questionnaires. Moreover, the second step of the research aimed to deepen the topic of collaborative consumption to verify how the pandemic is changing and how it will re-draft Italian consumers' willingness to adopt specific forms of shared consumption such as car sharing or bike sharing. According to our data, respondents increased the frequency of purchase of certain products such as books and TV series, while reducing the frequency of purchase of others, such as beauty care and clothing items. Furthermore, we found a decrease in the use of public transport and ridesharing, since respondents prefer to avoid contact with strangers on shared transportations means. As for sustainability, our results highlight the commitment of our sample of young, educated women toward a more responsible attitude in consumption.

Keywords: COVID-19; sustainable consumption; sharing; consumer behavior



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1. Introduction

The coronavirus disease 2019 (COVID-19) outbreak that affected the world population in 2020 has had significant consequences in almost all domains of the individual and collective experience; social actors have been forced to change their behavior, redefining goals, priorities, practices and lifestyles, in an attempt to adapt their life to the new habits determined by the global emergency.

An event of this dimension has also had a substantial impact on the consumption dynamics, prompting individuals not only to limit their consumption practices to adapt them to the situation of confinement imposed by the pandemic, but also—and perhaps above all—to rethink their consumption model, choosing products and services with greater attention and responsibility.

As Cohen (2020) points out, triggering a process of social change, the spread of COVID-19 virus is simultaneously a public health emergency and a real-time experiment in downsizing our consumer economy. In fact, in response to the spread of the virus, consumers have enacted practices modifying their consumption behavior and reorganizing their purchasing strategies according to the conditions of lockdown and social distancing imposed by the authorities.

According to several studies on the relationship between the pandemic and consumption dynamics (see, among others, [1,2]), in the Western world, individuals have reacted to the fear of COVID-19 altering their consumer behaviors, by stocking up, for example, on specific categories of goods such as bottled water, canned goods, or disinfectant and cleaning products, in an attempt to deal with the situation of uncertainty produced by the virus. McKinnon et al. [3] define such hoarding behavior as a type of inventory accumulation. The hoarding consumer perceives a high risk of being deprived of a product, so that he moves quickly to acquire abnormal quantities of goods. Indeed, according to Kirk and Rifkin [1] (p. 125) possessions can help to oppose the feeling of loss of control and contribute to a sense of security, managing the uncertainty of the future: “hoarding behavior has an evolutionary basis and is instinctual when a threat is perceived. [. . .]. Consumers also engage in hoarding beyond what is needed as an emotional reactance response”. In fact, the first phase of the pandemic has been characterized by highly emotional and irrational behaviors leading consumers to empty the stores shelves by hoarding products such as disinfectants or other convenience goods; Hall et al. [4] refer to this attitude as “panic buying”.

In any case, the lasting of the pandemic induced changes in consumer practices that are far more than just hoarding and stockpiling. Although differently according to different nations, consumers have reorganized their purchasing strategies, modifying established habits and experimenting with creative and innovative practices. As Seth [5] points out, social actors have shown flexibility and resilience, using improvisation to manage the shortage of products or services. Thus, consumers engaged in *do-it-yourself* activities such as cooking, baking, working out, or improving their home, displacing and reconfiguring previous consumption habits according to the “everything in-home” logic.

In Italy, restrictions on mobility and interpersonal contact remained in place during the first phase of the lockdown, which lasted from roughly mid-March to the beginning of May 2020. Due to the restrictive measures imposed by the government, consumers started to buy larger quantities of products, so as to decrease the frequency of purchases and avoid gatherings and long queues in front of supermarkets. According to Zinola [6], the reorganization of consumer strategies led to a different relationship with the points of sale, fostering, on one side, the attendance of neighborhood grocery stores and, on the other, the use of e-commerce. However, over time, the easing of restrictions has led to a gradual return to normality, reducing the consumption of products such as eggs, flour and cake mixes which, at the height of the pandemic, had experienced a boom in sales [7].

Yet, for Italian consumers, the change in purchasing criteria imposed by the lockdown led also to a greater support for the local economy and “Made in Italy” products, perceived as able to better guarantee the quality and safety of the raw materials used. At the same time, however, shoppers’ choices turned to those products/brands more attentive to the sustainability of the supply chain, as if the global spread of the virus forced consumers to rethink their relationship with nature from a perspective of greater awareness and responsibility. In fact, the pandemic has led an increasing number of individuals to develop a stronger attention to the ecological impact of their consumption behaviors or to the origin of raw materials [6] precisely favoring those brands most sensitive to environmental issues. As Cohen [8] (p. 2) writes, “COVID-19 is an opportunity to reduce over the longer term the prevalence of lifestyles premised on large volumes of energy and material throughput”, contributing to a sustainable consumption transition. Thus, the trends established during this coronavirus crisis could remain stable into the future.

Since the COVID-19 outbreak had a significant impact on consumer behavior by changing both the choices related to everyday products and the most widespread habits, this paper aims to illustrate the results of a quantitative research project aimed at investigating sustainable consumption, in order to verify the meaning attributed by Italian consumers to such practices. Specifically, authors wanted to confirm whether and how the pandemic changed the subjects’ attitude towards the most widespread forms of consumption, while analyzing their willingness to engage in more conscious and responsible choices of consumption. Moreover, authors wanted to deepen the topic of collaborative consumption to

verify how the pandemic is changing and how it will re-draft Italian consumers' willingness to adopt specific forms of shared consumption such as car sharing or bike sharing.

2. Materials and Methods

The authors carried out an online quantitative research through the Google Drive platform. Self-completed questionnaires were collected over two months (from 5 October to 12 December 2020).

According to the most recent sociological literature on the pandemic's effects (see, among others, [6,9,10]), due to lifestyle changes and restrictions imposed by the authorities, consumers have partially changed their consumption habits, moving towards specific products/services or reducing the frequency of purchase of certain goods. As Boons et al. [11] (p. 3) also point out: "the Covid-19 crisis and the response of 'lockdown' has globally disrupted the *normality* of everyday lives, resulting in people *abstaining* from previous practices, or *altering* and *substituting* them; they also *learn and adapt to new practices* and ways to *coordinate and organize* everyday lives within the home". To verify the impact of such changes on Italian consumers, the authors therefore formulated the following hypothesis:

Hypothesis 1 (H1). *The pandemic outbreak impacts on consumers behavior changing the frequency of significant consumption practices.*

Moreover, as Boons et al. [11] highlight, disruption and change of practices linked to the COVID-19 outbreak is already widespread in core areas such as food provision, shopping, and sustainable mobility, leading researchers to reflect on how the current coping strategies might feed into the transition to sustainable societies. Starting from the idea that practices are interrelated, and therefore should be seen as a system and not as a set of individual units [12], researchers identified some dimensions, generally related to one another, useful to understand whether and how much Italian consumers are interested in the issue of sustainability of consumer choices and what motivations foster their interest. To achieve this goal, authors decided to use Ajzen and Fishbein theory [13] as a tool to understanding what moves the individual towards a more sustainable direction. In order to comprehend which factors are more powerful than others in fostering purchase intention towards sustainable products, the authors have developed the following hypothesis:

Hypothesis 2 (H2). *As sustainable consumption practices, attitude, knowledge, responsibility, and fashion are positively correlated with the intention to buy.*

Since social practices are a major factor in shaping the environmental and social impact of products, services and technologies people use to fulfil their needs, it seems important to understand how the epidemic and the consequent lockdown have modified some consumption habits, with particular reference to those related to the sharing mobility. For this reason, the authors have developed the following hypothesis:

Hypothesis 3 (H3). *The pandemic outbreak changes the way consumers use collaborative consumption mobility services.*

In order to develop the questionnaire, authors referred to literature on consumer behavior and specifically on sustainable purchases focusing on five theoretical constructs: attitude, knowledge, responsibility, fashion, and intention to buy. According to Oh and Yoon [14], consumer attitude towards ethical consumption is positively related to ethical obligation, self-identity, and altruism.

The research conducted by Baranov et al. [15] highlights that ethical consumers want to know the origin and the composition of the purchased products. Moreover, they like to be informed about the social responsibility practices of the producing company. Thus, authors assumed that a higher knowledge about sustainability and sustainable consumption would be related to a more dependable intention to buy a sustainable product. Several

researchers [16,17] point out that perceived responsibility of environmental damages fosters the choice to engage in more sustainable consumption practices. As far as fashion is concerned, it is explored the possibility that ethical consumption could be influenced by some fashionable trend, even if at least one study [18] reveals that people's intention to buy a sustainable product is not affected by the opinions of significant others. Intention to buy represents traditionally the closest antecedent of actual behavior [13]. Indeed, as far as sustainable consumption is concerned, the "attitude-behavioral intention" gap [19–21] mitigate the predictive capacity of intention to buy.

To satisfy authors' aims, the questionnaire (1) gathers information about possible changes in the use of technology due to pandemic outbreak; (2) assesses the frequency of significant consumption practices in the pre-COVID-19 months; (3) assesses informants' knowledge of sustainable products; (4) evaluates the impact of attitude, knowledge, perceived responsibility, and fashion on the intention to purchase sustainable products through a multiple linear regression model, using a battery of items; (5) inquiries about the use of collaborative consumption platforms and if and how the COVID-19 outbreak impacted on these practices; (6) inquiries about the adoption of specific consumptions practices during the pandemic months and investigates eventual changes concerning the choice of products and services; and (7) finally, collects socio-demographic information on participants and their families.

Authors used a five-point Likert scale as an interval scale in order to measure the statements of each item, where 1 defines a low agreement with the question asked and 5 means that the participants fully agree with the question. The data collected were analyzed using Microsoft Excel and SPSS software.

The non-probabilistic convenience sample [22] was collected using a snowball procedure [23,24]. The 510 respondents were gathered mainly while presenting the research during several classes in three different Italian universities, IULM University of Milan, Alma Mater Studiorum of Bologna, and University of L'Aquila. Most of the students are attending Communications or Education Sciences faculties.

Since respondents are mostly female (80.6%), confirming that female consumers with a relatively high educational status are most interested in ethical consumption [25,26], authors decided to focus their analysis on them and to use the male part of the sample (15.9%) as a control group (Table 1).

Table 1. The sample by sex (percentage value).

Female	Male	N/A	Total
80.6	15.9	3.5	100.0

Most of the female sample is aged between 18 and 24 years old (87.6%), 8.3% is between 25 and 29 years old, and 3.9% is 30 or more years old. According to their age, as far as education is concerned, 82.5% have a high school degree. Moreover, 56.6% live in the center-south of Italy and 44% in the north. As for the occupation status, the majority of the sample declares to be a student (75.4%) and 21.4% describe themselves as working students.

3. Results

This section will present the most significant findings emerged from the research, aiming to highlight how the COVID-19 outbreak has affected the consumption habits of the selected sample.

3.1. The Impact of the Coronavirus on Overall Consumption Behaviors of the Sample

As the authors have pointed out, some household consumption routines adopted by the sample have changed because of the spread of the virus and the measures taken by the authorities. However, since more than 70% of respondents reported living with

their parents—either permanently or temporarily due to the pandemic—it seems likely to assume that the responsibility for household purchases does not lie entirely with them, but is shared at least with a parent, thus extending to the entire household the changes recorded in the consumption practices analyzed by this study.

Hall et al. [4] (p. 2) use the concept of “consumption displacement” to indicate how consumption is a process “characterized by the points in space and time where consumption take and make place, and by the movements to, from, and between those points”. Since consumption is contextual, new regulations and unexpected events such as a pandemic can affect consumers’ habits. Indeed, the responses of the analyzed sample revealed, for example, a decrease in the number of visits to the supermarket, a change that involved almost 70% of respondents (Table 2), probably as a result of both the fear of contagion and the rules imposed by the shops.

Table 2. As a result of the COVID-19 emergency, which of these behaviors have you adopted?

I Have Decreased the Shopping Frequency at the Supermarket	Count	Percent
No	130	31.6
Yes	281	68.4
Total	411	100.0

If, as Camberfort [2] also points out, social distancing and lockdown measures forced individuals to change their consumption patterns, leading people to question their usual buying choices, it is nevertheless possible to assume that at the end of the pandemic most consumers will return to their previous habits. Once the emotional impact of the first wave of the epidemic (between March and May 2020) had worn off, a substantial number of Italian consumers seemed to have resumed their normal habits, i.e., giving up—as shown in Table 3—on those hoarding strategies [1,5] characterizing the first lockdown period, when there was a widespread fear of running out of food in supermarkets.

Table 3. As a result of the COVID-19 emergency, which of these behaviors have you adopted?

I Stockpile Food Items	Count	Percent
No	215	52.3
Yes	196	47.7
Total	411	100.0

A second thought concerns the informants’ changes in purchasing specific product categories (Tables 4 and 5). Consistent with SITA’s analysis [27], in Italy, the COVID-19 outbreak led to a sharp decrease in clothing sales and a simultaneous increase in purchases for home entertainment products such as books, films, or TV series. According to the girls, 53% of them gave up buying clothes or shoes/accessories, while about half increased the frequency of buying items such as books or films.

Table 4. As a result of the COVID-19 emergency, has your purchase frequency of the following product/service categories decreased, increased, or remained unchanged?

Clothing (e.g., Clothes, Shoes, etc.)	Count	Percent
Decreased	218	53.0
Increased	35	8.6
Remained unchanged	158	38.4
Total	411	100.0

Table 5. As a result of the COVID-19 emergency, has your purchase frequency of the following product/service categories decreased, increased, or remained unchanged?

Entertainment Products and Services (e.g., Books, Films, Series, Video Games)	Count	Percent
Decreased	34	8.3
Increased	200	48.7
Remained unchanged	177	43.0
Total	411	100.0

It can be assumed, therefore, that in a situation of absolute gravity such as, precisely, a pandemic, the respondents considered fashion shopping to be excessively frivolous, choosing instead to buy products with which they can occupy their time, thus filling the long days spent at home.

3.2. COVID-19, Consumption Practices and Sustainability

In the empirical study, the questionnaire collected different information on participants, using different questions to investigate: (1) their attitude towards sustainable consumption; (2) their perceived knowledge on the issue of sustainability and its connection with sustainable consumption; (3) their sense of responsibility to become a greener consumer; (4) their idea of whether sustainable consumption has a fashion element to it or not; and (5) their intention to buy more sustainable products.

The results show that all the considered variables—attitude, knowledge, responsibility, and fashion—are positively correlated with the intention to buy. Attitude has been measured through three different questions, which aimed at digging into participants' inclination to purchase sustainable products, at understanding how important it is for them that a product they are about to buy is sustainable, and at assessing how gratified they feel when they buy a green product. Knowledge has been measured through three different questions aiming at evaluating how much participants are informed about sustainability and its related problems, as well as about its connection with sustainable consumption and its communications through certifications and eco-labels. In this perspective, several studies [28,29] have indicated that “substantial environmental knowledge is necessary to take suitable action towards ecological protection and that consumers with higher ecological knowledge are more likely to demonstrate sustainable purchasing behavior” [30] (p. 113). As it is well established, this knowledge can also be learned through interaction with significant others (informative influence). Responsibility has been measured through one question that aimed at understanding how much respondents feel morally responsible for behaving in a sustainable way in the context of consumption. Fashion has been measured through three different questions with the aim of understanding whether participants feel judged by other people when they buy a non-sustainable product, how much they care about external opinions, and if they believe that buying sustainable products may improve their image to the eyes of others. As Bearden et al. [31] have revealed, it is possible that the fashion dimension is significantly affected by the normative influence, since subjective norms have an extensive impact on young consumers' consumption behavior. Subjective norms can be interpreted as an individual's perception of the social response to whether or not an action is performed by himself and his/her willingness to conform to the expectations of others regarding consumption decisions.

Respondents do not show any stigma towards those who do not make sustainable purchases. Indeed, 87% of respondents have no fear of being judged by peers because of their non-sustainable consumption style. Only a minority percentage (5%) declare to criticize people not choosing sustainable brands or products. Indeed, they assert their strong or very strong propensity to express negative judgments towards those who do not adopt such consumption styles.

Moreover, collected data highlight that people engaging in sustainable purchases are moved by real concerns toward sustainability and not by some fashionable trends. Indeed, just a small percentage of the sample (6%) prefers such consumption choices because of fashion or so-called conspicuous consumption, while the vast majority (71.6%) is not interested in social acceptance or the need to appear. Consistently, only 10% of the sample considers the eco-sustainable choice very or very fashionable, while 70.3% believe that their choice to adopt an eco-sustainable consumption style does not lead them to be cooler or in some way more fashionable than those who adopt different consumption styles. Despite the link between eco-sustainability and fashion [32], those who engage in sustainable consumption seem to be motivated by instances that go beyond mere appearance and conspicuous consumption leading to genuine interest in environmental issues and social justice.

Although the fashion factor is not the leading driver for sustainable consumption choices, the collected data show that this style of consumption could soon become a fashion. Indeed, 68% of the respondents are highly likely to engage in sustainable consumption and, within this group, 34.5% is interested and a 25.5% very interested in adopting sustainable consumption choices, compared to a much less significant percentage, only 6.8%, who are not interested.

According to the data, the segment of young women with medium-high education is developing a strong sensitivity to this style of consumption, which could also become a fashion trend. Therefore, 71.9% of the sample declares to be willing to pay an extra price for a product or a service that in some way presents certified elements linked to the semantic universe of sustainability and social justice.

To better understand respondent's attitude towards sustainability, authors have also investigated their knowledge and perceptions of some companies' CSR (corporate social responsibility) activities.

Overall, the interviewees are fairly critical of commercial brands and their practices linked to sustainability. Procedures for communication and certification of sustainable processes are in fact indicated as not always clear or reliable, and more than half of the informants stated that brands, mainly fashion brands, should pay more attention to sustainability-related aspects. Apparently, when it comes to choosing an alternative in consumption, participants focus more on the fact that the product does not cause harm to the environment before and after the purchase. According to the collected sample, a product can be considered sustainable when its manufacturing is designed to have the smallest possible impact on the environment and when it can be recycled properly at the end of its life cycle. As Warde [33] pointed out, to understand the real extent of sustainable consumption practices, social researchers need to shift their attention from analyzing individual consumption activities to reflecting on the social organization of consumption and on social interactions.

Moreover, the questionnaire inquired if, following the COVID-19 emergency, informants have renounced buying some products. Two-thirds of respondents stated that, for now, the impact of the COVID-19 pandemic has not substantially changed their choice of products. On the other hand, 31%, about one-third of the total, indicated a significant change in their purchases. Specifically pointing to beauty and body care and apparel as the areas where they significantly reduced their frequency of purchase. Even the social life sector, as an obvious consequence of lockdowns, mobility restrictions, and programmed closures, has undergone a significant reduction in the habits of respondents, who have also reduced using public and private transport as well as travelling, attending cinema, and theaters. As it turns out from Figure 1, purchases for sport activities, gyms, and hi-tech have also endured a contraction. The survey has been intentionally focused on observing how the frequency of purchases in the sample group has changed. In this sense, authors are aware that although they have highlighted a reduction in the frequency of purchases, this does not automatically mean a reduction in the available budget, nor does it mean a reduction in the overall volume of consumption, especially in a critical phase in which

consumption habits have undergone a structural transformation due to the first phase of adaptation to pandemic prevention measures.

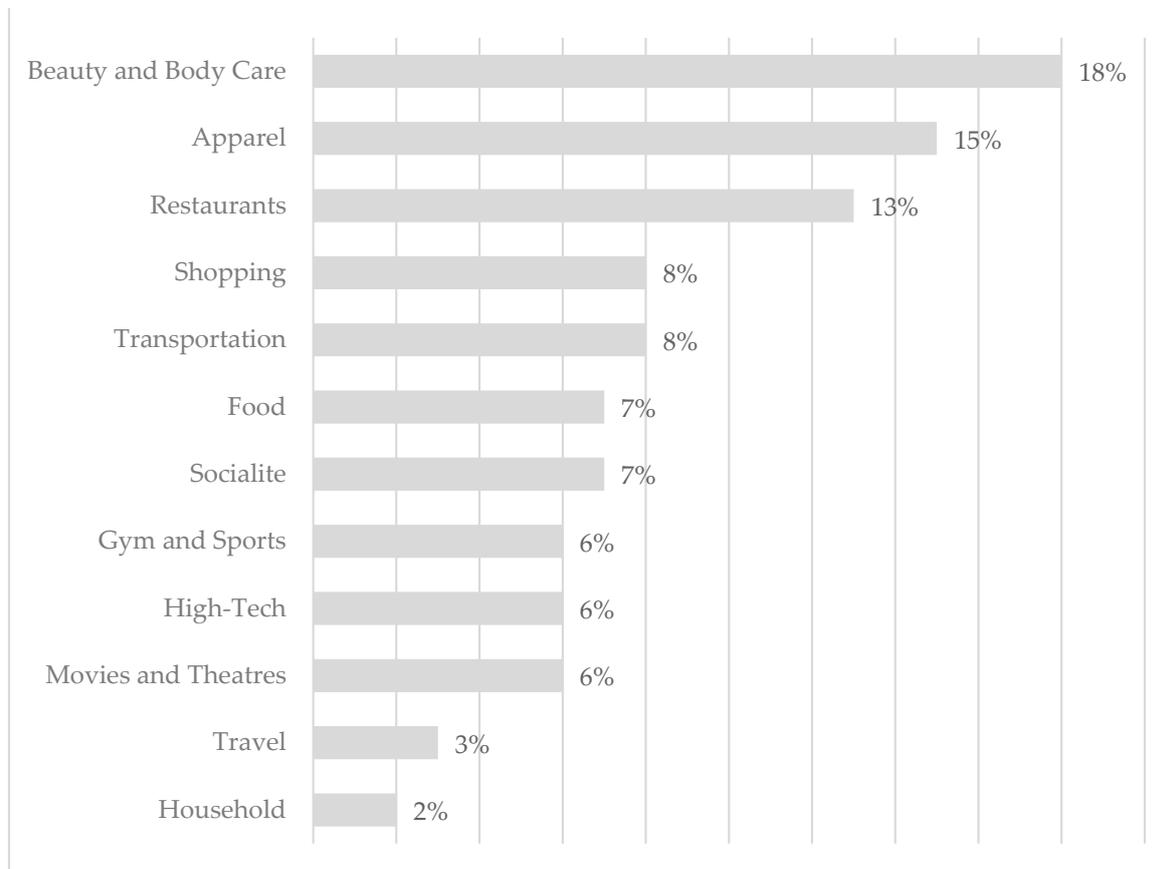


Figure 1. If, following the COVID-19 emergency, you have changed your consumption behavior, indicate 3 products (or categories of products/services) once necessary and today superfluous (open ended question).

3.3. How the Spreading of COVID-19 Has Impacted on Collaborative Consumption and Mobility Practices

In the last decades, new forms of consuming, described as collaborative consumption, have risen. They are assumed to mitigate environmental and social outcomes of consumer capitalism and accordingly positively contributing to more sustainable development [34].

Since 2008, the economic crises experienced by most Western countries has fostered changing in consumption practices, letting individuals and groups of consumers rethink ownership and the possibility of accessing rather than owning specific goods and supplies [35,36]. According to many studies [37,38], Millennials and Generation Z are most prone to engage in these practices since they are most Internet-savvy—the so-called digital natives [39]—and less interested in actual ownership of goods.

Previous studies [38,40] pointed out that, among all the collaborative consumption practices, those related to mobility sharing (ride sharing—i.e., BlaBlaCar, Uber—car sharing, bike sharing, scooter sharing) and housing (i.e., AirB&B, Couchsurfing) are the most used.

Indeed, according to recent data [41], in Italy in the last five years, from 2015 to 2019, mobility sharing has grown mainly in Milan, Rome, Turin, and Genoa. Mobility sharing encompasses cars, bicycles, scooters (some of them electric) and, more recently, jump scooters. Moreover, jump scooters have increased more than five times in just a few months, since the end of the first lockdown in June 2020, and are now available in 18 Italian provincial capitals. Currently, there are 38 cities in Italy offering at least one micro-mobility sharing service (station-based bike sharing, free-floating bike sharing, jump scooter sharing,

and scooter sharing). Most of them are in the north of the country, six in the center, and four in the south. Bike sharing is the most common service available in all the 38 cities.

After the COVID-19 outbreak, perception about safety changed and people are less prone to use public transportation and car sharing. An owned car is perceived as the safest mean of transportation, followed by bike sharing, scooter sharing, and jump scooter sharing, and fewer people are going to use public transportation.

The gathered data confirm the general attitude. Indeed, the questionnaire inquired if the pandemic outbreak affected the use of some collaborative consumption mobility practices. Among the 37.2% of users of ride sharing and car sharing services (i.e., BlaBlaCar, Enjoy, Car2Go, Uber), 48.4% declare that they will decrease their use of ride sharing services, consistent with the idea that the safety concerns suggest avoiding commune usage of shared vehicles (see Table 6).

Table 6. Do you think that due to the COVID-19 emergency you will use differently ridesharing services (Uber, BlaBlaCar, Enjoy, Car2go)?

		No Change	Yes, I'll Decrease the Usage	Yes, I'll Increase the Usage	Total
Count		45	74	34	153
Respondents who answered yes	Have you ever used the following forms of collaborative consumption (ridesharing services)?	29.4%	48.4%	22.2%	100.0%
% of total		10.9%	18.0%	8.3%	37.2%

Consistently, among the 39.7% of users of others “on the open air” mobility sharing, just 21.5% will decrease their use, while 36.2% will increase it (see Table 7).

Table 7. Do you think that due to the COVID-19 emergency you will use differently bike sharing, scooter sharing, jump scooter sharing services?

		No Change	Yes, I'll Decrease the Usage	Yes, I'll Increase the Usage	Total
Count		69	35	59	163
Respondents who answered yes	Have you ever used the following forms of collaborative consumption (bike, scooter sharing, jump scooter sharing)?	42.3%	21.5%	36.2%	100.0%
% of total		16.8%	8.5%	14.4%	39.7%

Like the other collaborative consumption practices, i.e., barter through platforms, solidarity purchasing groups, crowdfunding initiatives, which are much less used, respondents do not foresee any change in their usage.

Among the motivations leading to a different usage of collaborative consumption practices (open-ended question), the prominent one is related to fear (67%). Respondents prefer to avoid contact with strangers and they feel unsafe using shared transportations means. On top of that, an 8% of motivations is directly related to the construct of health. Therefore, it can be assumed that the main reason to change consumption habits is directly correlated with the fear of contracting the virus. Moreover, the government’s restrictions are mentioned as a reason leading to a lesser use of these practices by 6.6% of respondents.

Among the other motivations, some respondents will indeed use more collaborative practices because they feel responsible for the environment, thus the ecological concern (6.6%) prevails fostering sharing mobility. Moreover, a small percentage of respondents will change their habits because they feel compelled to collaborate with other people or for economic reasons (3.4% and 3.3% respectively).

3.4. Sustainability and the Universe of Human Value

In order to deeply analyze the sample's attitude towards sustainable consumption, authors decided to cross-reference the data relating to the importance of the environmental impact of the purchased goods with those relating to the respondents' universe of human value. Drawing on literature (see, among others, [42–44]), it has been hypothesized that consumers more attentive to the social and ecological consequences of their consumption choices referred to a meaning system oriented towards self-transcendent values: "[...] there are certain clusters of values which are strongly predictive of positive engagement with climate change (in particular, self-transcendent/altruistic values), and others (self-enhancing values) that appear less congruent with sustained, long-term engagement" [43] (p. 418). The universal values [45], with their strong emphasis on prosocial concern, are considered most important and predominant in ethical consumer decision making. As Schwartz highlighted [45], values are critical motivators of behaviors and attitudes and are crucial for explaining social change; to summarize the oppositions between competing values, the scholar [45,46] organized his value system along two bipolar dimensions. The first one contrasts the values of "openness to change" and "conservation", while the second dimension opposes the values of "self-enhancement" and "self-transcendence". As the latter dimension, "self-enhancement" underlines the pursuit of one's own interests and success (such as power or achievement), while "self-transcendence" values emphasize concern for the welfare and interests of others (such as universalism and benevolence).

Thus, authors have identified a series of items reflecting the subjects' prosocial orientation and their openness to the community (namely, social and environmental engagement, political engagement, and cultural interests) and have cross-referenced these data with those relating to the importance of products ecological impact. In this regard, it should be added that Schwartz himself [45] (p. 12) attributes a universalistic and pro-social value to values such as social justice and protection of the environment: "the motivational goal of universalism is understanding, appreciation, tolerance, and protection for the welfare of all people and for nature".

The following tables (Tables 8–10) point out that consumers most interested in the purchases of sustainable products consider fundamental the three value categories analyzed compared to those less engaged in ethical and responsible consumption issues. Table 8 shows an almost double percentages (+36.9%), Tables 9 and 10 show percentages higher than 13% or 18%.

Table 8. When you buy a product, how important is it for you that it is environmentally friendly?

		Q.29_Important Values in Life: Social/Environmental Engagement				Total
		Not at All/ Scarcely Important	Quite Important	Very Important		
Q.6—When you buy a product, how important is it for you that this is environmentally friendly?	Not at all/scarcely important	Count	8	42	44	94
		% in Q.6	8.5%	44.7%	46.8%	100.0%
		% of total	1.9%	10.2%	10.7%	22.9%
	Quite important	Count	8	41	96	145
		% in Q.6	5.5%	28.3%	66.2%	100.0%
		% of total	1.9%	10.0%	23.4%	35.3%
	Very important	Count	5	23	144	172
		% in Q.6	2.9%	13.4%	83.7%	100.0%
		% of total	1.2%	5.6%	35.0%	41.8%
Total	Count	21	106	284	411	
	% in Q.6	5.1%	25.8%	69.1%	100.0%	
	% of total	5.1%	25.8%	69.1%	100.0%	

Table 9. When you buy a product, how important is it for you that it is environmentally friendly?

			Q.29_ Important Values in Life: Political Engagement			Total
			Not at All/ Scarcely Important	Quite Important	Very Important	
Q.6—When you buy a product, how important is it for you that this is environmentally friendly?	Not at all/scarcely important	Count	44	28	22	94
		% in Q.6	46.8%	29.8%	23.4%	100.0%
		% of total	10.7%	6.8%	5.4%	22.9%
	Quite important	Count	56	51	38	145
		% in Q.6	38.6%	35.2%	26.2%	100.0%
		% of total	13.6%	12.4%	9.2%	35.3%
	Very important	Count	52	57	63	172
		% in Q.6	30.2%	33.1%	36.6%	100.0%
		% of total	12.7%	13.9%	15.3%	41.8%
Total	Count	152	136	123	411	
	% in Q.6	37.0%	33.1%	29.9%	100.0%	
	% of total	37.0%	33.1%	29.9%	100.0%	

Table 10. When you buy a product, how important is it for you that it is environmentally friendly?

			Q.29_ Important Values in Life: Cultural Interests			Total
			Not at All/ Scarcely Important	Quite Important	Very Important	
Q.6—When you buy a product, how important is it for you that this is environmentally friendly?	Not at all/scarcely important	Count	6	24	62	92
		% in Q.6	6.5%	26.1%	67.4%	100.0%
		% of total	1.5%	5.9%	15.2%	22.5%
	Quite important	Count	4	37	104	145
		% in Q.6	2.8%	25.5%	71.7%	100.0%
		% of total	1.0%	9.1%	25.5%	35.5%
	Very important	Count	8	17	146	171
		% in Q.6	4.7%	9.9%	85.4%	100.0%
		% of total	2.0%	4.2%	35.8%	41.9%
Total	Count	18	78	312	408	
	% in Q.6	4.4%	19.1%	76.5%	100.0%	
	% of total	4.4%	19.1%	76.5%	100.0%	

To strengthen this hypothesis, authors tried to cross-reference the same question with one of the values belonging to the opposite category (extrinsic or self-enhancing value), namely the “interest in fun” (which Schwartz places in the dimension of hedonism). Indeed, Table 11 points out that the less responsible consumers enhance the most the value of fun, with a gap of more than 4 percentage points compared to the subjects more committed to sustainability. As Santamaria et al. [44] (p. 21) write “extrinsic values are associated with a poor sense of well-being and decreased pro-social and environmental attitudes, while intrinsic values are associated with a higher sense of well-being and increased pro-social and environmental attitudes”.

Table 11. When you buy a product, how important is it for you that it is environmentally friendly?

		Q.29_Important Values in Life: Having Fun				Total
		Not at All/ Scarcely Important	Quite Important	Very Important		
Q.6—When you buy a product, how important is it for you that this is environmentally friendly?	Not at all/scarcely important	Count	3	17	74	94
		% in Q.6	3.2%	18.1%	78.7%	100.0%
		% of total	0.7%	4.1%	18.0%	22.9%
	Quite important	Count	5	22	118	145
		% in Q.6	3.4%	15.2%	81.4%	100.0%
		% of total	1.2%	5.4%	28.7%	35.3%
	Very important	Count	9	35	128	172
		% in Q.6	5.2%	20.3%	74.4%	100.0%
		% of total	2.2%	8.5%	31.1%	41.8%
Total	Count	17	74	320	411	
	% in Q.6	4.1%	18.0%	77.9%	100.0%	
	% of total	4.1%	18.0%	77.9%	100.0%	

4. Discussion

The present study investigates the effects of the COVID-19 pandemic on the consumption patterns of a sample of Italian female students. The authors' aim is also to explore the issue of sustainable consumption by analyzing possible changes in consumer attitudes as a consequence of the virus fear and of the restrictive measures taken by the government to slow down the rapid spread of the outbreak. Lockdown and social distancing constrained social life, closing public places, commercial activities, schools, and universities.

Overall, analyzed data confirm H1, since the pandemic outbreak impacted on some consumers' behavior changing the frequency of significant consumption practices. Our sample shows changes mostly related to buying specific category of goods, like entertainment products and services, or not participating in social activities like going to the movies or attending live performances. These results partially confirm the outcome of recent surveys on the impact of the pandemic [1,2] highlighting peculiar practices as stockpiling, preferring e-commerce, or choosing canned goods over fresh ones. Indeed, respondents have been adapting their consumption patterns to the changed external conditions, foregoing the purchase of specific product categories (such as body and beauty care), perceived as frivolous and unnecessary.

As to H2, the sample shows that attitude, knowledge, responsibility, and fashion are indeed positively correlated with the intention to buy sustainable products. Moreover, the willingness of the girls to buy products with a low environmental impact highlights that the awareness of ecological and social problems among the younger generation is increasing, as is their appreciation of brands paying more attention to the environmental impact of the supply chain.

H3 is also confirmed, since actual users of mobility services are prone to decreasing their use of ride sharing services, and increase the use of bike sharing, scooter sharing, and jump scooter sharing.

Authors are aware that the choice of the sample group is somewhat anomalous, compared to the national context of reference, since both the issues related to environmental sustainability and gender equality are often underrepresented in Italy, compared to the rest of Europe and Western countries in general. However, they believe that the reference segment, young women with a medium-high level of education, is the benchmark for the instances analyzed, in Italy as well as in the other contexts mentioned above. As Luchs and Mooradian write [47] (p. 129), "[...] women report greater concern for social and

environmental issues and report more socially and environmentally friendly purchase behaviors". Moreover, Zelezny et al. [48] found that women's greater environmental concerns begin at a young age.

As far as business implications are concerned, even if the sample composition does not allow to generalize the results, authors can recommend companies producing sustainable products to address educated young women that are eager to gather information about their sustainable purchases. Thus, companies should use specific labels [49] and informative advertising. They should also be transparent about their sustainable activities. It is also fair to suggest implementing the e-commerce channel, since the mobility limitations, in most countries, boosted e-commerce sales [50].

Further research should enlarge the sample to verify the findings among a wider population both in terms of age and gender. Moreover, research could investigate whether this global crisis has permanently changed the dynamics of consumption over the long term.

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