Beyond economic convenience: Unveiling the motives for engaging in food sharing initiatives

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ABSTRACT

Food waste is a major global problem nowadays because it negatively affects the environment, society, and the economy. Food sharing has lately emerged as an innovative solution to this problem, but little is known about the behavioral intentions of consumers with regard to food sharing initiatives. In this study, we use the theory of consumption values along with a mixed methods approach to analyze the key motives underlying consumers' intentions for using food sharing platforms. We develop a conceptual model to this end, and collect, analyze, and triangulate data to test it by using both a qualitative and a quantitative approach. The results highlight the relevance of epistemic, conditional, and social values in a communitarian sense in driving people's engagement in food sharing. Functional values were found to have a secondary importance for both users and non-users in this regard. A comparison between users and non-users also revealed that emotional values constitute an important factor for the latter. The study contributes to both theory and practice by highlighting the importance of such initiatives in addressing not only environmental issues, but also social needs, and hence contributing to the sustainable development of local communities.

1. Introduction

Food waste has emerged as an important subject of frequent discussion in research institutions, universities, and companies in recent years. It is among the major problems that characterize modern society, it has adverse effects from environmental, social, and economic perspectives, and it is linked to the resources for and the costs of producing food, and disposing of it once it has become waste (Cicatiello et al., 2017; Falcone and Imbert, 2017; van Lin et al., 2023). The United Nations Food and Agriculture Organization (FAO, 2017) estimates that one-third of the food annually produced for human consumption worldwide is wasted. In monetary terms, residents of the US alone throw roughly $1300 per year worth of food in the trash (Conrad, 2020). Food sharing (FS) is a solution to the problem of food waste that has gained momentum with the development of information and communications technologies as well as the sharing economy. It represents a new form of collaborative consumption that involves collecting and redistributing excess foods for free, or at a significant discount by gathering them from hotels, restaurants, canteens, and other public catering establishments (Akbar and Hoffmann, 2023).

FS has attracted an increasing amount of attention in research over the last few years (Davies and Legg, 2018), but requires further examination. The extant literature has mainly focused on providing an understanding of the best technological practices for FS management models (Michelini et al., 2018; Shankar et al., 2022), of the opportunities and characteristics of food sharing platforms (FSPs) (Bachnik and Szumnia-Samolej, 2018; Ciulli et al., 2020; Falcone and Imbert, 2017), and of obstacles to the involvement of consumers in FS initiatives (Barnes and Mattsson, 2016; Lazell, 2016; Mirosa et al., 2016). However, to the best of our knowledge, few studies have investigated people's attitudes toward FS from the perspective of consumer behavior. In this regard, previous studies have focused on investigating the motivation of individuals to participate in the sharing economy from the perspective of social identity (Schanes and Stagl, 2019), and the social, ecological, and economic needs that lead consumers to engage in sharing food through social media platforms (Ganglbauer et al., 2014).

No empirical study to date has explored the consumer-related values that induce people to become involved in FS. Moreover, no research has examined the differences between the users and non-users of FS, especially in the context of the drivers of FS. Addressing all these issues can improve our understanding of both the key values driving FS, and the differences between users and non-users of FS (Kaur et al., 2021).

Following the above premises, we seek to comprehensively understand the key motives underlying the use of FS through the lens of the theory of consumption values (TCV) (Sheth et al., 1991). To do so, we rely on a sequential multi-method approach (Davis et al., 2011; Johnson et al., 2022) that consists of both a qualitative (Study 1) and a quantitative investigation (Study 2). Such an approach combines the strengths of diverse methods of research to enhance the validity and reliability of the findings, and to provide a nuanced perspective of the motives behind people's adoption of FS.

In the context of theoretical contributions, we explore the motivations underlying consumer behavior in the context of FS by integrating past research (Ciulli and Kolk, 2019; Davies and Legg, 2018; Michelini et al., 2020; Schanes and Stagl, 2019). We emphasize that engagement in FS initiatives is primarily connected to people's search for novelty and their aspiration to collectively contribute to managing food waste. We also show that the social value for FS users is associated with a sense of community built around communities of consumption. Moreover, functional benefits appear to have secondary importance in motivating people to participate in FS actively. Finally, we highlight certain practical implications that may be useful to service providers of FSPs as well as FS communities.

The remainder of this paper is organized as follows: Section 2 provides the theoretical basis for our investigation and introduces the TCV and FS. It also offers insights into why it is important to consider both users and non-users when studying innovations such as FS. Section 3 outlines specific hypotheses that guide our empirical analysis by focusing on the interrelationships among TCV, FS, and the behavior of people in terms of adopting FS. Section 4 presents the methodological approach used in Study 1 and its findings, while Section 5 elaborates on the methodology of Study 2 and its findings by using Structural Equation Modeling (SEM) and fuzzy-set Qualitative Comparative Analysis (fsQCA) to analyze a sample encompassing both users and non-users. Section 6 engages in a general and comparative discussion, and examines the similarities and differences between the above two studies to highlight their theoretical and practical implications. Finally, Section 7 acknowledges the limitations of our work and proposes directions for future research agenda.

2. Theoretical background

Why people buy what they buy is the central question in research on consumer behavior and, more broadly, marketing-related disciplines. A significant contribution to answering this question was made in the early 1990s with the emergence of the TCV. By drawing from numerous models of consumer behavior, Sheth et al. (1991) postulated that people's purchasing choices are a function of five consumption-related values: functional (utilitarian and physical performance), emotional (affective response), social (group membership and symbolic aspect), conditional (specific situation), and epistemic (knowledge, novelty, and curiosity) values. In brief, the TCV claims that despite the context, these values—or a combination of them—deeply influence consumers' choices, and the specific weight of each value in the final decision differs from person to person. This theory has also made a significant contribution to understanding consumer behavior related to food consumption and green consumption (see Appendix 1), topics that are closely related to FS.

In parallel with the development and wider application of the TCV, advances in Information Technology and the global movement toward sustainable consumption have fueled the sharing economy (Barnes and Mattsson, 2016; Belezas and Daniel, 2023). From the perspective of

business models, the sharing economy is a host of platform-mediated business models that allow users to share various goods and services by giving access or passing ownership, for free or for money (Hamari et al., 2016). Among the innovations that have emerged from the sharing economy, some aim to moderate the phenomenon of food waste through unconventional models of consumption: namely, FS. This consists of a collaborative form of consumption that is intrinsically linked to green behavior (Morone et al., 2018) and green innovation, which aim to re-valorize food waste and minimize environmental damage (Liao and Chuang, 2022; Morone et al., 2018; Upadhayay et al., 2024). Moreover, FS has been presented as a facilitator of sustainability because it allows for the emergence of new behaviors related to food consumption (Apostolidis et al., 2021) that enable the sharing of real-world assets and resources (Octavia et al., 2022). By reducing waste, FS promotes an innovative model of reasonable and sustainable consumption in society that makes efficient use of resources by connecting firms and individuals (Gomes et al., 2023; Mackenzie and Davies, 2019; Öberg, 2023; Ranjbari et al., 2024).

By adopting the perspective of green innovation, FS can be conceived as an initiative that generates environmental, social, and economic benefits (Liao and Chuang, 2022) through the exploitation of technologies that enable the efficient management of food waste (Kumar et al., 2022). From this perspective, FSPs can be considered to be "crowd-based networks" (Belezas and Daniel, 2023, p.2) in the ecosystem of the sharing economy as they rely on the active participation of users to create environmental, social, and economic impacts, and in turn yield sustainable development (Belezas and Daniel, 2023). By combining resources, and engaging both consumers and firms in the fight against food waste, these platforms address social needs and, hence, play a crucial role in the sustainable development of local communities (Vo-Thanh et al., 2021). Indeed, FSPs encourage collaborative models of consumption with a prosocial orientation to reduce the negative impact of food waste, not only for environmental protection, but also for social-related causes (Nakagawa and Kosaka, 2022). FSPs leverage prosocial behaviors by exploiting technologies to connect people, involve users in virtual communities, and trigger their social values and concerns to benefit local communities and achieve socially sustainable development (Apostolidis et al., 2022; Jiao et al., 2023; Manika et al., 2021).

While the phenomenon of FS has lately attracted significant attention through analyses of the characteristics of FSPs (Ciulli and Kolk, 2019; Davies and Legg, 2018; Schanes and Stagl, 2019) and the business models of FS (Michelini et al., 2020), little is known about the behaviors of consumers in the context of FS. According to Tan et al. (2022), FS empowers green consumption by enhancing consumers' interest in the fight against food waste, and improves societal well-being (Bajaj et al., 2020; Parguel et al., 2017) by providing a practical and sustainable solution to waste disposal (Baek and Oh, 2021). Once consumers perceive the societal and the environmental benefits of adopting FS and using FSPs, they maintain the consistency between their attitudes and behaviors owing to the positive emotions and pride that they experience in practicing green consumption-related values to achieve ecological goals (Sherman and Cohen, 2006). Nevertheless, we seek to delve deeper into the mind of the consumer, and use the TCV to investigate the varying effects of consumption-related values on behavioral outcomes in the context of FS (Sheth et al., 1991).

2.1. Users vs. non-users

The decision-making process and buying behaviors of responsible and green consumers are mainly shaped by values that influence their choices, including in the context of FS (Codini et al., 2018). However, the extant literature on values that motivate consumers to adopt innovations remains scant. Previous studies have called for a better understanding of the consumption-related values of not only the users of FS, but also those of non-users to analyze the differences between them

(Kaur et al., 2021). Investigating only the consumption-related values of the adopters of a given innovation does not yield a complete understating of the phenomenon (Laukkanen, 2016). In particular, studying the behaviors of adopters and non-adopters provides a better comprehension of the reasons behind the dissemination of innovation by revealing why certain consumers are unwilling to adopt a digital platform (Claudy et al., 2015; Groβ, 2015). Previous studies have used several theories, especially the theory of consumer resistance, to try to explain the resistance of consumers to digital innovation and their lack of adoption, and in turn have provided a comprehensive framework for research (Talwar et al., 2020). With particular regard to the context of green consumption, to which FS also belongs, some studies have examined the behaviors of buyers and non-buyers of organic food to identify certain drivers, such as familiarity, positive or negative feelings, and knowledge, that have an impact on the behaviors of non-buyers (Kushwah et al., 2019; Truong et al., 2021). By replicating this approach but adopting the TCV as the theoretical framework, we seek to improve the understanding of the consumption-related values of the users and non-users of FS. Highlighting the differences and similarities between these groups yields valuable implications. We investigate the effects of the five distinct consumption values of the TCV—namely, functional, social, emotional, conditional, and epistemic values—on the intentions of users and non-users of FS.

3. Development of hypotheses

3.1. Functional value

Functional value concerns the ability of a product to achieve its functional, utilitarian, or physical purpose (Sheth et al., 1991). Recent studies have associated the functional value of a product or service with its characteristics and attributes, including price, durability, and service support (Smith and Colgate, 2007). In the context of FS, the functional value is represented by easy or convenient access to information on the products, and by the usefulness of FSPs in simplifying the purchasing process, saving time and money, and contributing to environmental protection (Mackenzie and Davies, 2019; Conrad, 2020). The functional benefits of FS are related to people's perception of safeguarding the environment with food savings over a short time, in a convenient manner, and with easy-to-use tools. This can motivate them to engage in FS. Based on the above, we propose the following hypotheses:

H1a. Functional value positively influences users' intention to use food sharing platforms.

H1b. Functional value positively influences non-users' intention to use food sharing platforms.

3.2. Emotional value

Emotional value is the utility derived from the feelings and affective states experienced by customers through engagement with a product or a service (Sheth et al., 1991; Sweeney and Soutar, 2001). It is also related to the playfulness, enjoyment, and fun that consumers can experience by using the product. Previous research has shown that emotional components—especially enjoyment and playfulness—directly influence consumers' intended use of mobile services (Tseng and Lo, 2011). The emotional value of FSPs is related to the benefits derived from the use of these platforms, and can be associated with value expression, exploration, and entertainment (Chandon et al., 2000). The expression of value involves the manifestation of personal values through consumption, exploration satisfies the human desire to investigate, and entertainment is the intrinsic fun experienced in the use of platforms. Thus, positive experiences while using FSPs tend to enhance users' intention to engage with them (Chandon et al. (2000)). We thus propose the following hypotheses:

H2a. Emotional value positively influences users' intention to use food sharing platforms.

H2b. Emotional value positively influences non-users' intention to use food sharing platforms.

3.3. Social value

Social value refers to the perceived utility of associating an alternative with specific social groups (Sheth et al., 1991), and prompts consumers to prefer visible products and shareable goods/services to enhance their social image (Karjaluoto et al., 2021). This concept is related to the perception of how consumers want to be seen by others and how they want to see themselves, and serves as a means to socially express and enhance one's self-image in social groups (Sweeney and Soutar, 2001).

Previous research has shown that social value positively influences consumer behavior because it enables consumers to feel connected to others and belong to a specific social group (Hsu and Chen, 2007; Ming-Sung Cheng et al., 2009). Furthermore, community interactions and social support bring social value to consumers, and transform consumption into a social experience (Jiao et al., 2018). FS is considered to be an innovative service that contributes to reducing food waste, and may be viewed as a means of promoting one's personal self-image via engagement in the environmental battle to ultimately stand out among peers (Kaur et al., 2021). As a result, we propose the following hypotheses:

H3a. Social value positively influences users' intention to use food sharing platforms.

H3b. Social value positively influences non-users' intention to use food sharing platforms.

3.4. Conditional value

Conditional value is the perceived utility of an alternative owing to a specific situation or set of circumstances that consumers face during their decision-making process (Sheth et al., 1991). With regard to green consumption, conditional value depends on the time, place, context, and personal situation, and shapes consumer behavior when a change occurs (Kummer et al., 2018; Kaur et al., 2021; Lin and Huang, 2012). In the context of FS, conditional value refers to the benefits that motivate consumers to use FSPs, such as reducing CO_2 emissions, incentivizing promotions, managing food waste, and protecting the environment (Kaur et al., 2021). Consumers are influenced mainly when they have the perception of using platforms that effectively manage food waste and preserve the natural environment, and when they receive useful information about environmental issues (Lin and Huang, 2012). Therefore, conditional value affects consumer choice and buying behavior in the context of FS. We therefore propose the following hypotheses:

H4a. Conditional value positively influences users' intention to use food sharing platforms.

H4b. Conditional value positively influences non-users' intention to use food sharing platforms.

3.5. Epistemic value

Epistemic value refers to the utility that derives from the ability of a product/service to arouse curiosity, provide novelty, and satisfy a desire for knowledge as perceived by consumers (Kushwah et al., 2019; Sheth et al., 1991). The literature on consumer behavior has shown that when consumers are bored with the current product/service, or are curious or wish to gain new knowledge about something, they tend to choose an alternative (Ha and Jang, 2013). With particular regard to green consumption, the literature has emphasized that consumers search for

substantial information, such as product labels, green certifications, and environmental impact, to differentiate green products from non-green products, identify novelty, and make a more conscious choice (Mohd Suki, 2016). The epistemic value in the context of FS is related to the desire to explore new food products, discover new places, and receive information on how to reuse food. FSPs fulfill consumers' desires, and stimulate them to explore new experiences and actively participate in FS-related initiatives (Furukawa et al., 2019). Thus, we propose the following hypotheses:

H5a. Epistemic value positively influences users' intention to use food sharing platforms.

H5b. Epistemic value positively influences non-users' intention to use food sharing platforms.

We use a mixed methods research design to identify and analyze the effects of consumption-related values on people's intention to become involved in FS. We collect, analyze, and triangulate qualitative (Study 1–focus group) and quantitative data (Study 2–SEM and fsQCA) to test the above hypotheses and better understand FS (Davis et al., 2011). This approach allows us to overcome the limitations inherent in individual methods, and promote a more robust and well-rounded research design. We follow a development approach to this end (Tashakkori and Teddlie, 1996). On the one hand, the qualitative investigation aims to generate preliminary results that inform the quantitative results as well as subsequent investigation. On the other hand, Study 2 is used to develop and expand on the insights generated regarding the adoption of food sharing via the qualitative investigation, and to obtain more fine-grained results. Note that the advantages obtained from the across-method triangulation (i.e., that between Study 1 and Study 2) were also coupled with a within-method triangulation (Tashakkori and Teddlie, 1996). Study 2 analyzes the data by following two analytical strategies. The first is SEM, a symmetrical method that estimates the relational effects of two or more latent variables (Byrne, 2016). The second is fsQCA. This asymmetrical method highlights the sets or combinations of configurational antecedents that may lead to a certain outcome (Pappas and Woodside, 2021; Ragin, 2008)—in our case, the intention to engage in or remain engaged in FS initiatives. Hence, this approach allows us to triangulate both qualitative and the quantitative findings in our discussion.

4. Study 1

4.1. Data collection and analysis

Researchers in marketing have used focus groups to study consumers' behaviors based on the TCV (Pope, 2001). Focus groups are typically used in the initial research phase of a mixed methods investigation to collect data and identify items for setting-up the survey used in the quantitative phase of the study (Davis et al., 2011). The focus group-based methodology can capture the participants' attitudes, opinions, and approaches regarding a specific phenomenon (Brits and du Plessis, 2007). Focus groups are instrumental when the aim of the research is to understand people's ideas about new phenomena. Owing to the synergistic effect of the group-based approach and the sharing of knowledge among participants, focus groups can yield more comprehensive information than one-to-one interviews, and can elicit data and ideas that might not be revealed in one-on-one questioning (Stewart et al., 2007). It is a valuable instrument for exploring the participants' perceptions, e.g., to understand the reasons for why they use or would use FSPs, and the values that they identify in such initiatives (Morgan, 1993).

Because a focus group with six to eight participants is considered to be sufficient to obtain relevant information about a topic (Krueger and Casey, 2000), we invited seven participants, users and non-users of FSPs, for a discussion in this study. The focus group was conducted in October 2021 to identify the values underlying people's choices to engage in FS,

and to use FSPs to share and buy food. To ensure a diversity of opinions and detailed results, the group of respondents of the focus group consisted of the variety of participants summarized in Table 1.

The focus group lasted for around 3 h. It was conducted by a moderator, who led the discussion by asking a series of questions to explore the participants' perceptions of different consumption-related values (functional, social, emotional, conditional, and epistemic) in the context of decision-making on whether to use FSPs, and a facilitator who handled the audio recording and took notes to identify the central values for engaging in FS. The results of the focus group were transcribed and codified to identify recurring themes and concepts (Tong et al., 2007). Initial coding was performed to identify emerging ideas and keywords, and focused coding was conducted in a second stage to combine or discard recurring themes, and to better identify the relationships among the codes (Nyumba et al., 2018). Finally, the themes and concepts were checked with the facilitator's notes to verify the accuracy and purity of the data, and thus enhance the credibility and consistency of the results.

4.2. Results of focus group

We now detail the results of the focus group. The values are presented in order of the importance attributed to them by the interviewees, in terms of their effects on the participants' behavioral outcomes (i.e., using FSPs).

Epistemic value: The findings of the focus group revealed that epistemic value was the most critical element in enticing consumers to use FSPs. The participants agreed that the ability of a product or service to provide customers with new and appealing information generates curiosity. All the participants found FS to be interesting because it allowed them to try new food products and discover new locations in their city. For instance, interviewee 7 stated:

> "The curiosity and novelty of food sharing apps lie in enabling me to try new foods, such as vegan food, and discover new places that I would never have visited without the app."

Moreover, the participants claimed that they would adopt FSPs for their so-called "surprise effect." For example, some of these platforms offer users the opportunity to buy boxes of food containing unknown products to arouse their curiosity. In this context, interviewee 4 stated:

> "Furthermore, I like this box idea because it reminds me of a surprise when I open Christmas gifts; even though you already know what is inside, in my opinion, it's like a discovery to actually see what's inside."

Moreover, the participants claimed that partaking in FS initiatives had increased their knowledge of fighting food waste. Via these initiatives, they had obtained valuable information on how to reuse leftover food after the holidays or continuously update their anti-waste recipes.

Conditional value: The outcomes of the focus group showed that the participants considered conditional value to be an important driver to engage in FS because it is understood as a temporary functional or social value that is strongly related to the use of FSPs. The participants claimed that using these platforms made them feel that they were collectively contributing to managing food waste. For instance,

Table 1
Focus group participants.

ID	Role in the focus group	Age	Gender
Interviewee 1	Expert in the field–Key account manager	30	Female
Interviewee 2	Expert in the field–Digital marketing manager	35	Male
Interviewee 3	Expert in the field–Co-founder and CEO	29	Male
Interviewee 4	User of FSP	25	Female
Interviewee 5	User of FSP	28	Female
Interviewee 6	Non-user of FSP	26	Female
Interviewee 7	Non-user of FSP	28	Male

interviewee 5 said:

> "I like using food sharing platforms because, thanks to information that are made available by them, they allow me to understand how I can do to contribute to a better society and the environment by reducing food waste."

In a similar vein, the participants agreed that FS contributes to reducing CO_2 emissions, thus enhancing the social and environmental values of these initiatives. Interviewee 2 suggested the following:

> "I would use food sharing apps more often if I perceived that they concretely contribute to the management of food waste and the reduction of CO_2 emissions."

For the above reasons, all participants claimed that FS initiatives and FSPs should carry out promotional activities focused on sustainable solutions for environmental preservation (e.g., the use of sustainable packaging) to incentivize the fight against food waste among users and potential recruits.

Emotional value: The focus group revealed that the resulting positive feelings and emotions constitute another important aspect that motivates people to engage in FS. All interviewees confirmed the emotional value directly related to several pleasant feelings induced by reducing food waste. Moreover, they indicated that their positive emotions were associated with a sense of joy, pleasure, and satisfaction derived from the sharing activity. Their positive emotions toward these platforms were verbalized by such expressions as "I love them" and "they are gratifying." For instance, interviewee 5 noted the following:

> "When I use food sharing apps, I feel good because I have the sense that I am performing a beneficial action for the environment."

Furthermore, the users of FSPs confirmed that the possibility of tasting new food products and discovering new places created a feeling of pleasure and enjoyment in them, and made them feel good about themselves. These positive sensations of satisfaction and enjoyment from being involved in FS also attracted non-users. The latter declared themselves intrigued by the positive emotions they could experience by engaging in FS, where this made them want to download FS apps and become users. Interviewee 7 stated:

> "I would like to try these apps because I would definitely find something to buy, especially as food is one of my major passions, and doing so would make me happy by making me feel good about myself."

All in all, the participants agreed that they found the fight against food waste through FS platforms emotionally engaging and rewarding.

Social value: Members of the focus group admitted that engaging in FS may help users by making them stand out among their peers. Being involved in FS activities may enhance an individual's social image as well as their appreciation and admiration within their reference group. Nevertheless, they stressed a communitarian perspective, rather than an enhancement of their social image, as the primary motivation for this. Being part of a group involved in conscientious and sustainable activities creates a "sense of community." In line with this perspective, interviewee 1 stated:

> "Using food sharing apps could help me feel part of a community that includes other people who want to protect the environment."

The sense of belonging to an FS community is crucial for engaging in such initiatives, enhancing social connections, increasing cooperation, and staying up to date with the daily activities of FSPs. In particular, engaging in such communities (also through social media) allows people to establish social relationships and offer social support, which becomes vital for encouraging non-adopters to participate in FS by increasing their awareness of their capacity to contribute to the fight against food waste. Interviewee 6 claimed the following:

> "If I would use these food sharing platforms, they would give me a sense of belonging to a community and make me feel important because food sharing is something that would effectively reduce food waste."

Thus, the sense of community obtained from engaging in FS appeared to prevail over its pure social value, related to enhancing one's self-image, within the reference group.

Functional value: The functional value emerged as the final and least important value driving people's intention to engage in FS during discussions in the focus group. For example, the participants appreciated the ease of use, process design, and availability of information of FSPs.

First, they claimed that one of the most important elements that lead to the adoption of FSPs is the possibility for users to complete purchases quickly. The participants remarked that making purchases with just a few clicks was essential as people have little time, and often use FSPs to save food as well as their time. Interviewee 3 declared:

> "A very important aspect is certainly the fact that I can shop quickly because these apps allow me to save time, and I can order what I need with just a few clicks."

Second, the interviewees claimed that the option for users to make online payments is another functional element that drives the adoption of FSPs, as this allows them to minimize the time taken and speed-up the buying process. For instance, interviewee 6 noted:

> "Online payments are convenient, save time, and speed-up the purchase."

Finally, the participants stated that the usefulness of FSPs also depended on their being able to easily access the product-related information. The users of FSPs particularly appreciate the ease of access afforded by them to product-related information because they can use this to map and compare various food options in a productive and performative way. Accordingly, the results of the focus group revealed that the functional values were all related to the platforms used. Notably, no mention of "shared" product attributes was made by any of the participants, especially those who were already users. The quality and economic convenience of the food items appeared to be a secondary issue, both for those involved and not involved in FS.

5. Study 2

As highlighted above, Study 2 expands upon the groundwork laid in Study 1. This subsequent quantitative inquiry involved the use of a survey to operationalize all the theoretical dimensions of the TCV (i.e., the consumption-related values) explored in Study 1. Notably, Study 2 provides information about the robustness of the exploratory findings achieved in the qualitative inquiry, and we compared them against those of the quantitative study. This comparative analysis strengthens the external validity of our insights and underscores areas that require further research.

5.1. Data collection

The data for Study 2 were collected through a survey conducted in Italy. The questionnaires were administered online to groups involved in or concerned about green and environmental issues, including the reduction in food waste and environmental preservation.

The survey needed to be filled out in 20 min, and was administered from November 2021 to January 2022. The questionnaire was developed after a thorough review of the literature, and consisted of two sections. The first collected the socio-demographic profiles of the respondents, while the second explored the variables of interest of the study. All items were modeled on a seven-point Likert scale. The constructs were modeled as reflective and measured as follows: 1) functional value (V_{FNC}), 2) emotional value (V_{EMO}), 3) social value (V_{SOC}), 4)

conditional value (V$_{COND}$), 5) epistemic value (V$_{EPI}$), and 6) intention to engage in (or continue engaging in) FS (INT). V$_{FNC}$ was a second-order construct adapted from Chandon et al. (2000), and was composed of the first-order factors of i) savings, ii) quality, and iii) convenience. V$_{FNC}$ measured the instrumental, functional, and cognitive benefits of providing value to the customer as they served as a means to an end. V$_{EMO}$ was a second-order construct that was adapted from Chandon et al. (2000), and was composed of the first-order constructs of i) value expression, ii) entertainment, and iii) exploration. Unlike V$_{FNC}$, V$_{EMO}$ captured the non-instrumental, experiential, and affective benefits related to the product: Consumers appreciate these values for their own sake, without regard to their practical purpose. V$_{SOC}$ was a first-order construct adapted from Dholakia et al. (2004), and was related to the value that a consumer derives from gaining acceptance and approval, and from enhancing their social status. V$_{COND}$ was a first-order construct adapted from Kaur et al. (2021), and sought to capture the situational value that consumers may derive from FS under certain circumstances, such as the positive feeling of contributing to the effort against food waste in light of worsening environmental conditions. Finally, V$_{EPI}$ was adapted from Pihlström and Brush (2008). It was related to the feeling of curiosity and the need for novelty, which may induce consumers to try FS and increase the overall value of this innovative service. All the measurement items for Study 2 have been used in recent studies (Gaston-Breton and Duque, 2015; Hwang et al., 2023; Reid et al., 2015), which proves their reliability. Finally, as all the measurement items were considered to be functions of their respective latent variables, such that changes in the perception of the latent values led to variations in the scores assigned to the observed indicators (Diamantopoulos and Siguaw, 2006), all the factors were modeled as reflective constructs.

A total of 1453 questionnaires were collected. After eliminating those filled out by people who were unfamiliar with FS, incomplete responses, failed attention checks, careless responses, and multi-variate outliners, 1115 useable and completed questionnaires were obtained (68.10% female; 66.80% from 18 to 25 years old; 87.60% with a high school diploma or higher level of education). All the analyses were conducted by using SPSS 23 and AMOS 24.

5.2. Construct validity, reliability, common method bias, and invariance tests

The reliability and validity of the measurements were tested via confirmatory factor analysis (CFA). It yielded an acceptable fit for the data ($\chi^2 = 2,334,208$, df = 521, χ^2/df = 4.448, RMSEA = 0.055, CFI = 0.946, TLI = 0.938, NFI = 0.932, SRMR = 0.045). The detailed results are provided in Table 2. Convergent validity was assessed by calculating the CR and AVE as well as the standardized factor loadings, which needed to be greater than 0.70, 0.50, and 0.50, respectively (Hair et al., 2018). As shown in Table 3, all values exceeded the minimum threshold, thus supporting the convergent validity and reliability of the constructs (Hair et al., 2018). Additional evidence of the construct's reliability was obtained, as the value of Cronbach's α for each latent factor was higher than 0.70.

The Fornell–Lacker criterion (Fornell and Larcker, 1981) and the Heterotrait–Monotrait (HTMT) ratio of correlations (Henseler et al., 2015) were used as tests of discriminant validity. For the Fornell–Lacker criterion, all square-roots of the AVE estimates were greater than the corresponding inter-construct correlations, except for the constructs of V$_{FNC}$ and V$_{EMO}$. For Henseler et al.'s criterion, the HTMT values did not exceed 0.85, suggesting an acceptable discriminant validity. This second test confirmed that the model posed no hindrances to discriminant validity (Table 3).

We also used the latent common method factor technique (Collier, 2020) to confirm that the common method bias (CMB) did not affect the data. The model with the common factor included did not fit the data better than the model without the common factor. While the difference between the χ^2 statistic of the models was deemed to be statistically

Table 2

CFA with factor loadings, AVE, CR, and Cronbach's α.

Construct	Item Code	Measurement Items	S.F.L.	CR	AVE	α
Functional Value (V$_{FNC}$)	***Second Order***			0.846	0.648	-
Saving	First-order V$_{FNC}$	adapted from Chandon et al. (2000)	0.870	*0.894*	*0.740*	*0.889*
	VUTI1	Food sharing makes you save some money.	*0.924*			
	VUTI2	Food sharing makes you get good deals.	*0.754*			
	VUTI3	Food sharing makes you spend less.	*0.895*			
Convenience	First-order V$_{FNC}$	adapted from Chandon et al. (2000)	0.762	*0.869*	*0.690*	*0.858*
	VUTI7	Food sharing reminds you of the need for certain ingredients/products.	*0.705*			
	VUTI8	Food sharing makes life easier.	*0.908*			
	VUTI9	Food sharing makes shopping faster.	*0.864*			
Quality	First-order V$_{FNC}$	adapted from Chandon et al. (2000)	0.780	*0.946*	*0.898*	*0.907*
	VUTI4	Food sharing allows you to buy higher-quality food at lower prices.	*0.770*			
	VUTI5	Food sharing allows you to buy better foods.	*0.955*			
	VUTI6	Food sharing allows you to eat higher-quality dishes.	*0.935*			
Emotional Value (V$_{EMO}$)	***Second Order***			0.937	0.833	–
Value Expression	First-order V$_{EMO}$	adapted from Chandon et al. (2000)	0.928	*0.910*	*0.771*	*0.905*
	V$_{EMO}$ 1	Food sharing makes you feel good.	*0.898*			
	V$_{EMO}$ 2	Food sharing makes you feel proud to save some food.	*0.914*			
	V$_{EMO}$ 3	Food sharing makes you feel smart.	*0.821*			
Exploration	First-order V$_{EMO}$	adapted from Chandon et al. (2000)	0.884	*0.940*	*0.840*	*0.939*
	V$_{EMO}$ 4	Food sharing entices you to try new products.	*0.887*			
	V$_{EMO}$ 5	Food sharing allows you to avoid always eating the same products.	*0.921*			
	V$_{EMO}$ 6	Food sharing suggests new dishes for you to try.	*0.941*			

Table 2 (*continued*)

Construct	Item Code	Measurement Items	S.F.L.	CR	AVE	α
Entrainment	First-order V_{EMO}	adapted from Chandon et al. (2000)	0.927	*0.929*	*0.867*	*0.943*
	V_{EMO} 7	Food sharing is fun.	*0.895*			
	V_{EMO} 8	Food sharing inspires you.	*0.934*			
	V_{EMO} 9	Food sharing is enjoyable.	*0.933*			
Social Value *(V_{SOC})*		Adapted from Dholakia et al. (2004)		0.920	0.795	0.918
	V_{SOC} 1	Food sharing can help you improve your image.	0.910			
	V_{SOC} 2	Food sharing can help you improve your reputation.	0.946			
	V_{SOC} 3	Food sharing can help you impress others.	0.814			
Conditional Value *(V_{COND})*		Adapted from Kaur et al. (2021)	0.854	0.594	0.847	
	V_{COND} 2	I will engage in food sharing (more often) if I perceive that it concretely contributes to reducing CO_2 emissions.	0.732			
	V_{COND} 3	I would engage in food sharing (more often) if better promotional incentives were offered.	0.737			
	V_{COND} 4	I will engage in food sharing (more often) if I perceive that it collectively contributes to managing food waste.	0.811			
	V_{COND} 5	I would engage in food sharing (more often) if it offered sustainable solutions to protect the environment (i.e., sustainable packaging, biodegradable shopping bags).	0.799			
Epistemic Value *(V_{EPI})*		Adapted from Pihlström and Brush (2008)		0.893	0.677	0.892
	V_{EPI} 1	Food sharing is something new.	0.876			
	V_{EPI} 2	Food sharing immediately aroused my curiosity.	0.869			
	V_{EPI} 3	I would use (use) food sharing to experiment with	0.749			

Table 2 (*continued*)

Construct	Item Code	Measurement Items	S.F.L.	CR	AVE	α
	V_{EPI} 4	new ways of doing things. I would use food sharing to test a new service.	0.790			
Intention to Use (INT)		Adapted from Tarute et al. (2017)		0.915	0.782	0.912
	INT1	I will use (keep using) food sharing apps or platforms in the future.	0.857			
	INT5	I would like to do (keep doing) food sharing in the future.	0.937			
	INT6	I will do (keep doing) food sharing in the future.	0.856			

Note: The numbers in *italics* represent the standardized factors loadings, AVE, and CR of the first-order constructs. The items in the parentheses represent adaptations for users.

significant, the variations in the other commonly used indices of fit were deemed to be marginal (ΔCFI = |0.002|, ΔRMSEA = |0.001|, ΔSRMR = |0.003|). Thus, CMB was not likely to affect the data (Table 3).

We also tested the measurement model containing V_{FNC} and V_{EMO} as second-order constructs against a model containing only their respective first-order factors as separate dimensions. While the first-order-only measurement model yielded a slightly improved fit (χ^2 = 1896,761, df = 458, χ^2/df = 4.141, RMSEA = 0.050, CFI = 0.958, TLI = 0.948, NFI = 0.939, SRMR = 0.039), it was significantly less parsimonious than the model containing the second-order factors, and posed several issues in terms of discriminant validity (Carless, 1998; Christodoulides et al., 2015).

Finally, as we sought to investigate the differences between users and non-users of FSPs, we conducted a multi-group comparison. To ensure that the underlying constructs being measured had the same structure for each group examined, a multi-group CFA was carried out following the suggestion by Hair et al. (2018). Once the baseline values of the goodness of fit for the configural model had been established, we tested the measurement model for invariance across groups. This involved re-estimating its parameters, initially constraining factor loadings and subsequently both factor loadings and intercepts to equality. The thresholds used to assess the different levels of invariance were the ones highlighted by Chen (2007) (Table 4).

5.3. Results of structural equation modeling

Having ensured invariance across users and non-users of FSPs, we tested the main hypotheses. Bootstraping (5000 samples) was used to compute the confidence intervals and compare the path coefficients across groups. The results were controlled for the gender (GND), age (AGE), and education level (EDU) of the respondents.

A SEM was first estimated by considering all samples. Surprisingly, the path analysis showed that V_{FNC} had a significant negative effect over INT (coeff. = −0.377, p < 0.01). On the contrary, V_{EMO} (coeff. = 0.327, p < 0.05), V_{SOC} (coeff. = 0.072, p > −0.01), V_{COND} (coeff. = 0.356, p < 0.01), and V_{EPI} (coeff. = 0.428, p < 0.01) showed a positive and significant effect over INT. With regard to the covariates, statistically significant effects were identified between AGE and INT (coeff. = −0.085, p < 0.05), while GND and EDU showed no significant effect. Finally, the model explained 48% of the variation in INT (R^2 = 0.480, Adjusted-R^2 =

Table 3

Correlations among constructs, discriminant validity, common method bias and invariance test.

Discriminant Validity									
	GND	AGE	EDU	V_FNC	V_EMO	V_SOC	V_COND	V_EPI	INT
GND	–	–	–	–	–	–	–	–	–
AGE	−0.046	–	–	–	–	–	–	–	–
EDU	0.022	−0.015	–	–	–	–	–	–	–
V_FNC	−0.055	−0.268	0.040	**0.805**	*0.839*	*0.294*	*0.151*	*0.629*	*0.303*
V_EMO	0.062	−0.297	0.059	0.919	**0.913**	*0.288*	*0.259*	*0.734*	*0.442*
V_SOC	−0.111	−0.114	−0.025	0.291	0.287	**0.891**	*0.184*	*0.256*	*0.253*
V_COND	0.102	0.038	−0.075	0.158	0.271	0.174	**0.771**	*0.306*	*0.490*
V_EPI	0.021	−0.332	0.082	0.664	0.739	0.241	0.309	**0.823**	*0.590*
INT	0.064	−0.224	0.001	0.328	0.454	0.236	0.484	0.591	**0.884**

Common Method Bias Test				
	χ^2 (df)	RMSEA	CFI	SRMR
Model with common latent factor included	2266,444 (520)	0.053	0.947	0.045
Model without common latent factor	2334,208 (521)	0,054	0,945	0,048
|Δ|	67.76 (1) [p < 0.01]	0,001	0,002	0,003

Invariance tests among the two groups								
Model	Compared against	CFI	|ΔCFI|	SRMR	|ΔSRMR|	RMSEA	|ΔRMSEA|	Invariant
Thresholds		>0.0100		>0.0300/0.0100		>0.0150		
Configural	–	0.939	–	0.050	–	0.040	–	Yes
Metric	Configural	0.939	0.000	0.050	0.000	0.040	0.000	Yes
Scalar	Configural	0.929	0.009	0.055	0.005	0.042	0.002	Yes

The square-root of the AVE on the diagonal are given in bold, and the inter-construct correlations are provided under the diagonal. HTMT correlations are provided above the diagonal and in *italics*.

Fit for the two-group unconstrained model (configural invariance): $\chi^2 = 3049.383$; df = 1042; χ^2/df = 2.926; RMSEA = 0.040; CFI = 0.939; TLI = 0.930; NFI = 0.911; SRMR = 0.050.

0.467).

A second (multi-group) structural model was then estimated (users vs. non-users). In this case, the path analysis showed that V_{FNC} had a non-significant effect over INT in the users' group (coeff. = −0.121, p = 0.537). However, the same relationship was negative and statistically significant among non-users (coeff. = −0.526, p < 0.05). These results lead us to reject both H1a and H1b. The multi-group model reported a non-significant effect of V_{EMO} for the users' group (coeff. = 0.217, p = 0.289), and a positive and significant effect for the non-users' group (coeff. = 0.466, p < 0.05). Thus, H2a was rejected while H2b was accepted. V_{SOC} had a non-significant effect on INT in the users' group (coeff. = −0.006, p = 0.916), and a positive and significant relationship with the intention to use FSPs in the non-users' group (coeff. = 0.106, p < 0.01). This leads us to reject H3a and accept H3b. Finally, both V_{COND} and V_{EPI} were positively related with INT in both the groups considered ($V_{COND} \rightarrow$INT: coeff._USER = 0.181, p_USER < 0.01, coeff._NON-USER = 0.389; p_NON-USER < 0.01; $V_{EPI} \rightarrow$INT: coeff._USER = 0.281, p_USER < 0.01; coeff._NON-USER = 0.454, p_NON-USER < 0.01). Thus, H4a, H4b, H5a, and H5b were accepted. With regard to the covariates, a statistically significant effect was identified between AGE and INT in the non-users group (coeff. = −0.083, p < 0.05). Finally, INT explained 35% of variation among users ($R^7 = 0.351$, Adjusted-$R^2 = 0.335$). By comparison, the model accounted for 49% of the variation among non-users ($R^2 = 0.497$, Adjusted-$R^2 = 0.491$).

Finally, we compared the structural paths of the two groups to highlight statistically significant differences between them. Only two paths were statistically different between the groups: $V_{COND} \rightarrow$INT (\|Diff\| = 0.207, p < 0.01) and $V_{EPI} \rightarrow$INT (\|Diff\| = 0.173, p < 0.05). All the other structural paths had non-significant differences between the groups. The details of this analysis are reported in Table 5 and Fig. 1.

5.4. Fuzzy set Qualitative Comparative Analysis

We used FsQCA to identify the sets of configurational antecedents (i. e., the constructs used in this study: V_{FNC}, V_{EMO}, V_{SOC}, V_{COND}, V_{EPI}) that could explain the presence or absence (i.e., ~[1] INT) of the outcome of interest. For the SEM, the sample was split among users and non-users. However, all variables needed to be calibrated into fuzzy sets to apply the algorithm for fsQCA, with their values ranging from zero to one. Therefore, the factors were directly calibrated by using three anchors for both groups: full membership (90th percentile), cross-over point (median), and non-membership (10th percentile) (Ragin, 2008). Table 5 summarizes the process of calibration.

We performed an analysis of necessity on both groups after the calibration. A "necessary" condition occurred if its consistency score was greater than 0.90 (Schneider et al., 2010). Setting INT as the outcome yielded consistency scores for every configurational antecedent in both groups in the range of 0.46–0.69. Therefore, none of the conditions was deemed necessary.

We then performed a sufficiency analysis. It identifies the combinations of causal conditions that are sufficient for an outcome to occur. The FsQCA algorithm generated a truth table with 2^k rows for both groups, where k is the number of causal combinations considered (i.e., five). All the outcomes of the truth tables were refined by using cutoff values of 0.80 for consistency and three for frequency (Ragin, 2008). All the results of the fsQCA analysis are displayed in Table 6.

In the results for the presence of INT in the user sample, the overall solution consistency score of 0.812 indicated a sufficiently robust relationship between the outcome and the solutions proposed. The overall solution coverage was 0.596. Solution coverage can be compared with the value of R^2 for symmetrical methods (Woodside, 2013). Hence, the three solutions proposed here accounted for a substantial proportion of the outcome. All individual solutions recorded consistency scores higher

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[1] Tilde (i.e., ~) in fsQCA stands for the negation or absence of a variable of interest.

Table 4
Analysis of structural models.

Structural Paths	Whole Sample (n = 1.115)					Multi-group Comparison													
						User group (n = 353)					Non-user group (n = 802)					Coeff. Diff.			
	Coeff.	S.E.	p	95% C.I.		Coeff.	S.E.	p	95% C.I.		Coeff.	S.E.	p	95% C.I.		Diff.	p	95% C.I.	
$V_{FNC} \to INT$	−0.351	0.137	<0.05	−0.578	−0.129	−0.121	0.147	0.537	−0.318	0.153	−0.526	0.221	<0.05	−0.921	−0.218	0.405	0.084	0.030	0.852
$V_{EMO} \to INT$	0.327	0.154	<0.05	0.083	0.570	0.217	0.179	0.289	−0.083	0.483	0.466	0.235	<0.05	0.121	0.875	−0.25	0.307	−0.740	0.190
$V_{SOC} \to INT$	0.072	0.026	<0.01	0.029	0.112	−0.006	0.039	0.916	−0.066	0.066	0.106	0.035	<0.01	0.047	0.161	−0.111	0.071	−0.192	−0.015
$V_{COND} \to INT$	0.356	0.041	<0.01	0.294	0.431	0.181	0.064	<0.01	0.098	0.310	0.389	0.058	<0.01	0.296	0.483	−0.207	<0.01	−0.356	−0.054
$V_{EPI} \to INT$	0.428	0.043	<0.01	0.361	0.506	0.281	0.076	<0.01	0.144	0.397	0.454	0.055	<0.01	0.365	0.554	−0.173	<0.05	−0.338	−0.026
Covariates																			
$GND \to INT$	−0.032	0.078	0.701	−0.171	0.084	−0.095	0.119	0.455	−0.285	0.116	−0.001	0.100	0.953	−0.176	0.150	−0.094	0.592	−0.328	0.196
$AGE \to INT$	−0.085	0.027	<0.05	−0.127	−0.038	−0.031	0.053	0.560	−0.122	0.048	−0.083	0.033	<0.05	−0.134	−0.025	0.052	0.388	−0.047	0.154
$EDU \to INT$	−0.024	0.030	0.409	−0.076	0.027	−0.033	0.049	0.437	−0.116	0.043	−0.034	0.040	0.328	−0.109	0.028	0.001	0.993	−0.101	0.110

than 0.812. Thus, they all provided an acceptable degree of approximation (Ragin, 2008). Moreover, all had unique coverages higher than zero. Hence, all the solutions were considered to be empirically relevant.

A detailed look at the individual solutions shows that C_1 involved V_{FNC}, V_{EMO}, and $\sim V_{SOC}$ as core conditions, while V_{COND} was deemed a peripheral condition. C_2 was a solution composed only of core conditions: namely, the presence of V_{EMO} and V_{EPI}, and the absence of V_{SOC} (i. e., $\sim V_{SOC}$). Lastly, C_{3a} and C_{3b} contained two neutral permutations of the same core conditions: the presence of V_{COND} and V_{EPI}. In the former, the peripheral conditions were V_{SOC} and $\sim V_{FNC}$, while the same role was played by V_{EMO} in the latter. Most notably, C_{3b} exhibited the largest unique coverage (0.197), and was thus the most empirically relevant solution.

An examination of the configurations proposed for the absence of INT (i.e., $\sim$ INT) for the user sample shows that the overall solution consistency score was 0.796, while its overall solution coverage was 0.590. An analysis of the individual solutions shows that all had consistency scores higher than 0.826 and unique coverage values greater than zero. C_{4a} and C_{4b} were neutral permutations from which both V_{COND} and V_{EPI} were absent as core conditions. Furthermore, these solutions exhibited mirroring peripheral conditions: V_{FNC} and V_{EMO} in the first, and $\sim V_{FNC}$ and $\sim V_{EMO}$ in the second. The core conditions in C_5 were V_{FNC} and $\sim V_{EMO}$ while the peripheral conditions were $\sim V_{SOC}$, $\sim V_{EPI}$, and V_{COND}. Finally, C_{6a} and C_{6b} were two neutral permutations that shared the same core conditions: namely, $\sim V_{EMO}$, V_{SOC}, and $\sim V_{EPI}$. The peripheral condition in C_{6a} was $\sim V_{COND}$, while the same role was played by $\sim V_{FNC}$ in C_{6b}. The most relevant solution was C_{4a} (unique coverage = 0.151). Consistently with the analysis of the presence of INT, this once again highlights the importance of epistemic and conditional values.

Conversely, an examination of the results obtained for the presence of INT in the non-user sample shows that the overall solution consistency score was 0.839 and the overall solution coverage was 0.541. Furthermore, all individual solutions recorded consistency scores higher than 0.836, and had unique coverages greater than zero. In this case, S_{1a}, S_{1b}, and S_{1c} shared the same core conditions: namely, V_{COND} and V_{EPI}. Thus, they were all neutral permutations of the same solution. However, in S_{1a}, $\sim V_{FNC}$ was considered to be a peripheral condition, while V_{EMO} and V_{SOC} played the same role in S_{1b} and S_{1c}, respectively. In this case, the most empirically relevant solution was S_{1a} (unique coverage = 0.165).

Finally, the results for $\sim$ INT for the non-user sample had an overall solution consistency of 0.864 and an overall solution coverage of 0.602. In addition, all solutions had consistency scores higher than 0.863 and unique coverages greater than zero. S_{2a} and S_{2b} shared the same core conditions of $\sim V_{COND}$ and $\sim V_{EPI}$. The peripheral conditions were V_{FNC} in S_{2a} and $\sim V_{SOC}$ in S_{2b}. The final solution for the absence of INT in the non-user sample was S_3. This featured $\sim V_{EMO}$ and $\sim V_{COND}$ as core conditions, and was the most empirically relevant solution (unique coverage = 0.137). Thus, the absence of emotional and conditional values led to a lower intention on part of non-users to engage in FS.

6. Discussion

In this study, we used the TCV developed by Sheth et al. (1991) to investigate the key motives behind people's participation in FS. Our work provides empirical evidence that i) epistemic and conditional values drive the engagement of individuals in FS initiatives, ii) social values are recognized as relevant mainly in a communitarian sense, iii) emotional values are significant factors among non-users, and iv) functional values have secondary importance for both users and non-users of FS programs. Epistemic value pertains to discovery and learning. According to the results of our focus group, the former was related by the interviewees to the pleasant feeling sparked by finding new areas in their cities during participation in FS, and to the "surprise effect" conveyed by some products available on the platforms (e.g., mystery food boxes). Similarly, the latter, learning, was associated with obtaining information on how to reuse leftovers and finding novel

Table 5
Calibration thresholds of the causal antecedents in both groups.

Fuzzy Set Measures	User Group (n = 353)			Analysis of Necessity		Non-user group (n. = 802)			Analysis of Necessity	
	Full membership	Intermediate Membership	Non-membership	Consistency	Coverage	Full Membership	Intermediate Membership	Non-membership	Consistency	Coverage
V_{FNC}	1.303	0.361	−1.192	0.678 (0.454)	0.677 (0.472)	1.032	0.074	−1.535	0.687 (0.456)	0.662 (0.473)
V_{EMO}	1.440	0.566	−1.084	0.716 (0.430)	0.711 (0.450)	1.009	0.043	−1.400	0.705 (0.440)	0.696 (0.445)
V_{SOC}	1.215	−0.167	−1.344	0.572 (0.540)	0.576 (0.557)	1.222	−0.093	−1.289	0.648 (0.488)	0.639 (0.493)
V_{COND}	0.970	0.409	−0.483	0.675 (0.461)	0.661 (0.489)	0.869	0.138	−0.916	0.743 (0.409)	0.726 (0.418)
V_{EPI}	1.797	0.998	−0.480	0.752 (0.413)	0.758 (0.426)	0.995	−0.165	−1.530	0.742 (0.417)	0.736 (0.420)
INT	1.310	0.552	−0.149	–	–	1.006	0.044	−1.405	–	–

Note: The results in parentheses for the analysis of necessity refer to the absence of the causal condition.
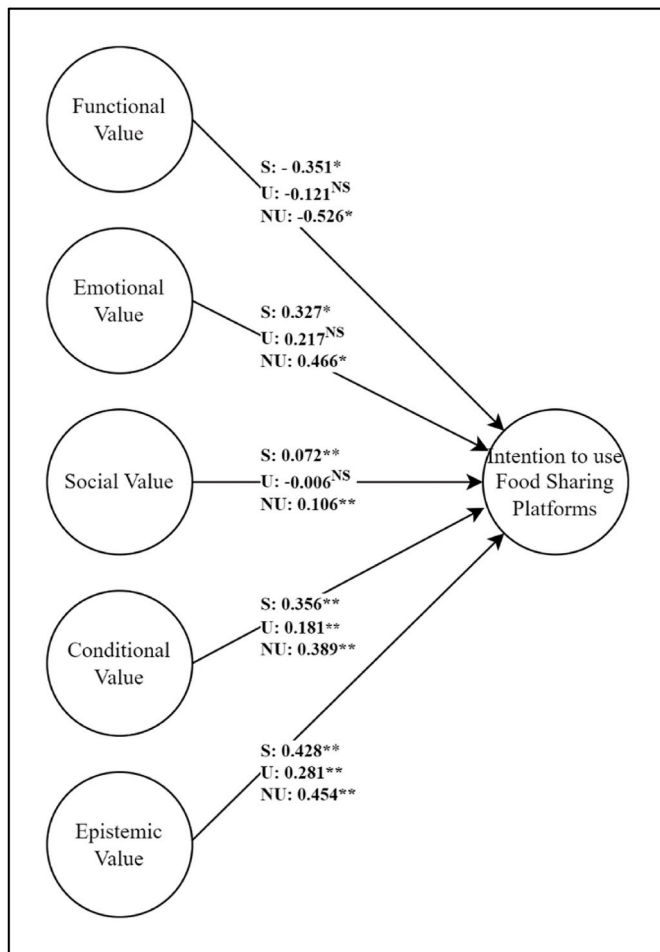

Fig. 1. The estimated model.
Note: Level of significance: *p < 0.05; **p < 0.01; ***p < 0.001. S stands for the whole sample estimates, U stand for the user sample estimates, and NU stand for the non-user sample estimates.

anti-waste food recipes. The importance of epistemic value was further confirmed by the results of Study 2. The SEM path analysis revealed a positive relation between this value and consumers' intentions to engage or continue engaging with FS in both groups analyzed here, with a more pronounced effect observed among non-users. These findings were also corroborated by fsQCA, where the presence of the epistemic value was consistently aligned with the presence of the intention to engage in FS, and vice versa in case of its absence across multiple solutions and the two groups.

With regard to the conditional value of FS, all participants in the focus group agreed that it gives users the perception of collectively contributing to managing food waste. The robustness of this finding was corroborated through the results of SEM and fsQCA. Similarly to the epistemic value, the path analysis revealed a significant positive relationship between the conditional value and consumer intention, with a more pronounced effect observed among non-users. The fsQCA further underscored the significance of the conditional value by consistently identifying its presence and absence as a core condition for the presence and absence, respectively, of the intention to participate in FS across multiple instances and groups.

The findings of Study 1 and Study 2 diverged with respect to the emotional value of FS. While the participants of the focus groups unanimously acknowledged the emotional benefits associated with FS, the multi-group SEM analysis revealed that these emotional aspects significantly influenced the intention to participate only in the non-users group. Certain divergences were also observed between the results of SEM and fsQCA. The presence or absence of emotional value emerged as a core condition in the fsQCA for the users' group. Conversely, emotional value predominantly functioned as a "do not care" configurational element for non-users, and lacked the explanatory power to account for the presence or absence of the intention to participate in FS. These disparities can be attributed to the methodological variance characterizing this investigation, which used different research methods. However, it is important to recognize that these differences might also mask crucial aspects of the importance of emotional values that should be explored in future research.

With regard to the social value of FS, some participants of the focus group admitted that engaging in FS may enhance one's social image. Nevertheless, they stressed the communitarian perspective—the pride of being part of a community that is sensitive to food waste and environmental protection—to a greater extent. The results of Study 2 showed that the social dimension of FS, linked to an improvement in one's self-image, had secondary importance in driving engagement in FS. Social value exhibited a weak or non-significant effect in the SEM, and few solutions with relatively low coverage contained it as a core condition in the fsQCA. Interestingly, social values were present and absent in a counterintuitive manner with respect to the outcome of interest in several solutions for users in the fsQCA (e.g., C_1, C_2, C_{6a}, C_{6b}).

Finally, the functional value of FS was the least significant predictor of the intentions of users and non-users to engage in it. The discussion among users in the focus group underscored such elements as the ease of use of FSPs and the availability of information as prominent utilitarian factors influencing their engagement. Interestingly, there was no substantial discussion in the focus group on the quality and cost of shared food. Pure utilitarian benefits related to FS, such as the price and quality of food, appeared to be marginal considerations. This observation aligns

Table 6
FsQCA solutions.

User Group (n = 353)									
Configuration	INT				~ INT				
	Solutions				Solutions				
	C_1	C_2	C_{3a}	C_{3b}	C_{4a}	C_{4b}	C_5	C_{6a}	C_{6b}
V_{FNC}	●		⊗		⊗	●	●		⊗
V_{EMO}	●	●		●	⊗	●		⊗	⊗
V_{SOC}	⊗	⊗	●				⊗	●	●
V_{COND}	●		●	●	⊗	⊗	●	⊗	
V_{EPI}		●	●	●	⊗	⊗	⊗	⊗	⊗
Consistency	0.852	0.844	0.812	0.817	0.847	0.824	0.826	0.889	0.826
Raw Coverage	0.222	0.327	0.150	0.474	0.413	0.294	0.119	0.261	0.224
Unique Coverage	0.003	0.091	0.025	0.197	0.151	0.062	0.018	0.007	0.062
Frequency Cutoff	3				3				
Solution Coverage	0.812				0.796				
Solution Consistency	0.596				0.590				

User Group (n = 802)						
Configuration	INT			~ INT		
	Solutions			Solutions		
	S_{1a}	S_{1b}	S_{1c}	S_{2a}	S_{2b}	S_3
V_{FNC}	⊗			●		
V_{EMO}		●				⊗
V_{SOC}			●		⊗	
V_{COND}	●	●	●	⊗	⊗	⊗
V_{EPI}	●	●	●	⊗	⊗	
Consistency	0.836	0.858	0.862	0.926	0.923	0.863
Raw Coverage	0.210	0.485	0.406	0.262	0.402	0.531
Unique Coverage	0.165	0.084	0.005	0.022	0.014	0.137
Frequency Cutoff	3			3		
Solution Coverage	0.541			0.602		
Solution Consistency	0.839			0.864		

Note: The crossed circles (⊗) indicate the absence of a causal condition, while the black circles (●) represent its presence. The core elements are identified by large circles, while the small circles represent peripheral elements. The blank spaces stand for the "do not care" situation, and are related to the unimportance of the presence or absence of a causal condition.

with the findings of the quantitative investigation. The SEM and fsQCA analyses regarded functional values as secondary, and even adverse, factors influencing engagement in FS initiatives. All in all, the results of both studies downplayed the importance of the functional and utilitarian benefits of FS.

6.1. Theoretical contributions

This study makes the following theoretical contributions to the literature. First, we contribute to research on FS by diverging from its prevalent focus on FSPs (Ciulli and Kolk, 2019; Davies and Legg, 2018; Ranjbari et al., 2024; Schanes and Stagl, 2019), the viable business models for such initiatives (Michelini et al., 2020), and the drivers of the attitudes of people and the effects of socio-demographic variables on engagement in FS (Wiśniewska and Czernyszewicz, 2023). Instead, we focused on the motives driving consumer behavior in this novel context. We integrated the findings reported by Mazzucchelli et al. (2021) and Mirosa et al. (2016) on the conditional value of FS into our work as well. These authors claimed that FSPs that can provide solutions to societal and environmental problems prompt positive responses from the consumer, who is inclined to partake in and commit to these initiatives in this case. This result aligns with that reported by Tan et al. (2022), who found that environmental protection was related to sustainable consumption-related practices in the context of online second-hand peer-to-peer platforms. From this perspective, this study also furthers the literature on green innovation by emphasizing the role of FS as an innovative and crowd-based initiative that yields environmental, social, and economic benefits owing to the active participation of users (Liao and Chuang, 2022; Kumar et al., 2022; Belezas and Daniel, 2023).

Second, we highlighted the primary role of the epistemic dimension in influencing people's engagement in FS. This finding allows us to draw two interesting insights. The first relates FS to other initiatives carried out via similar digital platforms. Previous studies on online apps and platforms (Chakraborty and Paul, 2022; Karjaluoto et al., 2021; Talwar et al., 2020) have found that positive behavioral outcomes are associated with epistemic value. Satisfying curiosity and offering new learning opportunities appear to be epistemic aspects that intrigue consumers and lead to their engagement in FS. The second insight relates FS to organic and novel foods. The influence of epistemic values is invariably the *fil rouge*: Past investigations have provided evidence for how curiosity and novelty encourage the consumption of organic and novel foods (Cao et al., 2022; Qasim et al., 2019; Suki et al., 2022). The importance of the epistemic element of FS suggests that engagement in it may also stem from a desire to seek novelty and variety, and exhibit learning behaviors. Intuitively, both the FSPs and the diverse foods available on them can satiate the curiosity of users, and offer both variety and a novel way to satisfy the basic human need to eat.

In terms of enhancing the self-image of users, the social value of FS appeared to be unimportant according to the results of this study. However, a notable result in the fsQCA was the appearance of social values as absent configurational antecedents in explaining consumers' intentions in several solutions. It is plausible that individuals who already engage in FS want to distance themselves from (or are even averse to) those who see FS as an opportunity to enhance their self-image. Thus, users tend to negatively judge exhibitionism and image-based behaviors involving FS. The users of FS in our focus group emphasized the sense of community around these initiatives. Even past research on FS groups has highlighted the importance of the communitarian aspect of these initiatives. Members within these novel "consumption communities" commit to the community's core tenet to

facilitate participation in these initiatives and their growth. Commitment and support vary greatly in form, from simple statements, the dissemination of information, and pro-active appeals (Ganglbauer et al., 2014) to actual volunteer work (Berns et al., 2021). We have provided some evidence from a theoretical perspective that the most important aspect of FS for consumers that is relatable to social value is the sense of community—the feeling of being an active part of a movement that keeps up the fight against food waste. Such a perspective has partially been reported by Tan et al. (2022), who found that the societal benefits of FS, i.e., doing something for the community, constituted an influential element driving the use of platforms selling second-hand goods. Nakagawa and Kosaka (2022) also found that a pro-social orientation plays a crucial role in encouraging collaborative consumption by involving individuals to attain socially sustainable development.

Similarly to other investigations of behaviors related to food and green consumption (Cao et al., 2022; Köse and Kırcova, 2021; Suki et al., 2022), the results of this work showed that emotional values are relevant for explaining the intentions of people to partake in FS. However, this was confirmed by both our studies only for non-users. The emotional values associated with FS are among the most important ones driving consumers' intentions in the context of a sharing economy (Zhang et al., 2019). Nonetheless, our findings regarding the concerns of users slightly diverged from previous theoretical knowledge. It can be argued that while users initially recognized the importance of the emotional value of FS in our focus group, the emotional benefits associated with FS may diminish over time. This phenomenon can be attributed to familiarity and routine, where regular engagement in FS leads to a sense of becoming accustomed, thus lessening the initial emotional impact. Moreover, a decrease in the sense of novelty and a feeling of satiation may occur as the experience becomes less novel, somewhat mechanical, and repetitive. Finally, a shift in user motivations might occur, with continued engagement being driven more strongly by such factors as conditional and epistemic values, rather than the initial emotional aspects. However, these latter conclusions are, at best, tentative. Future research should explore the role of emotional values in the context of FS in greater depth.

The finding that functional and utilitarian aspects are unimportant for FS or are negatively connected to consumers' intentions to engage in it aligns well with the literature. Others have reported similar findings while studying green consumption (Kushwah et al., 2019; Lin and Huang, 2012; Suki and Suki, 2015). This also seems to be the case for fair-trade communities (Giordano et al., 2018) and second-hand goods (Tan et al., 2022). The unique nature of such transactions can explain this result within the framework of FS. Functional features of the "shared" product may not carry much weight within these markets as their bedrock is mutual trust between the parties involved and their and shared benefit. An emphasis on "sharing" as the central concept of FS may lead even non-users to undervalue its utilitarian aspects. Furthermore, the functional values highlighted by the participants of our focus group predominantly revolved around the characteristics of FSPs. This suggests that the most relevant functional value of FS for users lies in the ability of FSPs to serve as facilitators and aggregators—essentially functioning as "digital spaces" where the demand for and the supply of unconsumed foods converge, ultimately reducing the cost of transaction for all involved actors. In conclusion, purely utilitarian values may not be crucial in motivating engagement with FS. Nonetheless, following Tan et al. (2022), we think that dismissing these "marginal" elements altogether poses certain risks. Even if the findings indicate that other values influence engagement from both users and non-users to a greater extent, it is likely that these individuals still expect the food shared on the platform to adhere to specific standards of quality and price.

6.2. Practical contributions

The practical implications of this study are as follows. First, FS operators should recognize the role of the epistemic values of FS as well as

people's desire for novelty and variety, and should accordingly focus on providing diverse and intriguing content. This can include a continually updated and enlarged set of offerings available on their platforms, information about the origins of the shared foods, educational resources on how to cook and preserve them, and even gamified elements that involve challenges, badges, or rewards for active participation on their platforms.

Second, considering the link between the conditional values of FS and positive consumer response, FSPs may find it beneficial to highlight the environmental advantages associated with their business. Alongside incorporating or creating more marketing communication centered on this content, FSPs should consider launching educational initiatives on topics such as food waste, the benefits of sustainable consumption, and their broader societal implications. This approach can not only enhance users' understanding of the importance of the initiative, but can also improve their perception of the FS operator's commitment to the cause of combating food waste.

Third, as emphasized by the participants of our focus group, a sense of community is a powerful motivator for engagement in FS. Therefore, FS operators should undertake community-building efforts to nurture people's involvement. These initiatives should align with the essence of FS—e.g., organizing community cleanups, tree-planting events, and collaborative sustainability projects. The aim is to deepen connections among individuals engaged in food sharing, and to foster a vibrant and engaged community that may also be more financially rewarding for the operators.

Fourth, highlighting the functional benefits of the foods traded within the sharing market may not be an appropriate strategy to pursue. Nevertheless, the marginality of the utilitarian benefits of FS, especially the price, may be representative of the fact that individuals have a peculiar sensitivity to this element of the marketing mix that concerns FS goods. Testing the boundaries of this sensitivity may be the first step for firms involved in the business to determine the appropriate pricing strategy to achieve higher economic sustainability. Finally, our work also has some implications for public actors of FS. FS initiatives fit well into two publicly relevant themes: achieving better resource allocation, and reducing the environmental impact of FS. A market for unconsumed foods allows i) for the lowering of the cost of unsold food for producers, ii) convenient access to quality foods for consumers, and iii) the lowering of the cost of management of food waste. Hence, this topic should be of considerable interest to institutions and other public actors.

7. Conclusions

By shedding light on the key drivers that contribute to explaining people's intention to use FSPs within the framework of TCV, this study contributes to the literature on green consumption and green innovation. In particular, our results further the extant literature suggesting that consumption-related values differently influence the behaviors of users and non-users in a novel context, such as that of FS. Our study has shown that epistemic and conditional values play a crucial role in motivating both groups to engage with FS initiatives, while functional values seem to be less important in this regard. Some differences were observed among the other values. Social values were found to be relevant for users in terms of the sense of belonging to the FS community, while emotional values seemed to influence only non-users. Therefore, this work helps provide a better understanding of the phenomenon of FS, where this is crucial for addressing environmental issues as well as social needs by encouraging new models of collaborative consumption with a pro-social orientation.

This study has limitations that also provide fruitful avenues for future research. Our work here was based on an unbalanced sample in terms of the demographic profile of the respondents. Future studies should replicate our analysis by using non-Western participants and comparing different generational cohorts. Moreover, there are inherent limitations to the methodologies used in this investigation. The findings

of Study 1, derived from a focus group, have limited generalizability and a notable degree of subjectivity. Study 2 relied on self-report questionnaires, a method that has been frequently used in past research but is prone to certain weaknesses associated with typical individual behavior. For instance, respondents may encounter challenges when none of the provided answer options aligns precisely with their opinions or circumstances. There is a potential for respondents to provide answers that they perceive as socially acceptable in this case, leading to responses that may be exaggerated or biased. While a multi-method approach aims to mitigate the limitations inherent in these two methods and triangulate their findings, it is important to acknowledge that the results may still be susceptible to bias. Furthermore, this research is cross-sectional, which limits the generalizability of its results. Future research in the area should collect qualitative and longitudinal data to investigate the mechanisms that lead consumers to partake in FS initiatives.

Moreover, our conceptual framework contains only consumption-related variables. Future studies should consider adding variables related to users' personality traits: Disgust, neophobia, extroversion, and environmentalism may all affect individuals' intention to participate in FS initiatives. Finally, some issues require further inquiry. First, scholars may want to focus on the importance of communities inside the FS world. Shedding light on this may also be interesting for the other lines of research on the paradigm of the sharing economy. Second, studying the sensitivity of consumers to price—via discrete choice experiments, for example—may help FS operators survive and prosper. Finally, additional efforts are needed to fully grasp the influence of the emotional value of FS on people's intention to engage in it.

CRediT authorship contribution statement

Jessica Bosisio: Formal analysis, Methodology, Writing – original draft, Writing – review & editing. **Gioele Zamparo:** Formal analysis, Methodology, Writing – original draft, Writing – review & editing, Data curation. **Alice Mazzucchelli:** Conceptualization, Writing – original draft, Writing – review & editing, Supervision. **Roberto Chierici:** Conceptualization, Writing – original draft, Writing – review & editing. **Michela Cesarina Mason:** Data curation, Formal analysis, Methodology, Writing – original draft, Writing – review & editing.

Appendix 1. Studies applying the theory of consumption values to food consumption and green consumption (Last five years)

Authors & Year	Title	Journal	Geographic Area	Method	Findings
			FOOD CONSUMPTION AND TCV STREAM		
Cao et al. (2022)	Consumption values, anxiety and organic food purchasing behaviour considering the moderating role of sustainable consumption attitude	*British Food Journal*	China	Quantitative	Functional value quality and conditional value have no significant influence on purchase behavior. Anxiety was reported to have a significant positive influence on all consumption values. The association between anxiety and purchase behavior was found to be negative and significant. Consumption values (functional value-price, emotional value, social value, and epistemic value) mediated the relationships between anxiety and purchase behavior.
Köse and Kırcova (2021)	Using theory of consumption values to predict organic food purchase intention: Role of health consciousness and eco-friendly LOHAS tendency	*Spanish Journal of Agricultural Research*	Turkey	Quantitative	Eco-friendly LOHAS tendencies, health consciousness, and emotional and social values (affective values) influence the intention to purchase organic food. On the other hand, financial and functional value (cognitive dimension of perceived value) were not significantly related to the intention to purchase organic food.
Kaur et al. (2021)	The value proposition of food delivery apps from the perspective of theory of consumption value	*International Journal of Contemporary Hospitality Management*	India	Mixed-method	The findings show that epistemic value ("visibility") is the chief driver of purchase intentions toward food-delivery apps, followed by conditional ("affordances"), price (part of the functional value), and social value ("prestige"). Food-safety concerns and health consciousness (proposed as part of the functional value) did not significantly affect the intentions to use food-delivery apps.
Suki et al. (2022)	Impact of consumption values on consumers' purchase of organic food and green environmental concerns	*Social Responsibility Journal*	Pakistan	Quantitative	All the consumption values significantly influence consumers' green environmental concerns and purchase behavior. Social value heavily influences consumers' green environmental concerns. Moreover, consumers' purchase of organic food is greatly impacted by conditional value. Consumers purchase organic food for their daily needs because they feel responsible for preserving and protecting the environment against global warming and its associated threats.
Yeap et al. (2019)	Hungry for more: understanding young domestic travellers' return for Penang Street food	*British Food Journal*	Malaysia	Quantitative	Taste (functional) value had the most salient effect on attitude towards Penang Street food, followed by the emotional value. In turn, attitudes significantly impacted tourist's revisit intentions.
Kushwah et al. (2019)	Ethical consumption intentions and choice behavior towards organic food. Moderation role of buying and environmental concerns	*Journal of Cleaner Production*	India	Quantitative	The results indicated a significant association between social, emotional, and epistemic values and ethical consumption intentions. Epistemic value was identified as the most crucial influencer towards both ethical consumption and choice behavior. Buyers and non-buyers were not significantly different. However, more

(*continued*)

Authors & Year	Title	Journal	Geographic Area	Method	Findings
				FOOD CONSUMPTION AND TCV STREAM	
Muhamed et al. (2019)	The impact of consumption value on consumer behaviour: A case study of halal-certified food supplies	*British Food Journal*	Malaysia	Quantitative	environmentally concerned consumers were statistically different regarding the associations of epistemic and price-related functional values and ethical consumption intentions. The empirical results showed that halal concerns had the highest impact on consumer choice behavior, particularly in purchasing halal-certified food supplies. Also, epistemic and emotional values were statistically significant in terms of their influence on consumer decision-making.
Qasim et al. (2019)	The defining role of environmental self-identity among consumption values and behavioral intention to consume organic food	*International journal of environmental research and public health*	Pakistan	Quantitative	Conditional, emotional, epistemic, and functional value quality significantly influence consumers' behavioral intention to consume organic food. Furthermore, environmental self-identity significantly mediates the structural relationship between consumption values and the behavioral intention to consume organic food.
Rahnama and Rajabpour (2017)	Factors for consumer choice of dairy products in Iran.	*Appetite*	Iran	Quantitative	The results indicate that functional, social, emotional, and epistemic values have a positive impact on choosing dairy products, and conditional values did not have a positive impact. The main influential factors for consumers' behavior toward dairy products were positive emotions (e.g., enjoyment, pleasure, comfort, and feeling relaxed) and functional value-health.
				GREEN CONSUMPTION AND TCV STREAM	
Tan et al. (2022)	How do ethical consumers utilize sharing economy platforms as part of their sustainable resale behavior? The role of consumers' green consumption values	*Technological Forecasting and Social Change*	Nordic countries	Quantitative	The results show that economic and practical values for using the second-hand peer-to-peer platform negatively affect green consumption values and weaken consumers' preparedness to engage in sustainable resale behavior. In contrast, recreational, generative, societal benefit, and protestor values positively influence green consumption values and increase the consumers' willingness to engage in pro-environmental behavior.
Zhang and Dong (2020)	Why do consumers make green purchase decisions? Insights from a systematic review	*International journal of environmental research and public health*	–	Systematic review	The results show that only functional and environmental value positively impacted consumers' choice behavior toward photovoltaic panels. Photovoltaic panel installations are an essential investment for Polish households.
Issock Issock et al. (2019)	Modelling green customer loyalty and positive word of mouth: can environmental knowledge make the difference in an emerging market?	*International Journal of Emerging Markets*	South Africa	Quantitative	The results reveal that consumption values partially influence green customer satisfaction, which, in turn, affects green customer trust and loyalty and positive word of mouth. Environmental knowledge only marginally moderates the relationships in the model.

Data availability

Data will be made available on request.

References

Akbar, P., Hoffmann, S., 2023. Collaborative space: framework for collaborative consumption and the sharing economy. J. Serv. Market. 37, 496–509. https://doi.org/10.1108/JSM-03-2021-0078.

Apostolidis, C., Brown, D., Wijetunga, D., Kathriarachchi, E., 2021. Sustainable value co-creation at the Bottom of the Pyramid: using mobile applications to reduce food waste and improve food security. J. Market. Manag. 37, 856–886. https://doi.org/10.1080/0267257X.2020.1863448.

Apostolidis, C., Shams, R., Gregory-Smith, D., Vrontis, D., Bian, X., Belyaeva, Z., Papagiannidis, S., 2022. Technology as a catalyst for sustainable social business: advancing the research agenda. Editorial introduction to the special issue. Technol. Forecast. Soc. Change 183, 121946. https://doi.org/10.1016/j.techfore.2022.121946.

Bachnik, K., Szumniak-Samolej, J., 2018. Social initiatives in food consumption and distribution as part of sustainable consumption and sharing economy. Journal of Entrepreneurship, Management and Innovation 101–122. https://doi.org/10.7341/201814215.

Baek, E., Oh, G.-E., 2021. Diverse values of fashion rental service and contamination concern of consumers. J. Bus. Res. 123, 165–175. https://doi.org/10.1016/j.jbusres.2020.09.061.

Bajaj, N., Steel, M., Ogden, S., Rahman, K., 2020. Consumer motivations to create alternative consumption platforms. Australas. Market J. 28, 50–57. https://doi.org/10.1016/j.ausmj.2020.06.001.

Barnes, S.J., Mattsson, J., 2016. Understanding current and future issues in collaborative consumption: a four-stage Delphi study. Technol. Forecast. Soc. Change 104, 200–211. https://doi.org/10.1016/j.techfore.2016.01.006.

Belezas, F., Daniel, A.D., 2023. Innovation in the sharing economy: a systematic literature review and research framework. Technovation 122, 102509. https://doi.org/10.1016/j.technovation.2022.102509.

Berns, K., Rossitto, C., Tholander, J., 2021. Queuing for waste: sociotechnical interactions within a food sharing community. In: Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems. ACM, New York, NY, USA, pp. 1–15. https://doi.org/10.1145/3411764.3445059.

Brits, H., du Plessis, L., 2007. Application of focus group interviews for quality management: an action research project. Syst. Pract. Action Res. 20, 117–126. https://doi.org/10.1007/s11213-006-9054-0.

Byrne, B.M., 2016. Structural Equation Modeling With AMOS: Basic Concepts, Applications, and Programming, Third Edition. Routledge, New York. https://doi.org/10.4324/9781315757421.

Cao, D., Zheng, Y., Liu, C., Yao, X., Chen, S., 2022. Consumption values, anxiety and organic food purchasing behaviour considering the moderating role of sustainable

consumption attitude. Br. Food J. 124, 3540–3562. https://doi.org/10.1108/BFJ-06-2021-0647.

Carless, S.A., 1998. Assessing the discriminant validity of transformational leader behaviour as measured by the MLQ [1]. J. Occup. Organ. Psychol. 71, 353–358. https://doi.org/10.1111/j.2044-8325.1998.tb00681.x.

Chakraborty, D., Paul, J., 2022. Healthcare apps' purchase intention: a consumption values perspective. Technovation 102481. https://doi.org/10.1016/j.technovation.2022.102481.

Chandon, P., Wansink, B., Laurent, G., 2000. A benefit congruency framework of sales promotion effectiveness. J Mark 64, 65–81. https://doi.org/10.1509/jmkg.64.4.65.18071.

Chen, F.F., 2007. Sensitivity of goodness of fit indexes to lack of measurement invariance. Struct Equ Modeling 14, 464–504. https://doi.org/10.1080/10705510701301834.

Christodoulides, G., Cadogan, J.W., Veloutsou, C., 2015. Consumer-based brand equity measurement: lessons learned from an international study. Int. Market. Rev. 32, 307–328. https://doi.org/10.1108/IMR-10-2013-0242.

Cicatiello, C., Franco, S., Pancino, B., Blasi, E., Falasconi, L., 2017. The dark side of retail food waste: evidences from in-store data. Resour. Conserv. Recycl. 125, 273–281. https://doi.org/10.1016/j.resconrec.2017.06.010.

Ciulli, F., Kolk, A., 2019. Incumbents and business model innovation for the sharing economy: implications for sustainability. J. Clean. Prod. 214, 995–1010. https://doi.org/10.1016/j.jclepro.2018.12.295.

Ciulli, F., Kolk, A., Boe-Lillegraven, S., 2020. Circularity brokers: digital platform organizations and waste recovery in food supply chains. J. Bus. Ethics 167, 299–331. https://doi.org/10.1007/s10551-019-04160-5.

Claudy, M.C., Garcia, R., O'Driscoll, A., 2015. Consumer resistance to innovation—a behavioral reasoning perspective. J Acad Mark Sci 43, 528–544. https://doi.org/10.1007/s11747-014-0399-0.

Codini, A.P., Miniero, G., Bonera, M., 2018. Why not promote promotion for green consumption? Eur. Bus. Rev. 30, 554–570. https://doi.org/10.1108/EBR-09-2016-0118.

Collier, J.E., 2020. Applied Structural Equation Modeling Using AMOS. Routledge. https://doi.org/10.4324/9781003018414.

Conrad, Z., 2020. Daily cost of consumer food wasted, inedible, and consumed in the United States, 2001-2016. Nutr. J. 19, 1–9. https://doi.org/10.1186/s12937-020-00552-w.

Davies, A.R., Legg, R., 2018. Fare sharing: interrogating the nexus of ICT, urban food sharing, and sustainability. Food Cult. Soc. 21, 233–254. https://doi.org/10.1080/15528014.2018.1427924.

Davis, D.F., Golicic, S.L., Boerstler, C.N., 2011. Benefits and challenges of conducting multiple methods research in marketing. J Acad Mark Sci 39, 467–479. https://doi.org/10.1007/s11747-010-0204-7.

Dholakia, U.M., Bagozzi, R.P., Pearo, L.K., 2004. A social influence model of consumer participation in network- and small-group-based virtual communities. Int. J. Res. Market. 21, 241–263. https://doi.org/10.1016/j.ijresmar.2003.12.004.

Diamantopoulos, A., Siguaw, J.A., 2006. Formative versus reflective indicators in organizational measure development: a comparison and empirical illustration. Br. J. Manag. 17, 263–282. https://doi.org/10.1111/j.1467-8551.2006.00500.x.

Falcone, P.M., Imbert, E., 2017. Bringing a sharing economy approach into the food sector: the potential of food sharing for reducing food waste. In: Food Waste Reduction and Valorisation. Springer International Publishing, Cham, pp. 197–214. https://doi.org/10.1007/978-3-319-50088-1_10.

FAO, 2017. Food Loss and Food Waste. Rome.

Fornell, C., Larcker, D.F., 1981. Structural equation models with unobservable variables and measurement error: algebra and statistics. J. Market. Res. 18, 382. https://doi.org/10.2307/3150980.

Furukawa, H., Matsumura, K., Harada, S., 2019. Effect of consumption values on consumer satisfaction and brand commitment: investigating functional, emotional, social, and epistemic values in the running shoes market. Int. Rev. Manag. Market. 9, 158–168. https://doi.org/10.32479/irmm.8713.

Ganglbauer, E., Fitzpatrick, G., Subasi, Ö., Güldenpfennig, F., 2014. Think globally, act locally. In: Proceedings of the 17th ACM Conference on Computer Supported Cooperative Work & Social Computing. ACM, New York, NY, USA, pp. 911–921. https://doi.org/10.1145/2531602.2531664.

Gaston-Breton, C., Duque, L.C., 2015. Utilitarian and hedonic promotional appeals of 99-ending prices. Eur J Mark 49, 212–237. https://doi.org/10.1108/EJM-09-2012-0556.

Giordano, A., Luise, V., Arvidsson, A., 2018. The coming community. The politics of alternative food networks in Southern Italy. J. Market. Manag. 34, 620–638. https://doi.org/10.1080/0267257X.2018.1480519.

Gomes, L.A. de V., Castillo-Ospina, D.A., Facin, A.L.F., Ferreira, C., dos, S., Ometto, A.R., 2023. Circular ecosystem innovation portfolio management. Technovation 124, 102745. https://doi.org/10.1016/j.technovation.2023.102745.

Groß, M., 2015. Mobile shopping: a classification framework and literature review. Int. J. Retail Distrib. Manag. 43, 221–241. https://doi.org/10.1108/IJRDM-06-2013-0119.

Ha, J., Jang, S.Shawn, 2013. Variety seeking in restaurant choice and its drivers. Int J Hosp Manag 32, 155–168. https://doi.org/10.1016/j.ijhm.2012.05.007.

Hair, J.F., Babin, B.J., Anderson, R.E., Black, W.C., 2018. Multivariate Data Analysis, eighth ed. Cengage, Hampshire: United Kingdom.

Hamari, J., Sjöklint, M., Ukkonen, A., 2016. The sharing economy: why people participate in collaborative consumption. J Assoc Inf Sci Technol 67, 2047–2059. https://doi.org/10.1002/asi.23552.

Henseler, J., Ringle, C.M., Sarstedt, M., 2015. A new criterion for assessing discriminant validity in variance-based structural equation modeling. J Acad Mark Sci 43, 115–135. https://doi.org/10.1007/s11747-014-0403-8.

Hsu, F.M., Chen, T.Y., 2007. Understanding information systems usage behavior in E-Government: the role of context and perceived value. In: PACIS 2007 Proceedings.

Hwang, J., Kim, S., Kim, I., Park, S., 2023. Factors affecting the memorable experiences of Chinese customers in duty-free shopping. Sage Open 13. https://doi.org/10.1177/21582440231204431.

Issock Issock, P.B., Mpinganjira, M., Roberts-Lombard, M., 2019. Modelling green customer loyalty and positive word of mouth. Int. J. Emerg. Mark. 15, 405–426. https://doi.org/10.1108/IJOEM-09-2018-0489.

Jiao, H., Wang, L., Yang, J., 2023. Standing head and shoulders above others? Complementor experience-based design and crowdfunding success on digital platforms. Technovation 128, 102871. https://doi.org/10.1016/j.technovation.2023.102871.

Jiao, Y., Ertz, M., Jo, M.-S., Sarigollu, E., 2018. Social value, content value, and brand equity in social media brand communities. Int. Market. Rev. 35, 18–41. https://doi.org/10.1108/IMR-07-2016-0132.

Johnson, C.D., Bauer, B.C., Carlson, B.D., 2022. Constituency building: determining consumers' willingness to participate in corporate political activities. Int. J. Res. Mark. 39 (1), 42–57. https://doi.org/10.1016/j.ijresmar.2021.06.004.

Karjaluoto, H., Glavee-Geo, R., Ramdhony, D., Shaikh, A.A., Hurpaul, A., 2021. Consumption values and mobile banking services: understanding the urban–rural dichotomy in a developing economy. Int. J. Bank Market. 39, 272–293. https://doi.org/10.1108/IJBM-03-2020-0129.

Kaur, P., Dhir, A., Talwar, S., Ghuman, K., 2021. The value proposition of food delivery apps from the perspective of theory of consumption value. Int. J. Contemp. Hospit. Manag. 33, 1129–1159. https://doi.org/10.1108/IJCHM-05-2020-0477.

Köse, S.G., Kırcova, İ., 2021. Using theory of consumption values to predict organic food purchase intention: role of health consciousness and eco-friendly LOHAS tendency. Spanish J. Agric. Res. 19, e0109. https://doi.org/10.5424/sjar/2021193-16640.

Krueger, R.A., Casey, M.A., 2000. Focus Groups: A Practical Guide for Applied Research, fourth ed. Sage Publications Inc.

Kumar, S., Raut, R.D., Agrawal, N., Cheikhrouhou, N., Sharma, M., Daim, T., 2022. Integrated blockchain and internet of things in the food supply chain: adoption barriers. Technovation 118, 102589. https://doi.org/10.1016/j.technovation.2022.102589.

Kummer, T.-F., Ryschka, S., Bick, M., 2018. Why do we share where we are? The influence of situational factors on the conditional value of check-in services. Decis. Support Syst. 115, 1–12. https://doi.org/10.1016/j.dss.2018.08.012.

Kushwah, S., Dhir, A., Sagar, M., 2019. Ethical consumption intentions and choice behavior towards organic food. Moderation role of buying and environmental concerns. J. Clean. Prod. 236, 117519. https://doi.org/10.1016/j.jclepro.2019.06.350.

Laukkanen, T., 2016. Consumer adoption versus rejection decisions in seemingly similar service innovations: the case of the Internet and mobile banking. J. Bus. Res. 69, 2432–2439. https://doi.org/10.1016/j.jbusres.2016.01.013.

Lazell, J., 2016. Consumer food waste behaviour in universities: sharing as a means of prevention. J. Consum. Behav. 15, 430–439. https://doi.org/10.1002/cb.1581.

Liao, C.-S., Chuang, H.-K., 2022. Determinants of innovative green electronics: an experimental study of eco-friendly laptop computers. Technovation 113, 102424. https://doi.org/10.1016/j.technovation.2021.102424.

Lin, P.-C., Huang, Y.-H., 2012. The influence factors on choice behavior regarding green products based on the theory of consumption values. J. Clean. Prod. 22, 11–18. https://doi.org/10.1016/j.jclepro.2011.10.002.

Mackenzie, S.G., Davies, A.R., 2019. Share it: Co-designing a sustainability impact assessment framework for urban food sharing initiatives. Environ. Impact Assess. Rev. 79, 106300. https://doi.org/10.1016/j.eiar.2019.106300.

Manika, D., Antonetti, P., Papagiannidis, S., Guo, X., 2021. How pride triggered by pro-environmental Technology adoption spills over into conservation behaviours: a social business application. Technol. Forecast. Soc. Change 172, 121005. https://doi.org/10.1016/j.techfore.2021.121005.

Mazzucchelli, A., Gurioli, M., Graziano, D., Quaccquarelli, B., Aouina-Mejri, C., 2021. How to fight against food waste in the digital era: key factors for a successful food sharing platform. J. Bus. Res. 124, 47–58. https://doi.org/10.1016/j.jbusres.2020.11.055.

Michelini, L., Grieco, C., Ciulli, F., Di Leo, A., 2020. Uncovering the impact of food sharing platform business models: a theory of change approach. Br. Food J. 122, 1437–1462. https://doi.org/10.1108/BFJ-06-2019-0422.

Michelini, L., Principato, L., Iasevoli, G., 2018. Understanding food sharing models to tackle sustainability challenges. Ecol. Econ. 145, 205–217. https://doi.org/10.1016/j.ecolecon.2017.09.009.

Ming-Sung Cheng, J., Shih-Tse Wang, E., Ying-Chao Lin, J., Vivek, S.D., 2009. Why do customers utilize the internet as a retailing platform? Asia Pac. J. Mark. Logist. 21, 144–160. https://doi.org/10.1108/13555850910926290.

Mirosa, M., Mainvil, L., Horne, H., Mangan-Walker, E., 2016. The social value of rescuing food, nourishing communities. Br. Food J. 118, 3044–3058. https://doi.org/10.1108/BFJ-04-2016-0149.

Mohd Suki, N., 2016. Green product purchase intention: impact of green brands, attitude, and knowledge. Br. Food J. 118, 2893–2910. https://doi.org/10.1108/BFJ-06-2016-0295.

Morgan, D.L., 1993. Successful Focus Groups: Advancing the State of the Art.

Morone, P., Falcone, P.M., Imbert, E., Morone, A., 2018. Does food sharing lead to food waste reduction? An experimental analysis to assess challenges and opportunities of a new consumption model. J. Clean. Prod. 185, 749–760. https://doi.org/10.1016/j.jclepro.2018.01.208.

Muhamed, A.A., Ab Rahman, M.N., Mohd Hamzah, F., Che Mohd Zain, C.R., Zailani, S., 2019. The impact of consumption value on consumer behaviour. Br. Food J. 121, 2951–2966. https://doi.org/10.1108/BFJ-10-2018-0692.

Nakagawa, K., Kosaka, G., 2022. What social issues do people invest in? An examination based on the empathy–altruism hypothesis of prosocial crowdfunding platforms. Technovation 114, 102508. https://doi.org/10.1016/j.technovation.2022.102508.

Nyumba, T., Wilson, K., Derrick, C.J., Mukherjee, N., 2018. The use of focus group discussion methodology: insights from two decades of application in conservation. Methods Ecol. Evol. 9, 20–32. https://doi.org/10.1111/2041-210X.12860.

Öberg, C., 2023. Towards a typology of sharing economy business model transformation. Technovation 123, 102722. https://doi.org/10.1016/j.technovation.2023.102722.

Octavia, D., Nasution, R.A., Yudoko, G., 2022. A conceptual framework for food sharing as collaborative consumption. Foods 11, 1422. https://doi.org/10.3390/foods11101422.

Pappas, I.O., Woodside, A.G., 2021. Fuzzy-set qualitative comparative analysis (fsQCA): guidelines for research practice in information systems and marketing. Int J Inf Manage 58, 102310. https://doi.org/10.1016/j.ijinfomgt.2021.102310.

Parguel, B., Lunardo, R., Benoit-Moreau, F., 2017. Sustainability of the sharing economy in question: when second-hand peer-to-peer platforms stimulate indulgent consumption. Technol. Forecast. Soc. Change 125, 48–57. https://doi.org/10.1016/j.techfore.2017.03.029.

Pihlström, M., Brush, G.J., 2008. Comparing the perceived value of information and entertainment mobile services. Psychol Mark 25, 732–755. https://doi.org/10.1002/mar.20236.

Pope, N., 2001. An examination of the use of peer rating for formative assessment in the context of the theory of consumption values. Assess Eval. High Educ. 26, 235–246. https://doi.org/10.1080/02602930120052396.

Qasim, H., Yan, L., Guo, R., Saeed, A., Ashraf, B., 2019. The defining role of environmental self-identity among consumption values and behavioral intention to consume organic food. Int J Environ Res Public Health 16, 1106. https://doi.org/10.3390/ijerph16071106.

Ragin, C.C., 2008. Redesigning Social Inquiry. University of Chicago Press. https://doi.org/10.7208/chicago/9780226702797.001.0001.

Rahnama, H., Rajabpour, S., 2017. Factors for consumer choice of dairy products in Iran. Appetite 111, 46–55. https://doi.org/10.1016/j.appet.2016.12.004.

Ranjbari, M., Shams Esfandabadi, Z., Siebers, P.-O., Pisano, P., Quatraro, F., 2024. Digitally enabled food sharing platforms towards effective waste management in a circular economy: a system dynamics simulation model. Technovation 130, 102939. https://doi.org/10.1016/j.technovation.2023.102939.

Reid, M., Thompson, P., Mavondo, F., Brunsø, K., 2015. Economic and utilitarian benefits of monetary versus non-monetary in-store sales promotions. J. Market. Manag. 31, 247–268. https://doi.org/10.1080/0267257X.2014.939216.

Schanes, K., Stagl, S., 2019. Food waste fighters: what motivates people to engage in food sharing? J. Clean. Prod. 211, 1491–1501. https://doi.org/10.1016/j.jclepro.2018.11.162.

Schneider, M.R., Schulze-Bentrop, C., Paunescu, M., 2010. Mapping the institutional capital of high-tech firms: a fuzzy-set analysis of capitalist variety and export performance. J. Int. Bus. Stud. 41, 246–266. https://doi.org/10.1057/jibs.2009.36.

Shankar, A., Dhir, A., Talwar, S., Islam, N., Sharma, P., 2022. Balancing food waste and sustainability goals in online food delivery: towards a comprehensive conceptual framework. Technovation 117, 102606. https://doi.org/10.1016/j.technovation.2022.102606.

Sherman, D.K., Cohen, G.L., 2006. The psychology of self-defense. Self-Affirmation Theory 183–242. https://doi.org/10.1016/S0065-2601(06)38004-5.

Sheth, J.N., Newman, B.I., Gross, B.L., 1991. Consumption values and market choices: theory and applications. Cinicinnati, OH: South-Western Pub.

Smith, J.B., Colgate, M., 2007. Customer value creation: a practical framework. J. Market. Theor. Pract. 15, 7–23. https://doi.org/10.2753/MTP1069-6679150101.

Stewart, D.W., Shamdasani, P.N., Rook, D., 2007. Applied Social Research Methods Series, Focus Grou.

Suki, M.N., Majeed, A., Mohd Suki, N., 2022. Impact of consumption values on consumers' purchase of organic food and green environmental concerns. Soc. Responsib. J. 18, 1128–1141. https://doi.org/10.1108/SRJ-01-2021-0026.

Suki, Mohd Norazah, Suki, Mohd Norbayah, 2015. Consumption values and consumer environmental concern regarding green products. Int. J. Sustain. Dev. World Ecol. 22, 269–278. https://doi.org/10.1080/13504509.2015.1013074.

Sweeney, J.C., Soutar, G.N., 2001. Consumer perceived value: the development of a multiple item scale. J. Retailing 77, 203–220. https://doi.org/10.1016/S0022-4359(01)00041-0.

Talwar, S., Dhir, A., Kaur, P., Mäntymäki, M., 2020. Why do people purchase from online travel agencies (OTAs)? A consumption values perspective. Int J Hosp Manag 88, 102534. https://doi.org/10.1016/j.ijhm.2020.102534.

Tan, T.M., Makkonen, H., Kaur, P., Salo, J., 2022. How do ethical consumers utilize sharing economy platforms as part of their sustainable resale behavior? The role of consumers' green consumption values. Technol. Forecast. Soc. Change 176, 121432. https://doi.org/10.1016/j.techfore.2021.121432.

Tarute, A., Nikou, S., Gatautis, R., 2017. Mobile application driven consumer engagement. Telematics Inf. 34, 145–156. https://doi.org/10.1016/j.tele.2017.01.006.

Tashakkori, A., Teddlie, C., 1996. Mixed Methodology: Combining Qualitative and Quantitative Approaches.

Tong, A., Sainsbury, P., Craig, J., 2007. Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups. Int. J. Qual. Health Care 19, 349–357. https://doi.org/10.1093/intqhc/mzm042.

Truong, V.A., Lang, B., Conroy, D.M., 2021. Are trust and consumption values important for buyers of organic food? A comparison of regular buyers, occasional buyers, and non-buyers. Appetite 161, 105123. https://doi.org/10.1016/j.appet.2021.105123.

Tseng, F.-M., Lo, H.-Y., 2011. Antecedents of consumers' intentions to upgrade their mobile phones. Telecomm Policy 35, 74–86. https://doi.org/10.1016/j.telpol.2010.11.003.

Upadhayay, N.B., Rocchetta, S., Gupta, S., Kamble, S., Stekelorum, R., 2024. Blazing the trail: the role of digital and green servitization on technological innovation. Technovation 130, 102922. https://doi.org/10.1016/j.technovation.2023.102922.

van Lin, A., Aydinli, A., Bertini, M., van Herpen, E., von Schuckmann, J., 2023. Does cash really mean trash? An empirical investigation into the effect of retailer price promotions on household food waste. J. Consum. Res. 50, 663–682. https://doi.org/10.1093/jcr/ucad018.

Vo-Thanh, T., Zaman, M., Hasan, R., Rather, R.A., Lombardi, R., Secundo, G., 2021. How a mobile app can become a catalyst for sustainable social business: the case of Too Good to Go. Technol. Forecast. Soc. Change 171, 120962. https://doi.org/10.1016/j.techfore.2021.120962.

Wiśniewska, M., Czernyszewicz, E., 2023. Survey of young consumer's attitudes using food sharing attitudes and behaviors model. Br. Food J. 125, 242–261. https://doi.org/10.1108/BFJ-09-2021-1025.

Woodside, A.G., 2013. Moving beyond multiple regression analysis to algorithms: calling for adoption of a paradigm shift from symmetric to asymmetric thinking in data analysis and crafting theory. J. Bus. Res. 66, 463–472. https://doi.org/10.1016/j.jbusres.2012.12.021.

Yeap, J.A.L., Ong, K.S.G., Yapp, E.H.T., Ooi, S.K., 2019. Hungry for more: understanding young domestic travellers' return for Penang street food. Br. Food J. 122, 1935–1952. https://doi.org/10.1108/BFJ-09-2018-0632.

Zhang, T.C., Gu, H., Jahromi, M.F., 2019. What makes the sharing economy successful? An empirical examination of competitive customer value propositions. Comput Human Behav 95, 275–283. https://doi.org/10.1016/j.chb.2018.03.019.

Zhang, X., Dong, F., 2020. Why do consumers make green purchase decisions? Insights from a systematic review. Int J Environ Res Public Health 17, 6607. https://doi.org/10.3390/ijerph17186607.