Abstract: An emergent effort to reduce wasted food is to share uneaten food with others via social media. However, the following question arises: Are those unknown people willing to take my leftovers? Few studies address the above question. Hence, developing a comprehensive model that explains the acceptance of leftover food from strangers (LFFS) via social media warrants research attention. Considering the dual roles LFFS recipients play—namely, both peer-to-peer (P2P) technology user and service consumer—the study embraces diverse motivational factors across research disciplines to explain LFFS acceptance. Drawing on technology and marketing research, the study develops a value-based model to investigate consumer acceptance of LFFS via social media. The study examines the effects of two prominent consumers’ beliefs (cognitive interaction and affective trust) on their context-specific value perception (conditional and epistemic values) toward LFFS, and the impact of these perceived values on the acceptance of the leftover food from strangers. The study employed a two-stage data collection approach and collected 663 usable questionnaire packets from two major metropolitan areas in Taiwan. Using a Structural Equation Model (IBM SPSS Amos) to analyze the data, the results indicate that trust and interactivity relate positively to consumer perceived value (both conditional and epistemic) of LFFS. Furthermore, both conditional and epistemic values mediate the relationships between the proposed consumer beliefs and LFFS acceptance. The research helps create a sustainable society as sharing uneaten food with other unknown social community members provides a connected, diverse, and sustainable life.

Keywords: sharing economy; reducing food waste; value-based acceptance model

1. Introduction

Food shortage and security has long been a global crisis and concern which attracts research attention [1]. Ironically, about 1.02 billion tons of food was wasted globally in 2019 [2]. Nearly 17% of food produced for human consumption is wasted every year. Specifically, individual households account for 61% of the total waste, while food service and retail waste account for 26% and 13%, respectively. Realizing the importance of reducing food waste, governments, schools, and societies launch various initiatives to stop wasting food. Information technology (IT) plays a pivotal role in food waste reduction [3]. Considering the rapid adoption of the internet and potency of mobile devices [4], a variety of apps and social media are widely used for connecting people and sharing information. These digital tools become fast-growing and popular platforms to save food waste [5]. As more governmental and entrepreneurial initiatives to fight food waste are launched via social-media-based platforms, growing concerns emerge about providing reliable and useful information, as well as food safety, drawing attention from academics and practitioners [6]. To address these concerns, developing a comprehensive model that explains the acceptance of leftover food from strangers (LFFS) warrants research attention.

Extant information system (IS) acceptance theories mostly have a cognitive orientation [7]. Researchers adopt and extend these theories to analyze various behaviors and
perceptions of IS and IT users [8–10]. The acceptance of LFFS via social media, however, is not merely based on peer-to-peer (P2P) technology or innovation related factors. Rather, the acceptance of LFFS via social media involves many context-specific aspects, which arise from the role of the user, the difference in motivation, the nature of the enabling technology, etc., that merit a new lens for understanding user’s acceptance of the service.

LFFS consumers play the dual roles of IS user and service recipient. Individuals who accept LFFS via social media may even consider themselves more of service consumers than technology users considering the prevalent use of P2P technology. A key assumption in examining consumer behavior is value maximization. In this regard, the outlook for LFFS does not depend solely on consumer acceptance of the P2P technology as a viable means of transaction or result of evaluative affect (i.e., cognition and affect). The acceptance of LFFS is further contingent on consumer recognition of the value the service brings forth (i.e., value perception) [11]. Employing a value-centered approach in a voluntary scenario rather than a conventional technology driven model under the mandatory case becomes a rational undertaking in the present context [12]. Consequently, the study draws on both IS and marketing research and adopts a value-centric approach with a balanced cognitive and affective perspective to investigate the acceptance of LFFS via social media. Specifically, the study derives consumer beliefs, cognitive and affective, specific to LFFS that serve as the precursors to consumers’ value perception, which in turn drives the acceptance of LFFS via social media.

LFFS differs to other online services in several aspects. For example, LFFS sharing platforms based on P2P exchanges, in broader terms, are a form of what has occasionally been labeled “consumer-to-consumer” (C2C) exchange [13], which are different to other conventional B2C or B2B settings in e-commerce. Furthermore, exchanges among peers via LFFS platforms involve matching (online) and interaction (both online and offline) in a timely manner. Such contextual aspects become more relevant in food sharing compared to other types of e-commerce transactions—even compared to C2C e-commerce [14]. Finally, the exchange of food and related information generally does not involve financial transactions; however, it brings forth a more critical issue, i.e., trust. Hence, the study argues that research on LFFS in the explicit context of the sharing economy is necessary. Nonetheless, despite a long history of IS research on e-commerce, literature on LFFS in the sharing economy is scarce. Therefore, the value-based LFFS acceptance model (i.e., a beliefs-values-behavior framework) enriches the extant literature in several ways. First, the study is among the first efforts to explore context-specific perceived customer values and their relationships with other prominent precursors in sharing leftover food with strangers via social-media-based food sharing platforms. As such, researchers can clarify those evaluative consumer beliefs and underlying value dimensions affecting consumer acceptance of LFFS via social media. Second, the present research unveils how social-media-based food sharing platforms might go about eliciting people’s willingness to share the uneaten food with others. The findings help food sharing platforms craft services that attract consumers. Third, social community members benefit from the results by being more conscious about those cognitive, affective, and value factors shaping their LFFS acceptance behaviors.

From the sustainability perspective, the results contribute to sustainability on both environmental and economic aspects because alleviating or even eradicating global food shortage is not only an environmental but also an economical effort. The research also helps create a sustainable society because sharing uneaten food with other unknown social community members provides a connected, diverse, and sustainable life.

This paper is organized as follows. First, the study elaborates on the related theories and derives a framework that predicts LFFS acceptance via social media. Second, the study presents the research method pertaining to data collection, sample, and measures. Third, the study conducts the empirical analysis and states the results. The study finishes by discussing the main points arising from the analysis and results.
2. Conceptual Background and Model Development

2.1. Sharing Uneaten Food with Others via P2P Social Platforms

Food shortage is a global crisis and spawns a variety of initiatives to reduce food waste. With a service-dominant (S-D) logic [15], LFFS service is not merely adding value to the uneaten food. Furthermore, it involves the collective roles of food donors, recipients, and the sharing platform aiming to achieve sustainable food consumption through services. Researchers propose several approaches such as taking advantage of the available technologies [16] and changing consumers behaviors [17] to resolve the food shortage crisis. Sharing extra food with others is a common practice. This change in consumer behavior draws much research attention [18]. Food sharing often occurs among friends or family members [19,20]. This behavior, however, is not obviously at play in the case where interactions mainly occur between people that are previously unfamiliar to each other. To facilitate food sharing with unknown people, technology-assisted food sharing platforms become popular alternatives [21]. These alternatives attract research attention in the sharing economy. A sharing economy takes advantage of the digital technologies (i.e., platforms) and growing volume of sharing activity. Sharing economy platforms can be categorized, for example, by market orientation (for-profit vs. nonprofit) and market structure (peer-to-peer vs. business-to-peer) from the operational perspective [22]. As such, food sharing platforms operate under the nonprofit and peer-to-peer scenario. To share is to trust. Trust is a subjective belief that reflects the willingness of people to put themselves in a vulnerable position vis-à-vis the actions of others. Thus, trust is the cornerstone of the sharing economy [23]. Several studies examine the role of trust in a sharing economy (e.g., [24]). Trust becomes a more critical factor in food sharing as it involves two important concerns: stranger sharing and food hygiene. While the digital platforms may make stranger sharing less risky by providing information on users via the use of ratings and reputations [25,26], an adequate legal framework to protect consumers is still missing in the sharing economy [23]. In addition to those research efforts on trust, sharing platform studies also focus on other important aspects such as system design, consumers behaviors, etc. For example, research examines the design of food sharing mobile apps [27] and webpages [28]. Particularly, research proposes food sharing ICTs [29], designs P2P food sharing networks [18], or even develops recommendation systems for P2P collaboration [30]. Behavioral research, on the other hand, examines how digital technology mediates the behavior of consumers in various online systems that facilitate offline gift giving and sharing [31]. Other research probes into what motivates people to participate in P2P meal-sharing initiatives in tourism [32]. Still, research suggests the need for further studies on the roles of governments, suppliers and consumers [33]. In particular, understanding why consumers are willing to accept and take the leftover food from unfamiliar others receives insufficient research attention.

P2P sharing economy is a growing trend [34]. Food sharing websites, which are typically free, connect neighbors with each other and/or with local businesses so surplus food can be shared, instead of thrown away. The food to be shared oftentimes is nearing its expiration date in local stores, or it is simply extra vegetables or bread in a household fridge. The social networking food sharing service website contains contextual (e.g., what and where) information or even knowledge regarding cooking or consuming the food. As such, the food sharing service possesses two peculiar characteristics: (1) location awareness and (2) sustainability awareness. Furthermore, the platform as well as its exchange partners are engaged in the co-creation of value through reciprocal service provision [35].

2.2. Perceived Value of LFFS via Social Media

Perceived value represents a consumer’s overall assessment of the utility of a product or service, which is based on the consumer’s perception of what is received and what is given [36]. Marketing researchers commonly agree on the importance of consumer perceived value to the use of products or services [37]. Service researchers further consider all product offerings as performing services “in their capacity to create need- or
want-satisfying experiences” in the process of engendering customer value. [38]. In fact, consumer perceived value represents a multifaceted concept [39]. For example, an early theoretical framework of perceived value suggests five dimensions, namely social, emotional, functional, epistemic, and conditional value, relating specifically to the perceived utility of a choice at the product or brand level [40]. This framework experiences investigation and modification in various research fields such as economics, social psychology, etc. Particularly, Sweeney and Soutar [41] categorize the concept of perceived value into four distinct value dimensions, namely, quality, emotional, monetary, and social value in the retail environment. Likewise, research in e-commerce posits that users’ perceived value attributes to its utilitarian, hedonic, and social aspects [37,42]. Notably, researchers highlight the importance of experiential value in e-retailing, which encompasses aesthetics, playfulness, service excellence, and customer ROI dimensions [43]. It appears that researchers delineate the intended meaning of perceived value differently across contexts even though these classifications generally take roots in similar concepts. Above all, consumers may consider attributes other than price when determining the value of a product or service.

Marketing research broadly regards the fulfillment of goal-directed and/or experiential needs as two pivotal motives for consumption [44]. Goal-directed consumers generally appreciate more those utilitarian benefits, whereas experiential consumers recognize more the hedonic value the consumption process brings about [45]. In the present context, consumers browse nearby available uneaten food via food sharing platforms and take it when needed. Consumers sometimes discover uneaten food of interest by coincidence, namely, out of serendipity. Research suggests the utilitarian facet of serendipity, which enhances consumer’s experience [46]. This goal-directed behavior is not only economical but also socially sustainable. Under this scenario for using LFFS, consumers are likely to appreciate the conditional value LFFS may bring forth [47]. Namely, these consumers adopt LFFS to “fulfill sustainability commitment” under a particular situation and perceive the conditional effects of a specific situation on value perception [48]. In contrast, experiential consumers may be affective and adopt LFFS out of curiosity. People offering uneaten food on social-media-based food sharing platforms may also provide cooking recipes and nutrition information or even recommend ways of consumption. As such, the value LFFS brings forth appears to be from the epistemic aspect. Epistemic value relates to experienced curiosity, novelty or gained knowledge per se. Indeed, research emphasizes the need to include epistemic value when considering products or services for which novelty or surprise is important [49]. Likewise, service research urges the need for adopting a contingency approach when conducting empirical research on value [50,51]. Namely, the notion of value is “contextually bound”, which serves as a fundamental premise in service research [52]. In this sense, the study aims at assessing a fully contextual service experience and adopts the following two types of values: conditional and epistemic values, specific to the acceptance of LFFS. Conditional value, a special case of utilitarian value, is based on how well food donors and sharing platforms serve to fulfill consumers’ purpose to search uneaten food under a specific condition, whereas epistemic value, a special case of hedonic value, relates to food donors and sharing platform’s capability to arouse curiosity or offer novelty for consumers that are seeking uneaten food. In light of Holbrook’s conceptualization of consumer value as “situational”, adopting the above contextualization also makes sense because perceived value of LFFS depends on the context in which consumer’s evaluative judgment is made [38].

2.3. Antecedents to Perceived Value

A body of research addresses the antecedents to perceived value in e-commerce [53,54], m-commerce [55–58], and various service contexts [59–61]. In particular, DeSarbo et al. [59] aver that price and quality represent the two key factors driving customer perceived value across business-to-business and business-to-customer contexts. Centering on these two critical factors, other environmental cues also serve as important consumer beliefs leading to the perceived value in retailing [62] and tourism [63]. In the context of e-commerce, re-
searchers commonly agree on the importance of valence of experience and perceived risk, in addition to price and quality, to engender consumer’s value perception [64]. M-commerce researchers further highlight content (e.g., usefulness and entertainment) and transaction security (e.g., credibility and privacy) as pivotal precursors to value [55,57,65–67]. Research on peer-to-peer accommodation sharing examines how personal and exogenous information (i.e., self-description, text reviews, and star ratings) lead to consumers’ value expectations [54]. Their findings suggest that the availability of a host self-description relates positively to consumers’ social value expectations. In contrast, the availability of an excellent star rating has a positive effect on consumers’ economic value expectations. Most of all, a positive text review enhances both consumers’ social and economic value expectations. As such, the results stress the pivotal role of platforms in designing and maintaining trust-supporting environments [68]. Table 1 summarizes these key factors affecting consumers perceived value. Citing the entire list of possible precursors to the value perception toward LFFS appears tautological and unrealistic, if not impossible. Evidently, LFFS users’ value perception is expected to build on both cognitive and affective beliefs about the service [6,69,70]. The study thus borrows from work on the sharing economy and proposes two salient factors, namely, trust and interactivity as the affective and cognitive beliefs determining consumer perceived value of LFFS for two reasons. First, customer trust not only serves as a foundation for the growth and success of e-commerce [71], but it also emerges as a new concern (i.e., trust as the emotional price) in the sharing economy (e.g., [14,23]). Because of the unique characteristics of LFFS (i.e., absence of face-to-face interactions and concern of food sanitation), consumers feel greater uncertainty and heightened risk when they use the service [72]. Consequently, consumer perceived trust is decisive in the present context [73]. Second, consumers intrinsically expect people who offer uneaten food to provide them with the interaction-based context-specific information such as where and what, or even how related to taking and cooking the food [21,74]. Hence, fulfilling consumer contextual need via the location- and context-sensitive interaction (i.e., interaction as the cognitive quality) becomes essential to consumer perceived value of LFFS via social media.

Table 1. Summary of antecedents to perceived value.

| Author(s)               | Context          | Antecedents to Perceived Value                                                                 |
|-------------------------|------------------|-----------------------------------------------------------------------------------------------|
| DeSarbo et al. [59]     | Marketing        | Price and quality                                                                             |
| Anckar and D’Incau [75] | M-commerce       | Cost savings, wireless convenience, and familiarity with device                               |
| Sirdeshmukh et al. [76] | Services         | Valence of experience, perceived risk, price, and quality                                     |
| Chen and Dubinsky [64]  | E-commerce       | Mall attribute beliefs (convenience, safety, selection, etc.)                                 |
| Stoel et al. [62]       | Retailing        | Novelty, control, and hedonics                                                                |
| Duman and Mattila [77]  | Tourism          | Entertainment, informativeness, credibility, privacy, and message exposure                     |
| Haghiran et al. [65]    | Mobile marketing | Usefulness, playfulness, price, and ease of use                                               |
| Chu and Lu [78]         | Online music     | Content, price, tangibles, reliability, process easiness, support, time use, and service      |
| Heinonen [79]           | Online banking   | Usefulness, enjoyment, technicality, and perceived fee                                        |
| Kim et al. [55]         | Mobile internet  | Convenience, control, compatibility, risk, and effort                                         |
| Kleijnen et al. [56]    | Mobile service   | Get and give                                                                                  |
| Ledden et al. [80]      | Education        | Service quality (connection, interaction, content, device, customer service, privacy, and context) |
| Vlachos and Vrechopoulos [74]| Mobile internet | Service quality                                                                               |
| Hu et al. [60]          | Hotel industry   | System and service quality, and auction price                                                |
| Wu et al. [53]          | Online auction   | Convenience, pleasure, price, and risk                                                        |
| Gupta and Kim [81]      | Online shopping  | Escapism and enjoyment                                                                        |
| Turel et al. [82]       | Hedonic digital artifacts | Information quality, perceived fee, and system quality                                      |
| Kim and Han [83]        | Mobile data services | Program, service, product, facility, and natural environment                                 |
| Lee et al. [63]         | Tourism          | Utilitarian, social, and hedonic motivations                                                   |
| Kim, Kim, and Wachter [84]| Mobile user engagement |                                                                                              |
Table 1. Cont.

| Author(s)                  | Context                     | Antecedents to Perceived Value                                                                 |
|----------------------------|-----------------------------|-------------------------------------------------------------------------------------------------|
| Al-Debei and Al-Lozi [85]  | Mobile data services       | Technological, social, and informational influences                                             |
| Alshibly [86]              | Social commerce             | Online trust and service quality                                                                |
| Bajaş [61]                 | Tourism                     | Perceived quality and perceived costs                                                             |
| Chang et al. [67]          | Mobile SNS                  | Privacy concern, perceived risk, and enjoyment                                                   |
| Seol et al. [57]           | Mobile office               | Usefulness, social image, performance risk, and psychological risk                              |
| Wu and Li [87]             | Social commerce             | Social commerce marketing mix (needs, risk, convenience, etc.)                                  |
| Liébana-Cabanillas et al. [58]| Mobile payment            | Convenience                                                                                     |
| Dann et al. [54]           | Sharing platforms           | Self-description, text review, and star rating                                                   |

2.4. Trust and Perceived Value

Trust manifests itself in various business relationships. Researchers constantly explore the intended conceptualization of trust across research disciplines in the offline context [88], online environment, and sharing economy [23,89]. Early IT research conceptualizes trust as the extent to which an individual believes that the use of a technology is reliable and credible [90]. Further research suggests a complex and multidimensional concept for trust [91]. Particularly, IS researchers recognize trust as combining both cognitive and affective elements considering that trust decisions commonly involve reasoning and feeling [92]. These decisions become less cognitive (or more affective) when they are away from the service providers, as in the case of sharing economy [93]. Sharing platform acts as a mediator between the supply side and the demand side of the market. Transactions on the internet oftentimes involve interactions with strangers without past experience; hence, trust becomes a critical factor in decision making. Trust-related concerns in transaction involve privacy (e.g., anonymity, opt in, and opt out), security, and other associated risks per se. Furthermore, trust in the food sharing context is a perception in the honesty, integrity and reliability of others—a “faith in a human being.” For example, some people seem to have a huge lack of trust in unknown others, thinking that leftovers would be unhealthy or even polluted. To accept the uneaten food, people need to trust those strangers will not do something malicious to hurt others! As such, the use of LFFS possesses, in addition to all trust issues related to e-commerce, another major threat in the sharing economy: the sharing of intended and unsanitary food, which entails a potential unwarranted invasion of trust [94]. Hence, consumers’ trust in LFFS appears to arise more from its emotional aspect, whether it is rational or irrational, because it goes beyond the available evidence to feel comfortable counting on the food donors or providers. Building on Earle and Siegrist’s [95] definition on generalized trust and extending Hawlitschek et al. [89] definition on trust in the sharing economy, the study thus conceptualizes trust in the present context as “the affective belief that allows consumers to willingly become vulnerable to uneaten food providers via P2P platforms after having taken LFFS’s characteristics into consideration.”

Research on IS and the sharing economy widely examines the relationship between trust and adoption behaviors (e.g., [93,96]). Specifically, research affirms that the affective part of trust (i.e., emotional trust) not only affects consumer intention to adopt Web-based recommendation agents (RAs), but also mediates the impact of cognitive trust on the intention to adopt RAs [97]. Research also indicates that perceived risk relates to both online and offline shoppers’ product value perception [64]. Likewise, research on the sharing economy finds that trustful transactions between peers via sharing platforms demonstrate the added value for the consumers based on what is provided to them by the providers [89]. Particularly, from a relational exchange perspective, trust creates value by providing relational benefits derived from interactions with the uneaten food provider that is competent in fulfilling consumers’ conditional needs, and committed to gratify their knowledge-seeking motives [76,98]. Based on the evidence from prior studies, the study
thus posits that consumers’ trust in LFFS strengthens their value perception, from both the conditional and epistemic aspects, of the service.

**Hypothesis 1 (H1).** Trust relates positively to consumer perceived conditional value of LFFS.

**Hypothesis 2 (H2).** Trust relates positively to consumer perceived epistemic value of LFFS.

### 2.5. Interactivity and Perceived Value

Early studies reveal various perspectives to capture the concept of interactivity, for example, based on its features [99], process [100], or the way individuals perceive and experience it [101]. Recent research extends these definitions to the online environment and highlights their mechanical, dyadic, and social characteristics [102,103]. Interactivity in the sharing economy inherits similar characteristics from online and mobile interactivity, and possesses additional elements such as interactions between peers (both online and offline) and contextual offer (i.e., matching needs) [89]. Contextual offer is particularly critical to the acceptance of LFFS because LFFS aims to provide consumers with contextually relevant food information and services based on where they are (i.e., localization) and what they are about. Following this line of logic, interactivity refers to “the extent to which a person perceives food sharing platforms provide timely, personalized, and contextually relevant food services” in the present study.

Research finds interactivity to be predictive in e-commerce adoption [104]. For example, an ideal human–Web interaction engenders more consumer exploratory behavior [105]. Online shoppers reckon interactivity as a significant determinant of e-loyalty [104]. Furthermore, researchers attribute the value creation to an interaction between a consumer and a product or service [39]. Likewise, consumer–consumer and consumer–seller interactions exert a positive effect on social support, which in turn enhances consumers’ intention to co-create brand value [103]. Internet users may shop online more frequently if they receive immediate response to their questions. Moreover, consumers’ perceived relevance of the information (a key component of interactivity) is essential to their valence of experience, which leads to perceived value of an online service [64]. Namely, consumers perceive only relevant information to be valuable, especially amid today’s “information overload.” With respect to the adoption of location-based services, research finds that consumer perceived conditional value is greater when relevance of interest is observed [106]. Hence, the study expects that interactivity (i.e., contextual offerings geared to situational and personalized needs) enhances consumer perceived conditional value of LFFS.

**Hypothesis 3 (H3).** Interactivity relates positively to consumer perceived conditional value of LFFS.

Likewise, the interactive and contextual nature of food sharing platforms allows for creating new and regularly updated uneaten food services for the users. Research suggests that an ideal human–Web interaction leads to positive consequences, such as longer staying time and more exploratory behavior [107]. Furthermore, Nel et al. [108] find that a successful human interaction with a website engenders users’ aroused curiosity as well as intrinsic interest. Research on information management also indicates that relevant, meaningful, and justified information serves as a basis for constructing epistemic value [109]. As such, the inherent informative and interactive nature (i.e., interactivity) makes the food sharing platform suitable for the acquisition of epistemic value, as in the case of some internet-based services [110]. Accordingly, the study posits that interactivity on the social-media-based food sharing platforms leads to consumer perceived epistemic value of LFFS.

**Hypothesis 4 (H4).** Interactivity relates positively to consumer perceived epistemic value of LFFS.
2.6. Perceived Value and LFFS Acceptance

Researchers are generally interested in a limited number of behavioral consequences such as attitude and adoption intention [71,74]. The present study, however, considers consumer acceptance (i.e., actual use) as the criterion variable for several reasons. Managerially, perceived value pertains to the actual behavior rather than the internal state of consumers (e.g., intention) from the user’s perspective. From the service provider’s perspective, concentrating on the actual use of LFFS is managerially meaningful in that food sharing platforms are naturally interested in the extent to which consumers use their services. Theoretically, consumer behavior researchers suggest that actual usage remains an underexplored area of research [111], even if intention is a reliable indicator of actual behavior [112]. Furthermore, technology acceptance researchers generally refer to the adoption of a technology-based product/service as acquiring a technology-based appliance or subscribing to a technology-based service [42]. While this definition is also indicative in predicting actual usage of a particular technology, for example, in mandatory settings, this definition is potentially incomprehensive in the present context, namely, a voluntary usage context, as a consumer may subscribe a food sharing platform but seldom or never uses it (i.e., novelty-seeking rather than innovative behavior).

Consumers’ perceived value affects their perceptual intention to adopt a new product or service [42,55,113,114]. Furthermore, consumer research suggests that conditional value is pivotal to consumer’s purchase behavior [115]. This situational factor also facilitates consumer choice [116]. Likewise, IS research indicates that conditional value is among the factors that elicit customer perceived usefulness and satisfaction in m-commerce [117], and it drives the use of location-based mobile services (LBS) [47,118]. As mentioned, consumers usually adopt LFFS in a specific context (e.g., searching nearby available uneaten food). Apparently, gratifying users’ contextual needs is essential to their evaluation of the service, and thus their acceptance of the service. Therefore, the study postulates the following hypothesis.

**Hypothesis 5 (H5). Consumers’ perceived conditional value relates positively to their use of LFFS.**

Prior studies report mixed findings regarding the role of epistemic value in consumer behavior. For example, tourism researchers find that curiosity does not lead to value perception for cruise vacationers, particularly for those vacationers with prior cruising experiences [77]. Social commerce research indicates that epistemic curiosity is a key determinant influencing customer adoption of social commerce [119]. Furthermore, retail researchers emphasize the importance of epistemic value in experiential services (e.g., adventures) [41,120]. As noted above, seeking LFFS via social media possesses an experiential facet. Accordingly, the foregoing discussion suggests that consumer perceived epistemic value relates to LFFS acceptance as follows:

**Hypothesis 6 (H6). Consumers’ perceived epistemic value relates positively to their use of LFFS.**

2.7. Mediating Role of Perceived Value

The above hypotheses posit that those consumer beliefs, namely trust and interactivity, alter an individual’s perceived value of LFFS (i.e., conditional and epistemic values), which in turn influences the individual’s acceptance of the service via social media (Figure 1). Consequently, the study argues that the proposed consumer perceived values of LFFS serve as a facilitator in the relationship between those cognitive and affective factors and the acceptance of the service. This argument also concurs with the view that treats the value construct as a mediator in the adoption of a new technological application or service [56,82]. The study thus hypothesizes the following set of mediation statements.
Hypothesis 7 (H7). Consumer perceived conditional and epistemic values of LFFS mediate the relationship between (a) trust, and (b) interactivity, and the use of the service.

2.8. Control Variables

To investigate the effects arising from those recognized extraneous factors, several control variables are introduced. Particularly, this study controls for consumer age, gender, income level, usage intensity, and usage experience. Prior studies maintain that these consumer characteristics influence people’s decision making to adopt a new system or product [8].

3. Method

3.1. Measures

The study records all responses on 7-point Likert-type scales anchored by 1 (strongly disagree) and 7 (strongly agree) unless otherwise noted. To ensure the content validity of the scales, the study adopts those measured items based on prior related studies. Specifically, the study borrows the construct of trust from Lu, Zhao, & Wang [121] and interactivity from Kim and Park [122], respectively. The study also assesses consumer perceived conditional and epistemic values toward LFFS based on Pura [117] and Pihlström and Brush [123]. Finally, this study develops a multiple-item scale consistent with Pavlou [124] and Mazzucchelli et al. [125] to measure consumer use of LFFS via the food sharing platform.

Along with other demographical questions, the aforementioned items were initially prepared in English; they were translated into Chinese by independent translators, and then back translated into English to ensure accuracy and follow appropriate guidelines [126]. The study tested the questionnaire in a pilot study involving 48 LFFS users as well as two experts from the related disciplines in information system and marketing to confirm the clarity of the questions and validity of the instrument. The result of this review suggested necessary modifications to the wording of some questions (e.g., specifying time frame in measuring LFFS usage). The Appendix A demonstrates the detail of these measures.

3.2. Data Collection and Sample

The study collected data from two major metropolitan areas (Taipei and Taichung) in Taiwan from June to December in 2020. Only those individuals with LFFS experience in “Leftover Food Terminator” are eligible to participate in the study [55]. Created in 2016, “Leftover Food Terminator” is a food sharing group (categorized as general and private) in Facebook with 84 thousand members. Any registered Facebook user can find...
this group. However, only members can see who is in the group and what they post. As the name states, Leftover Food Terminator aims to terminate leftover food through posting uneaten food information, which is available to all members. Posts include information related to pick-up location, type of food, and expiration date. Oftentimes a photo of the food as well as why it is offered are also provided. Typical food offered in the website is pastry and drinks. Homemade cookies and soups or homegrown vegetables, fruits, and herbs are available occasionally. Uncooked food is usually provided with recipe. Notably, members may also post and share events in the website. These events include food saving seminars and marketplace. Members learn how to save food, extend food shelf life, etc., via these events.

The study employed a two-stage data collection approach. Each individual completed the first questionnaire pertaining to trust, interaction, and perceived conditional and epistemic values of LFFS, as well as demographical information (Stage One). Two weeks later the interviewers sent out the second questionnaire about the acceptance behavior to the participants (Stage Two). This two-stage approach permitted the respondents to answer questions in the appropriate temporal separation, reducing potential common method bias [127], while providing for defensible temporal association. In order to increase the participating rate, each respondent received a bookstore certificate worth of NT$150 (approximately US$5) as an incentive. A total of 3480 invitations were randomly sent to the members living in the Taipei and Taichung areas. A total of 839 members responded to the first questionnaire. The study matched data from both stages, resulting in 663 usable questionnaire packets—a 24% response rate and 79% completion rate. Table 2 summarizes the respondents’ profile. Notably, the age groups were defined to reflect three stages in life: education, early in the workplace, and thereafter. Due to high university entrance rate, 45% of Taiwanese people aged 25 to 64 hold a bachelor's degree or higher, and college graduates enter graduate schools with high percentage rate [128].

Table 2. Demographic profile.

| Measure                    | Items                       | Frequency | Percent |
|----------------------------|-----------------------------|-----------|---------|
| Gender                     | Male                        | 373       | 56      |
|                            | Female                      | 290       | 44      |
| Age                        | Under 25                    | 242       | 37      |
|                            | 26–30                       | 248       | 38      |
|                            | Over 30                     | 173       | 25      |
| Education                  | High school or less         | 46        | 7       |
|                            | Bachelor’s degree           | 425       | 64      |
|                            | Graduate degree             | 192       | 29      |
| Monthly income             | Less than NT$20,000         | 232       | 35      |
|                            | NT$20,000–40,000            | 278       | 42      |
|                            | Over NT$40,000              | 153       | 23      |
| Social media usage (per week) | Less than 6 h                | 397       | 60      |
|                            | 6–10 h                      | 151       | 23      |
|                            | Over 10 h                   | 115       | 17      |
| Social media experience    | Less than 5 years           | 340       | 51      |
|                            | 5 years–10 years            | 145       | 22      |
|                            | Over 10 years               | 178       | 27      |

The study conducted preliminary analyses and the calculated t-statistics indicated that age ($t = −0.89, p = 0.37$), gender ($t = −0.09, p = 0.93$), and social media usage intensity ($t = 0.96, p = 0.34$) do not relate to LFFS use, whereas income level ($t = 2.25, p = 0.02$) and social media usage experience ($t = 2.18, p = 0.03$) relate to LFFS use.
4. Results

The study analyzed the data using IBM SPSS Amos and followed Kline’s [129] two-step approach: a measurement model and a subsequent structural model. The study first conducted a confirmatory factor analysis (CFA) with a maximum likelihood estimation to assess the measurement model. As Table 3 depicts, the level of internal consistency in each construct is acceptable, with Cronbach’s alpha estimates ranging from 0.89 to 0.93 [130]. All composite reliabilities of the constructs are over the value of 0.89, ensuring adequate internal consistency of multiple items for each construct [130]. To further examine convergent validity, it is also satisfied in that all confirmatory factor loadings exceed 0.70 [130] and are significant at the level of 0.05. Additionally, the average variance extracted (AVE) of all constructs surpasses the minimum criterion of 0.50, indicating a large portion of the variance being explained by these constructs [130]. Table 3 reveals that the correlations between constructs range from 0.59 to 0.81 and are less than 0.90, as suggested by Hair et al. [130]. The correlations are significantly less than 1.00 at the 0.05 level, indicating sufficient discriminant validity [131]. The square root of AVE of each construct is larger than the construct’s correlations with other constructs, which also suggests good convergent and discriminant validity [130]. It is noteworthy that the $\chi^2$ value with 142 degrees of freedom is 554.34 ($p > 0.05$). Given the known sensitivity of the $\chi^2$ statistics test to sample size, several widely used goodness-of-fit indices demonstrate that the confirmatory factor model fits the data well (GFI = 0.91, NFI = 0.95, CFI = 0.96, IFI = 0.96, and RMSEA = 0.07 with 90% C.I. = [0.05, 0.09]).

Table 3. Means, standard deviations, correlations, reliabilities, and confirmatory factor analysis properties.

| Construct            | Mean (S.D.) | T    | I    | C    | E    | U    |
|----------------------|-------------|------|------|------|------|------|
| Trust (T)            | 5.26 (1.11) | 1.00 |      |      |      |      |
| Interactivity (I)    | 5.22 (1.19) | 0.59 $^c$ | 1.00 |      |      |      |
| Conditional value (C)| 5.38 (1.15) | 0.66 $^c$ | 0.69 $^c$ | 1.00 |      |      |
| Epistemic value (E)  | 5.37 (1.13) | 0.65 $^c$ | 0.66 $^c$ | 0.75 $^c$ | 1.00 |      |
| LFFS use (U)         | 5.38 (1.09) | 0.59 $^c$ | 0.60 $^c$ | 0.76 $^c$ | 0.81 $^c$ | 1.00 |
| AVE                  | 0.68        | 0.79 | 0.72 | 0.73 | 0.75 |      |
| Composite reliability| 0.89        | 0.92 | 0.91 | 0.93 | 0.90 |      |
| Cronbach’s alpha     | 0.89        | 0.92 | 0.91 | 0.93 | 0.90 |      |

Note: $^c p < 0.001$.

As in the next step, the proposed structural model was estimated (Figure 2). The estimation produced the following statistics: $\chi^2 = 640.24$, df = 145, $p < 0.05$, GFI = 0.90, NFI = 0.94, CFI = 0.95, IFI = 0.96, and RMSEA = 0.07 with 90% C.I. = [0.05, 0.09]. The model’s fit as indicated by these indices is deemed satisfactory; thus, it provides a good basis for testing the hypothesized paths. As Figure 2 shows, all six paths are significant. The model explains 60% of the variance in conditional value and 57% of the variance in epistemic value. The model also explains 70% of the variance in LFFS use. In summary, H1–H6 are supported.

The study followed the bootstrap test for mediation to investigate the mediating roles played by conditional and epistemic values [132]. Specifically, if its confidence interval does not include zero, the indirect effect is significant and mediation is established. The study first examined whether trust affects LFFS use through conditional and epistemic values. The mediation test suggested that trust has an indirect positive effect on LFFS use (0.32, 95% C.I. = [0.26, 0.38]). Notably, this indirect effect is stronger via epistemic value (conditional value: 0.12, 95% C.I. = [0.09, 0.17]; epistemic value: 0.19, 95% C.I. = [0.14, 0.25]). Likewise, interactivity has a significant positive indirect effect on LFFS use (0.31, 95% C.I. = [0.25, 0.37]). Similarly, this indirect effect is stronger via epistemic value (conditional value: 0.13, 95% C.I. = [0.10, 0.18]; epistemic value: 0.17, 95% C.I. = [0.13, 0.23]). Thus, H7 is supported.
5. Discussion

Drawing on the IS and marketing research, the study theoretically articulates and empirically tests a model positing that sharing economy-specific consumer beliefs (i.e., trust and interactivity) drives the acceptance of LFFS via consumer’s value perception (i.e., conditional and epistemic values). The results demonstrate strong support for the main thesis of the research model and offer insights about the predictors of LFFS acceptance. The findings also shed light on a number of theoretical and managerial implications, which point to certain limitations that draw directions for future research.

5.1. Implications for Theory, Research, and Practice

Theoretically, the proposed model embraces both technological and marketing aspects and establishes a research paradigm to predict LFFS acceptance. The contribution is several fold. First, the study opens new venues for future research on food sharing platforms. Existing studies are in the embryonic stage and largely explore the driving factors/motives for businesses or consumers to engage in the digital food sharing platform [6,123]. Nonetheless, the use of these platforms should comprehend the notion of specific factors in the sharing economy (i.e., trust and interactivity) considering that food recipients rely heavily on the trustworthy interactions with the food providers (often unknown to them) to fulfill their contextual needs. Second, the study has significant implications for research into the sharing economy consumer behavior. While research on the sharing economy widely and experimentally shows the role of interactivity (both between consumers and between consumers and service providers) or trust (both particularized and system) in forming relationships, building platform reputation, eliciting buying intention, etc. (e.g., [24,26,89]), the employment of a value-centered approach receives insufficient attention in the sharing economy literature, particularly in the context of food sharing. Furthermore, differentiating between different types of value (i.e., a multidimensional view) versus evaluating consumer perceived value in an aggregate manner (i.e., a unidimensional view) remains sparse in food sharing platforms research, making the study further valuable as value researchers constantly urge the need to examine context-specific facets of the value [41]. Third, the study highlights the roles of trust and interaction in predicting LFFS acceptance. As more people use peer-to-peer technology for personal needs and wants, researchers
should not overlook the significance of these affective and cognitive motivators. Fourth, consumer perceived conditional and epistemic values mediate the effect of consumer beliefs on LFFS acceptance, implying that the effect of these beliefs on acceptance operates indirectly via perceived values. This observation is in contrast to extant research findings which commonly underline the direct impact of trust on intentions or behaviors [104,133], solidifying the role of value perception in determining LFFS acceptance. Consequently, the developed model can serve as an initial blueprint for understanding the acceptance of social-media-based food sharing services.

Managerially, this study provides several practical implications for the development of food sharing platforms in the sharing economy. The findings help service providers to better understand how each type of perceptive factor contributes to eliciting different consumers’ perceived values toward LFFS and eventually prompts their acceptance behavior. As this study demonstrates, consumers’ perception of conditional and epistemic values, which represent a benefit–cost trade-off evaluation over LFFS, plays a principal role in predicting their acceptance behavior. These value perceptions, however, build on two stellar consumer beliefs: trust and interactivity. Food sharing platform developers may strengthen consumer perceived trust by enhancing social presence [134] and the effectiveness of institutional mechanisms [135], providing related food information (e.g., nutrition, expiration date, etc.), adding animation to the system, and incorporating related technology into the system for better service demonstration and information quality [136]. Likewise, word-of-mouth referrals [121], endorsements by other members, and the presence of a third-party seal lead to consumers’ trust perception [133].

To enhance user’s sense of interactivity, food sharing platforms are encouraged to offer timely and contextually relevant information and services. As such, lack of responsive feedback for inquiries makes it difficult to sustain the interaction [137]. Namely, for platform-based food sharing services to be interactive, it is important to note this responsiveness. Likewise, food sharing platform designers may increase consumer perceived interactivity by better interface design such as asking questions to identify the customer’s awareness of the unknown and then providing tailored and personalized answers. Most importantly, food sharing platforms should provide consumers with accurate information or service that is contextually relevant to them based upon customer profile and other information. These contextual offerings certainly foster consumer perceived interactivity.

5.2. Limitations and Future Research

While the results help broaden the understanding of consumer’s acceptance of LFFS via social media, several limitations are of note which draw directions for future research. First, the collection of data is limited to metropolitan areas in Taiwan. Further studies to verify the generalizability and transferability of the findings across cultures and/or countries are potentially valuable. Particularly, future research may examine whether the found phenomenon of male over-representation is a biased representation or not. Second, the study demonstrates the multidimensionality of trust and stresses the need of its emotional aspect (i.e., affective trust) to understand consumer’s value perception toward LFFS. However, the study theorizes about trust at an abstract level, only making a distinction between cognitive and affective trust. The examination of more detailed facets of consumer perceived trust thus merits further investigation. Third, the acceptance of LFFS does not merely associate with operational meanings. The acceptance behavior indeed generates implications for changes in the sharing economy strategy which warrants further research. Apparently, a multitude of research questions deserve further investigation in an attempt to advance understanding of LFFS acceptance in the sharing economy.

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Appendix A. Measurement Items † (Factor Loading/Mean/S.D.)

**Trust**
I think members on this food sharing platform have the ability to help me with my needs. (0.774/5.39/1.10)
I think members on this food sharing platform will do everything within their capacity to help others. (0.807/5.08/1.11)
I think members on this food sharing platform would not mislead other members deliberately. (0.833/5.19/1.08)
I think the information shared by the members on this food sharing platform is not trustworthy. * (0.881/5.37/1.11)

**Interactivity**
This food sharing platform offers timely information to me. (0.850/5.36/1.14)
This food sharing platform provides me with meaningful information. (0.895/5.08/1.23)
This food sharing platform listens to my feedback on its service. (0.912/6.21/1.18)

**Conditional Value**
I value the information this food sharing platform offers, with the help of which I get what I need in a certain situation. (0.808/5.47/1.07)
I value the customized and location-based information that I receive from this food sharing platform. (0.850/5.35/1.13)
I value the real time information and interaction that this food sharing platform makes possible. (0.854/5.31/1.16)
Using this food sharing platform has been a beneficial part of my daily life. (0.870/5.16/1.20)
The convenience of using this food sharing platform has not contributed to the value of my daily life. *ā

**Epistemic Value**
I use this food sharing platform to experiment with new ways of cooking or preparing food. (0.890/5.34/1.12)
I use this food sharing platform to test new ways of cooking. (0.907/5.39/1.09)
I visit this food sharing platform out of curiosity. (0.757/5.29/1.23)
The reason that I visit this food sharing platform is to learn new cooking skills or knowledge. (0.873/5.48/1.08)
Visiting this food sharing platform gratifies my epistemic needs. (0.841/5.37/1.15)

**LFFS Use**
I have frequently used this food sharing platform during the last six months. (0.848/5.43/1.11)
I received food a lot via this food sharing platform during the last six months. (0.882/5.36/1.05)
I am a frequent food recipient on this food sharing platform during the last six months. (0.876/5.35/1.12)

Notes: †: Items are originally stated in Chinese.
*: Reverse-coded items.
a: Deleted items from pretests/factor analysis.
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