



How do ethical consumers utilize sharing economy platforms as part of their sustainable resale behavior? The role of consumers' green consumption values

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ABSTRACT

Past research has extensively studied the antecedents and consequences of consumers' green consumption values, as well as the psychological mechanisms that underlie an ethical consumer. Yet a frustrating paradox remains, indicated by the consumers' intention-behavior gap for their sustainable behavior. To address this gap, the present study focuses on the consumption values that lead to using a sharing economy platform. Our study draws on the theory of consumption values and altruistic-egoistic values, as well as spillover effect psychology, to examine associations between context-specific values, green consumption values, and sustainable resale behavior. By collaborating with a Nordic second-hand peer-to-peer platform brand, our findings—obtained from large-scale field data ($n = 3256$)—challenge the conventional wisdom by demonstrating that economic and practical values for using the second-hand peer-to-peer platform negatively affect green consumption values and subsequently weaken the 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. Further, such relationships are moderated by gender: stronger effects were identified among female consumers. These findings have important implications for theory and practice.

1. Introduction

The emergence of online second-hand peer-to-peer (P2P) platforms, such as eBay and Facebook Marketplace help to facilitate the supply and demand of unused or rarely used products online. Consumers can rely on second-hand P2P platforms during either the reselling or purchasing process. In this regard, the second-hand P2P platforms may support consumers' green consumption practices and sustainable resale behavior by extending the life cycle of unused products through taking or giving a transfer of ownership from or to others (Eckhardt et al., 2019; Parguel et al., 2017). Accordingly, the online second-hand P2P platforms have been growing in popularity, especially due to the COVID-19 pandemic that has accelerated the growth even further (Khusainova, 2021). For instance, in the domain of resale apparel, it is projected that

the current market value of \$36 billion will be doubled in the next five years, reaching \$77 billion in the year 2025 (Shahbandeh, 2021). In Nordic countries, the second-hand P2P platform has been playing an essential role in shaping sustainable consumption behaviors and habits among young consumers for over a decade (Autio and Heinonen, 2004; Koivola, 2021). To date, in Finland, apart from global brands' P2P marketplaces (e.g., Facebook Marketplace, eBay), there are at least five independent, fashion-related second-hand P2P providers that are available to raise consumer awareness about the importance of making more sustainable consumption choices via online platforms (Koivola, 2021).

Over the last decades, green consumption values phenomena have been well studied (White et al., 2019), especially its antecedents and consequences, based on the theory of consumption values (TCV;

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Tanrikulu, 2021). Nevertheless, there are distinct gaps in the current knowledge and understanding. First, to the best of our knowledge, no study has utilized the TCV in the context of secondhand P2P platforms. As such, an empirical study is essential since there is a need to identify a set of context-specific consumption values while adopting the TCV framework (e.g., Mäntymäki and Salo, 2015). Second, most studies investigate the effects of consumption values on purchase intention (e.g., Tandon et al., 2021; Talwar et al., 2020); there is no research that examines their effect on consumers' overall green consumption values and their subsequent sustainable behavior. Third, regarding the moderating role of gender on the TCV, although the impact of gender identity has been heavily examined by consumer researchers (Palan, 2001), Kaur et al. (2021) found that gender did not moderate the relationship of any of the investigated consumption values and consumer purchase intentions on P2P food-sharing platforms. In regard to this, we argue that the moderating effect of gender may be exhibited by the association between the consumption values for using P2P platforms and consumers' overall consumption values, but it is not directly pertinent to consumers' behavioral outcomes (see, e.g., Kaur et al., 2021). Thus, the present study attempts to fill the research gaps by applying the TCV in order to provide insights into understanding sustainable resale behaviors in the second-hand P2P platform context. The study examines the following three research questions (RQs):

RQ1. Which context-specific consumption values positively (vs. negatively) influence consumers' green consumption values?

RQ2. Do consumers' green consumption values mediate the relationships between context-specific consumption values and sustainable resale behaviors?

RQ3. Does gender moderate the relationships between context-specific consumption values and consumers' green consumption values?

To address these RQs, in our research project we collaborated with one of the largest second-hand P2P platforms in the Nordic countries. A total of 3256 actual users' responses were collected from a cross-sectional survey using structural equation modeling to test our proposed framework. In terms of theoretical implications, the current research offers four significant contributions. First, we add to the TCV (Sheth et al., 1991) by identifying a set of second-hand P2P platform-specific consumption values and its unique positive and negative influences on consumers' overall values related to green consumption. Second, we contribute to sustainable consumption behavior literature (e.g., Chu and Liao, 2008; White et al., 2019) by indicating that the application of the TCV in order to examine sustainable consumption behavior is acceptable, as evident from our model that explains more than 66% of the variance in sustainable consumption behavior. Third, regarding sharing economy platforms literature (e.g., Eckhardt et al., 2019), our findings show that altruistic values (vs. egoistic values) that lead people to use second-hand P2P platforms are positively (vs. negatively) associated with consumers' green consumption values and sustainable resale behavior. Fourth, we add to gender literature in P2P platform research (e.g., Kaur et al., 2021; Worsley et al., 2013; Ye et al., 2019) by demonstrating that female consumers are more sensitive to environmental impacts when engaging in the sharing economy; however, female consumers also had a higher level of unwillingness to engage in sustainable behavior when they perceived more economic gain and practical utility while using the secondhand P2P platforms.

These findings have significant implications for second-hand P2P platform managers as they can expand their understanding of users' values for using their services that relate to green consumption values; such an effect provides versatile opportunities for consumers to diversify their consumption practices and for companies to leverage the extended product life cycles for sustainable branding. The current research suggests that brand managers should collaborate with second-hand P2P platforms to gain detailed consumer insights into consumer-brand interaction and to boost authentic brand discussions that feed the brand identity in the primary market. In the next sections, in order to develop

our conceptual framework and our hypotheses, we review the literature on the TCV, consumers' green consumption values, the underlying values for using second-hand P2P platforms, and sustainable resale behavior. This is followed by a presentation of the results obtained from large-scale field data in order to test our hypotheses. Finally, we discuss the theoretical contributions, managerial implications, limitations, and suggestions for future research.

2. The theoretical background and hypotheses' development

2.1. Theory of consumption values (TCV)

The TCV was introduced by Sheth et al. (1991) to explain why and how consumers decide to acquire a specific product or brand from a range of available selections. Five types of generic consumption values that influence consumer choice and behavior can be identified: functional, social, emotional, conditional, and epistemic values (Kaur et al., 2021). Importantly, the use of the TCV should be based on three fundamental axiomatic propositions. First, the consumption value is a predictor or independent variable (Tanrikulu, 2021). Second, consumer choices and behavior, such as brand love (Sreen et al., 2021) and purchase intentions (Tandon et al., 2021), are functions of various consumption values. Third, the consumption values differ in different contexts and contribute to distinct consumer behavioral outcomes; for instance, in the context of online travel agencies, the functional aspect are referred to as *monetary and quality-of-benefits values*, whereas the epistemic aspect is related to *information value* when examining the consumers' purchase intention (Talwar et al., 2020).

We draw from the literature on the TCV to build our framework for three reasons. The TCV provides a theoretical underpinning that explains a multi-dimensional framework for the perceived value that underlies both the cognitive and affective aspects of consumption (Mäntymäki and Salo, 2015; Tanrikulu, 2021). Second, due to our research context of second-hand P2P marketing, this theory has been widely elaborated in the research context of digital technologies and services (e.g., Kaur et al., 2021; Tandon et al., 2021). Third, the TCV has been widely used to investigate the differential effects of consumption values on behavioral outcomes across a variety of marketing contexts (Tanrikulu, 2021), including digital marketing (e.g., Carlson et al., 2019; Mäntymäki and Salo, 2015), tourism marketing (e.g., Rousta and Jamshidi, 2020; Yang and Mattila, 2016), social marketing (e.g., Kaur et al., 2018; Nadeem et al., 2021; Reinikainen et al., 2021), green and sustainable marketing (e.g., Lin et al., 2020; Wang et al., 2020), and educational marketing (e.g., Lai et al., 2012; Rivera et al., 2018; Voropai et al., 2019). These reasons led us to utilize the TCV to attain a deeper understanding of the consumption values present on the second-hand P2P platforms.

2.2. A mapping the TCV to second-hand P2P platforms among ethical consumers

In line with the notion of previous studies on TCV research (e.g., Kaur et al., 2021; Talwar et al., 2020; Tandon et al., 2021), scholars need to identify a set of context-specific consumption values while adopting the TCV framework since it is a generic conceptualization of values. According to Freestone and McGoldrick (2008), an ethical consumer is generally referred to as an individual who conforms to the values of green consumerism. Consumers' green consumption values are related to consumers' tendency to express environmental protection values through their purchases and consumption behavior (Haws et al., 2014). Prothero et al. (2011) found that second-hand P2P platforms serve to empower consumers' green consumption values by reducing their environmental footprint and enabling the sustainable transformation of the current consumer markets. For instance, second-hand P2P platforms redefine the life cycle of a sold product by allowing consumers to resell a rarely used or unused item online without requiring them to search for a

potential buyer (as practiced traditionally) (Ferraro et al., 2016; Tan et al., 2018). In this regard, consumers nowadays have an effective option to transfer the value of unused items to the next owner without directly disposing of the item, and at the same time as being consistent with their environmental protection values, they are incentivized by the financial reward (Bailey et al., 2018; Haws et al., 2014).

Previous studies have found that consumers perceive second-hand P2P platforms as part of a bigger social change that provides opportunities to improve societal well-being outcomes (Bajaj et al., 2020; Parguel et al., 2017), as well as providing a practical and sustainable solution to waste disposal (Baek and Oh, 2021; Manninen et al., 2018). In particular, Ertz et al. (2016) identified six distinctive perceived utilities for using second-hand P2P platforms that are associated with consumers' green consumption values: recreational, generative, societal benefit, protester, economic, and practical values. In this regard, as shown in Table 1, we present the operational descriptions of the specific consumption values as identified in the context of the second-hand P2P platforms (Ertz et al., 2016) and mapped to the generic consumption values. Our proposed model comprises of five specific consumption values, namely recreational value (emotional value), generative value (conditional value), societal benefit value (social value), protester value (epistemic value), and economic and practical value (functional value).

We utilized altruistic and egoistic values (Nair and Little, 2016; Yadav, 2016) to conceptualize the positive and negative effects of the specific consumption values on consumers' green consumption values. We argue that altruistic-related values—the recreational, generative, societal benefit, and protester values—show unselfish concern for the welfare of others and include both social and environment sustainability awareness (Panda et al., 2020), and thus they increase one's tendency to appreciate green consumption values, which is related to ethical choices that focus on the benefits for others instead of for the consumer himself or herself (Carrington et al., 2021; Shaw et al., 2016). In contrast, egoistic-related values that focus on the consumers' personal gain—on economic and practical value—result in a negative impact on consumers' green consumption values. As such, the understanding of different values (i.e., the values related to the second-hand P2P platforms in this study) plays an essential role in influencing consumers'

green consumption values (Haws et al., 2014).

2.3. The positive effects of altruistic-related values of using second-hand P2P platforms on green consumption values

Recreational value (emotional value) refers to consumers' perceptions of the utility of gaining the inherent pleasure of engaging with the second-hand P2P platforms. In line with the notion put forward in the work of Ianoletto-Calin et al. (2020), we position ourselves as considering that the recreational value of using second-hand P2P platforms is related to the altruistic-related value as it highlights the positive feeling of reuse and circulates an unused product for environmental protection reasons (Nair and Little, 2016). Previous research has also found that pleasure value (i.e., termed *recreational value* in this study) encourages consumers to engage with second-hand P2P platforms as it supports environmental sustainability and aligns with green consumption values (Oliveira et al., 2021). Further, once consumers perceive the environmental benefits of using second-hand P2P platforms, they should maintain their attitude-behavior consistency (Sherman and Cohen, 2006) by experiencing positive emotions—feeling proud of practicing green consumption values to achieve ecological goals—while trading their unused items on the second-hand P2P platforms (Parguel et al., 2017). On these grounds, we propose the following:

H1: Consumers' recreational value, gained from using second-hand P2P platforms, is positively related to their green consumption values

Dollahite et al. (2019) stated that generative value is related to religious and spiritual beliefs that drive sustainable behavior. For instance, Davari et al. (2017) found that intrinsic and extrinsic religiosity significantly and positively predicted consumers' green consumption. In the current research, the *generative value* (conditional value) represents consumers' perceptions of the utility of extending the life cycle of the unused product by making it available for others while using the second-hand P2P platform. Following the notion of Farrant et al. (2010), the generative value of using second-hand P2P platforms is related to altruistic-related value as it demonstrates an unselfish concern for the welfare of others by extending the life cycle of unused products to others who cannot afford new products. Previous studies have shown that the generative value is associated with two sequential objectives: increasing the unused items' life cycle so the items are available for people who are in need of them and practicing green consumption values to accomplish things that make the world a better place (Schalhehn et al., 2019) and to demonstrate their care to others through their ethical consumption (Shaw et al., 2016). For these reasons, we hypothesize that:

H2: Consumers' generative value, gained from using second-hand P2P platforms, is positively related to their green consumption values

The *societal benefit value* (the social value) refers to consumers' perceptions of the utility of improving societal well-being within an online community of the second-hand P2P platforms. Consistent with Wasko and Faraj (2005), we argue that the societal benefit value is related to altruistic-related value as it concerns benefits for other human beings through providing accessible assets in the sharing economy. In the context of second-hand P2P platforms, Lim (2020) found that consumers are motivated to adopt green consumption values as they enjoy the sharing practices that could contribute a greater level of benefits to society. From an environmental perspective, the societal benefit value of using second-hand P2P platforms aims to preserve natural resources and to develop a sense of community (Belk, 2010; Ertz et al., 2016). For instance, previous studies have found that the engagement of socially motivated consumers on second-hand P2P platforms has significantly fostered a zero-waste society (Parguel et al., 2017), lowered carbon footprints (Clausen et al., 2010), and minimized negative environmental impacts (Medalla et al., 2020). Accordingly, when buying and selling on second-hand P2P platforms, consumers associate themselves with a socially and environmentally friendly practice (Botsman and Rogers, 2011; Kim and Jin, 2020); this practice not only creates social links

Table 1

Mapping of generic TCV values to specific consumption values among ethical consumers in the context of second-hand P2P platforms.

Generic TCV values	Specific consumption values	Operational description
Emotional value	Recreational value	Consumers' perceptions of the utility of gaining the inherent pleasure of engaging with the second-hand P2P platforms
Conditional value	Generative value	Consumers' perceptions of the utility of extending the life cycle of the unused product by making it available for others while using the second-hand P2P platforms
Social value	Societal benefit value	Consumers' perceptions of the utility of improving societal well-being within an online community of the second-hand P2P platforms
Epistemic value	Protester value	Consumers' perceptions of the utility of enabling others to circumvent conventional marketing systems and to avoid new purchases while using the second-hand P2P platforms
Functional value	Economic value	Consumers' perceptions of the utility of enjoying economic gain while executing exchange for a product on the second-hand P2P platforms
	Practical value	Consumers' perceptions of the utility of easily getting rid of unused or rarely used products while using the second-hand P2P platforms

between them but also enhances their green consumption values (Prothero et al., 2011). Thus, we hypothesize the following:

H3: Consumers' societal benefit value, gained from using second-hand P2P platforms, is positively related to their green consumption values

The *protester value* (epistemic value) refers to consumers' perceptions of the utility of enabling others to circumvent conventional marketing systems and to avoid new purchases while using the second-hand P2P platforms. To pursue a protester value, consumers utilize second-hand P2P platforms as a protest against environmentally unfriendly consumption and retailing practices (Guiot and Roux, 2010). The reason given is that second-hand P2P platforms empower consumers to attenuate the need for new products and directly decrease the chances of labor exploitation, toxin waste, and the abuse of environmental resources during the production process (Parker and Weber, 2013). In this sense, the protester value is related to altruistic value as it emphasizes solving overconsumption behavior (Seegebarth et al., 2016) and nurturing pro-environmental purchase patterns (Vicente-Molina et al., 2018), which are closely associated with green consumption values. Based on these notions, we argue that:

H4: Consumers' protester value, gained from using second-hand P2P platforms, is positively related to their green consumption values

2.4. The negative effects of egoistic-related values of using second-hand P2P platforms on consumers' green consumption values

Previous studies have found that motivations for using second-hand P2P platforms are significantly associated with consumers' ethical values (Oliveira et al., 2021; Schallehn et al., 2019). For instance, Birch et al. (2018) found that egoistic-related values have positive indirect effects on consumer's purchase frequency of green products via their favorable beliefs, interest in traceability, and to make purchases. The reason given is that the six instrument items of this survey study are related to personal health value, e.g., "I'm very conscious about my health and the health of others for whom I shop in the household," "I take responsibility for the state of my health and the health of others for whom I shop in the household" (Birch et al., 2018, p. 225). As such, it is justifiable that egoistic-related values focusing on health interests are positively associated with green consumption values.

Nonetheless, we argue that certain types of egoistic-related values, such as economic and practical values (functional values), that drive maintaining and enhancing the self-centered benefits of consumers' desires (Yadav, 2016) may result in a negative impact on consumers' green consumption values. The *economic value* is related to consumers' perceptions of the utility of enjoying economic gain while executing an exchange for a product on the second-hand P2P platforms, whereas the *practical value* relates to consumers' perceptions of the utility of easily getting rid of unused or rarely used products while using the second-hand P2P platforms. Previous research shows that consumers' self-focus on financial gains and the ease of the disposal of unused items outweighs their green consumption values when performing transactions on the second-hand P2P platforms (Edbring et al., 2016). In this sense, the economic and practical values activate consumers' focus on cost-benefit assessments (perceived value and price fairness; see Mende et al., 2018); they may defend their conspicuous and impulsive consumption by *rationalizing* that the purchased items could effortlessly be sold to others in the second-hand P2P platforms for monetary returns.

Thus, both the economic and practical values for using second-hand P2P platforms may encourage consumers to purchase more hedonic and unnecessary items, which undermines the consumers' green consumption values. This could be further explained by individuals sometimes exhibiting behaviors (e.g., environmentally unfriendly consumption) that are inconsistent with their values (e.g., ethical consumerism) for the purpose of achieving certain goals (Schwartz, 1973). Based on these notions, we argue that:

H5: For consumers, the economic value of using second-hand P2P

platforms is negatively related to their green consumption values

H6: For consumers, the practical value of using second-hand P2P platforms is negatively related to their green consumption values

2.5. The relationship of sustainable resale behavior and consumers' green consumption values

We define *sustainable resale behavior* as the set of consumers' strategic practices and disposal actions in their consumption that aim at protecting natural and social resources. Following the notion of Chu and Liao (2008), in the current research there are three important sustainable resale behaviors: (1) *planned resale behavior* is related to one's behavior when planning to extend the life cycle of an item one intends to purchase by later reselling it to others, (2) *strategic resale behavior in regard to unused items*, which refers to one's strategic effort and behavior in regard to reselling an unused item to others, and (3) *reseller behavior in regard to unused items* is defined as one's behavior in regard to being able to resell an unused item to others.

Previous studies have found that consumers with a high level of green consumption values are aware of their purchase practices that protect the environment through sustainable resale behavior; these consumers also promote their role in the second-hand P2P platforms so that they can resell unused or rarely used items effectively by taking care of the products while using them (Clausen et al., 2010; Halder et al., 2020; Mutum et al., 2020; van Tonder et al., 2020). For instance, in the context of secondhand furniture, consumers with a high level of green consumption values are motivated to preserve the quality of furniture, and subsequently, they can resell their used furniture on the second-hand P2P platforms in order to be environmentally responsible consumers (Edbring et al., 2016). Accordingly, we propose the following hypothesis:

H7: Consumers' green consumption values are positively related to sustainable resale behavior

Although previous studies have found that the motivations and values for using second-hand P2P platforms are associated with online resale behavior (Botsman and Rogers, 2011; Ertz et al., 2016; Kim and Jin, 2020), we argue that consumers' green consumption values play a critical mediating role in the relationship for three reasons. First, the investigated outcome, namely sustainable resale behavior, refers to the way in which consumers strategically practice their sustainable purchase and resale behavior. Thus, this construct captures behavior beyond resale behavior by involving a deep understanding of consumers' ecological behavior (Song and Kim, 2018). Second, the predictors—the positive consumption values (e.g., economic and practical values) for using second-hand P2P platforms—are not sufficient to provide a strong explanation for the underlying psychological mechanism that leads to sustainable resale behavior. Third, the consumers' intention-behavior gap emphasizes that the attitudes of ethical consumers do not correlate to their actions (Carrington et al., 2010; White et al., 2019). In this regard, green consumption values play an essential role in explaining the conditions in which ethical consumers engage (vs. disengage) in sustainable resale behavior while utilizing second-hand P2P platforms, which is in line with the notion of a spillover effect (White et al., 2019). On these grounds, we propose the following:

H8: The effects of (a) the recreational value, (b) the generative value, (c) the societal benefit value, (d) the protester value, (e) the economic value, and (f) the practical value on sustainable resale behavior are mediated by consumers' green consumption values

2.6. The moderating effects of gender on the relationship between consumers' green consumption values and extended consumption values of using second-hand P2P platforms

Research on the TCV has found that emotional and novelty values are highly appreciated among Japanese tourists, whereas Western tourists are more likely to emphasize functional value, such as price value

(Williams et al., 2017). Interestingly, a recent study that was conducted among Indian tourists indicated that functional values (money and quality-of-benefits values) and condition values (i.e., preference values) are highly associated with consumers' purchase intention on online traveling platforms, but the emotional value is not considered a dominant value for purchase intention (Talwar et al., 2020). As such, marketing scholars started focusing on variables that affect the level, direction, or presence of a relationship between consumption values and consumer behavioral outcomes, such as users' activity levels on online platforms, consumer attitudes toward using online platforms, perceptions of hygiene, privacy and security concerns, online environmental concern, and gender (Kaur et al., 2018; Sreen et al., 2021; Tandon et al., 2021; Talwar et al., 2020).

To the best of our knowledge, only one study has investigated the moderating role of gender in the context of the TCV recently. Kaur et al. (2021) found that gender did not moderate the relationship of any of the investigated consumption values (i.e., price value, prestige value, health consciousness, food-safety concern, affordances value, and viability) nor purchase intention in the P2P food-sharing platforms research. Nonetheless, previous studies have found that gender serves as an important moderator in the research of the P2P platforms (e.g., Worsley et al., 2013; Ye et al., 2019). Possibly, the moderating effect of gender exists within the relationship between the consumption values leading to using P2P platforms and the consumer's overall consumption values, but it is not directly pertinent to consumer behavioral outcomes.

Previous studies have found that female consumers play a significant supporting role on the second-hand P2P platforms (Northey and Brodie, 2020). The reason given is that both male and female consumers perceive differences in terms of the sustainable brand image of second-hand P2P platforms (Lee and Kim, 2019). Importantly, research has shown that female consumers tend to be more environmentally responsible than men in terms of handling their clothing disposal process (Vehmas et al., 2018; Yan et al., 2015). Further, female consumers are more sensitive towards environmental impacts (Clausen et al.,

2010), and previous research has indicated that female consumers have a higher level of consideration of green consumption values when reselling their unused items on second-hand P2P platforms (Mahadevan, 2018).

On the other hand, Kalamas et al. (2014) found that female consumers scored a higher level for having an external environmental locus of control that incorporates God and natural earth-cycle facets, which counterintuitively indicated that these female consumers were less likely to engage with green consumption values and sustainable behavior. In line with the notion of a spillover effect (White et al., 2019), we argue that the consumption values for using second-hand P2P platforms among female consumers would result in a greater level of spillover effect onto their sustainable resale behavior than male consumers, including both positive and negative effects. Thus, we hypothesize the following:

H9: The relationship between green consumption values and (a) the recreational value, (b) the generative value, (c) the societal benefit value, (d) the protester value, (e) the economic value, and (f) the practical value is expected to have stronger effects among female consumers than among male consumers

3. Methodology

Fig. 1 presents our conceptual framework. We test H1–H6 regarding the effects of the extended consumption values for using the second-hand P2P platforms on the consumers' green consumption values, which are explained by six types of values: recreational, generative, societal benefit, protester, economic, and practical values. We test H7 regarding the effect of consumers' green consumption values on sustainable resale behavior in three dimensions with a second-order construct: planned resale behavior, strategic resale behavior in regard to unused items, and reseller behavior in regard to unused items. Next, we conducted an indirect effect analysis in order to examine H8a–H8f. Lastly, we test H9a–H9f regarding the moderating role of gender, which

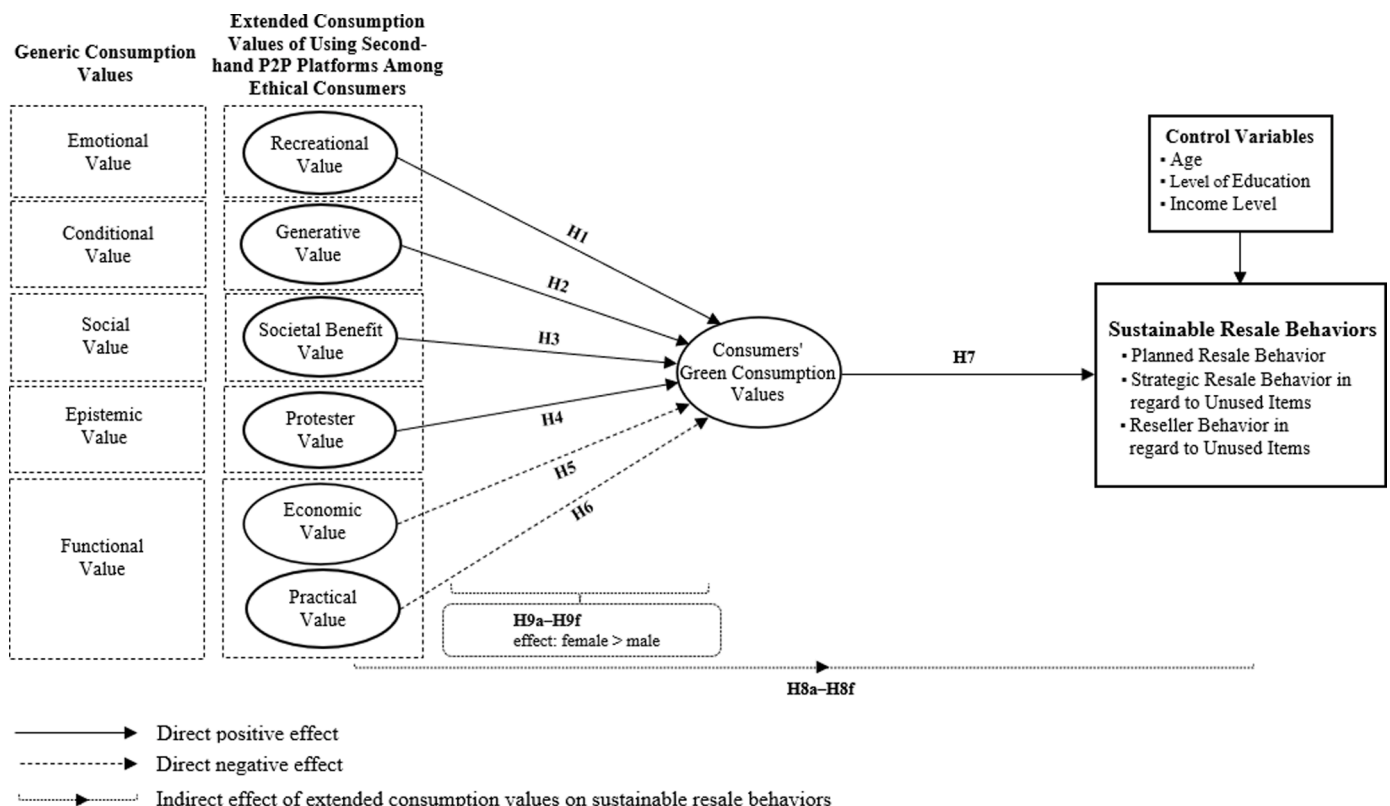


Fig. 1. The conceptual framework.

hypothesize the stronger effects of the extended consumption values for using second-hand P2P platform on green consumption values among female consumers. We further included demographic variables (i.e., age, level of education, and annual disposable income level) to control their influences on sustainable resale behaviors.

As the relationships proposed in Fig. 1 are theoretically supported by previous literature (e.g., Ertz et al., 2016; Haws et al., 2014; Kaur et al., 2021; Sherman and Cohen, 2006; Tandon et al., 2021; Talwar et al., 2020; White et al., 2019; Yadav, 2016), it is appropriate to use a non-probability convenience sampling method (Calder et al., 1982). We performed structural equation modeling analysis as this method allows researchers to include exogenous and endogenous variables in a single model estimation (Hair et al., 2010). We first performed confirmatory factor analysis to identify a measurement model by confirming the relationship between the observed variables and latent variables, which enabled a comprehensive assessment of construct validity, including convergent and discriminant validity. Next, comparing structural models with different groups (i.e., a basic group vs. a male group vs. a female group) was conducted to test the hypotheses.

As shown in Fig. 1, we constructed three structural models using SPSS AMOS 25 to test H1–H7. A critical remark is that our research framework only emphasizes *indirect mediation* (i.e., H8a–H8f) that relates to sequential effect (Tan et al., 2021; Zhao et al., 2010). In other words, no direct effects of the motivations for using a second-hand P2P platform are hypothesized for the sustainable resale behavior as the consumers' green consumption values serve as the underlying mechanism that explains their sustainable behavior as ethical consumers. H9a–H9f were examined on the basis of a chi-square difference test, following a series of slope tests. Specifically, we compared the effects with an unconstrained model and a constrained model.

4. Field data collection and measurement items

We used Webropol to design a self-administrated online questionnaire. We collaborated in this research project with one of the largest second-hand P2P platforms in the Nordic countries. A unique and auto-generated link to the online questionnaire was sent to the second-hand P2P platform users who had submitted a sales announcement between March 13, 2019, and March 17, 2019. To increase the response rate of this research, electronic gift cards were randomly rewarded to those respondents who had participated in the online questionnaire with an identifier email. A total of 54,267 requests that based on the sales announcement had been sent during the period. With a response rate of 6%, our finalized dataset consists of 3256 usable responses. Table 2 presents the profile of the field data respondents.

First, the participants responded to demographic questions and two questions that relate to ethical consumer (“As an ethical consumer, it is important to me of using products that do not harm the environment,” “As an ethical consumer, I am concerned about wasting resources of our planet”; $\alpha = 0.76$; $M = 4.99$ vs. midpoint 4; $t(3255) = 37.94$; $p < .001$). Then, the respondents were asked to answer items on the six values for using the second-hand P2P platform (adopted and modified from Ertz et al., 2016; Farrant et al., 2010; Nair and Little, 2016; Talwar et al., 2020), green consumption values (Haws et al., 2014; “I consider the potential environmental impact of my actions when making many of my decisions,” “I would describe myself as environmentally responsible,” “I am willing to take actions that are more environmentally friendly”), planned resale behavior (Chu and Liao, 2008; “When purchasing an item, I consider how easy it is to resell it to another consumer,” “When purchasing an item, I consider the resale value of the item,” “I purchase certain brands because those brands are easier to resell to another consumer”), strategic resale behavior in regard to unused items (Chu and Liao, 2008; “When reselling an unused item, I try to take the best photo of the item that I can,” “When reselling an unused item, I provide a description of the item that is as true as possible”), and reseller behavior in regard to unused items (Chu and Liao, 2008; “I can easily resell my

Table 2

Demographics of field data respondents.

Profile category	Percentage
<i>Gender</i>	
Male (n= 1264)	38.8%
Female (n= 1983)	60.9%
Other (n= 9)	0.3%
<i>Age</i>	
Mean	45.2 years
Age range	18–75
Standard deviation	15.1
<i>Regional area</i>	
Capital region	29.8%
Other	70.2%
<i>Level of education</i>	
High school graduate	10.3%
Matriculation or vocational school	39.4%
Bachelor's degree	25.7%
Master's degree	14.7%
Other	6.9%
Missing data	3.0%
<i>Annual disposable income level (€)</i>	
Less than 19,999	26.5%
20,000 to 39,999	40.6%
40,000 to 59,999	16.4%
60,000 to 79,999	3.8%
80,000 or more	2.6%
Missing data	10.1%
<i>Number of household member</i>	
1 person	22.7%
2 persons	35.2%
3 persons	13.6%
4 persons or more	24.0%
Missing data	4.5%

unused items as I know that there is demand for them,” “I easily sell my unused items as I am a flexible seller,” “I easily sell my unused items as I am an experienced seller”). The respondents had to answer all the measurement questions in the online survey before they could complete the survey. All the statements were responded to using a scale ranging from 1 = *strongly disagree* to 7 = *strongly agree*.

5. Results

Table 3 presents the measurement models showing sufficient reliability and validity (as recommended by Hair et al., 2010) ($\chi^2/d.f. = 8.058$, the root mean square error of approximation [RMSEA] = 0.047, the non-normed fit index [NNFI] = 0.947, the comparative fit index [CFI] = 0.953, and the standardized root mean square residual [SRMR] = 0.038). All the Cronbach's alpha and composite reliability values exceeded the value of 0.70. The results of the discriminant validity analysis showed that the square root of the average variance extracted (AVE) exceeded the correlations between all pairs of constructs (see Table 4).

Table 5 demonstrates that all three structural models fit the data well (basic model: $\chi^2/d.f. = 10.605$, RMSEA = 0.054, NNFI = 0.908, CFI = 0.916, and SRMR = 0.076; male model: $\chi^2/d.f. = 4.790$, RMSEA = 0.055, NNFI = 0.901, CFI = 0.914, and SRMR = 0.079; female model: $\chi^2/d.f. = 6.672$, RMSEA = 0.053, NNFI = 0.905, CFI = 0.918, and SRMR = 0.076). Participants' age, their level of education, and their annual disposable income level were the control variables. Sustainable resale behavior was found to be significantly and negatively controlled by participants' age ($\beta_{\text{basic}} = -0.31$; $t = -11.94$, $p \leq 0.01$; $\beta_{\text{male}} = -0.33$; $t = -8.97$, $p \leq 0.01$; $\beta_{\text{female}} = -0.30$; $t = -7.27$, $p \leq 0.01$). However, the results of basic, male, and female structural models showed that sustainable resale behavior was not significantly controlled by participants'

Table 3

Results of standardized factor loading, Cronbach's Alpha, composite reliability, average variance extracted, and model fit indices.

Constructs	n= 3256			
	SFL	α	CR	AVE
Recreation value		.74	.77	.54
RM1: [The second-hand P2P platform] enables me to come into contact with other individuals.	.79			
RM2: [The second-hand P2P platform] provides me with an opportunity to chat with other individuals.	.85			
RM3: [The second-hand P2P platform] is a pleasant way of passing my time.	.54			
Generative value		.81	.82	.60
GM1: I sell items on [the second-hand P2P platform] as this enables me to extend the product life span.	.78			
GM2: I sell items on [the second-hand P2P platform] as this enables me to avoid an item being set aside and forgotten.	.68			
GM3: I sell items on [the second-hand P2P platform] as this enables me to give a new life to an item.	.87			
Societal benefit value		.87	.87	.69
SM1: By selling items on [the second-hand P2P platform], I am able to help out disadvantaged individuals.	.79			
SM2: By selling items on [the second-hand P2P platform], I feel like I am helping out individuals that are less fortunate than myself.	.88			
SM3: By selling items on [the second-hand P2P platform], I have the impression of doing something good for the community.	.82			
Protester value		.83	.83	.63
PRM1: [The second-hand P2P platform] enables me to not support the new goods market.	.76			
PRM2: By selling items on [the second-hand P2P platform], I can protest against high prices in the new goods market.	.79			
PRM3: By selling items on [the second-hand P2P platform], I can contribute to the fight against the overconsumption of new items.	.82			
Economic value		.70	.70	.54
EM1: I sell items on [the second-hand P2P platform] as this enables me to earn easy money.	.72			
EM2: I sell items on [the second-hand P2P platform] as this provides me with added income.	.74			
Practical value		.81	.81	.68
PM1: By selling items on [the second-hand P2P platform], I am able to keep things tidy at home.	.82			
PM2: By selling items on [the second-hand P2P platform], I am able to sort things out on the home front.	.84			
Consumers' green consumption values		.92	.92	.78
CGV1: I consider the potential environmental impact of my actions when making many of my decisions.	.87			
CGV2: I would describe myself as environmentally responsible.	.90			
CGV3: I am willing to take actions that are more environmentally friendly.	.89			
Planned resale behavior		.85	.86	.67
PRB1: When purchasing an item, I consider how easy it is to resell it to another consumer.	.85			
PRB2: When purchasing an item, I consider the resale value of the item.	.87			
PRB3: I purchase certain brands because those brands are easier to resell to another consumer.	.72			
Strategic resale behavior in regard to unused items		.72	.73	.58
RS1: When reselling an unused item, I try to take the best photo of the item that I can.	.77			
RS2: When reselling an unused item, I provide a description of the item that is as true as possible.	.75			

Table 3 (continued)

Constructs	n= 3256			
	SFL	α	CR	AVE
Reseller behavior in regard to unused items		.76	.76	.52
RC1: I can easily resell my unused items as I know that there is demand for them.	.70			
RC2: I easily sell unused items as I am a flexible seller.	.74			
RC3: I easily sell unused items as I am an experienced seller.	.71			

CFA model fit indices: $\chi^2/\text{d.f.} = 8.058$, RMSEA = 0.047, NNFI = 0.947, CFI = 0.953, SRMR = 0.038

.Notes:

SFL = Standardized factor loadings, all loadings are significant below 0.001 level and less than 0.01 difference in loading when comparing the CFA and second order CFA; α = Cronbach's Alpha; CR = Composite reliability; AVE = Average variance extracted; "[The second-hand P2P platform]" was replaced by a Nordic second-hand P2P platform's brand name during the data collection.

educational background ($p > .05$) and their annual disposable income level ($p > .05$).

In the basic model, the result revealed that consumers' green consumption values are significantly and positively predicted by the recreational value ($\beta = 0.07$; $t = 3.28$, $p \leq 0.01$), the generative value ($\beta = 0.26$; $t = 10.07$, $p \leq 0.01$), the societal benefit value ($\beta = 0.06$; $t = 2.19$, $p \leq 0.05$), and the protester value ($\beta = 0.46$; $t = 18.13$, $p \leq 0.01$), whereas consumers' green consumption values are significantly and negatively predicted by the economic value ($\beta = -0.09$; $t = -4.49$, $p \leq 0.01$) and the practical value ($\beta = -0.07$; $t = -3.02$, $p \leq 0.01$). Thus, H1 to H6 are supported. In line with our hypotheses, in all the structural models, consumers' green consumption values significantly and positively predicted sustainable resale behavior in the basic structural model ($\beta = 0.26$; $t = 8.87$, $p \leq 0.01$), the male structural model ($\beta = 0.30$; $t = 7.39$, $p \leq 0.01$), and the female structural model ($\beta = 0.22$; $t = 4.88$, $p \leq 0.01$). Therefore, H7 is supported.

To examine the effects of the identified six values for sustainable resale behavior that is mediated by consumers' green consumption values, we conducted an indirect analysis with 5000 bootstrapped samples and a 95% confidence level for the confidence intervals (CIs); the results of the basic model reveal that all the indirect relationships were significantly mediated by the consumers' green consumption values. The recreational, generative, societal benefit, and protester values had a positive indirect effect on sustainable resale behavior ($\beta_{\text{recreational}} = 0.02$, $SE = 0.01$; CI [.007, 0.033]; $\beta_{\text{generative}} = 0.07$, $SE = 0.01$; CI [.047, 0.091]; $\beta_{\text{societal benefit}} = 0.02$, $SE = 0.01$; CI [.001, 0.032]; $\beta_{\text{protestor}} = 0.12$, $SE = 0.02$; CI [.092, 0.149]). In contrast, the economic and practical values had negative indirect effects on sustainable resale behavior ($\beta_{\text{economic}} = -0.03$, $SE = 0.01$; CI [-0.037, -0.014]; $\beta_{\text{practical}} = -0.02$, $SE = 0.01$; CI [-0.032, -0.005]). Thus, H8a to H8f are supported.

To test the moderating effect of gender (i.e., to test H9a to H9f), we conducted a chi-square difference test with an unconstrained model and a constrained model by equalizing the unstandardized path estimates (i.e., the effect of the six values for using second-hand P2P platform on consumers' green consumption values) of the male and female models. The results showed a significant difference in the chi square after constraining the models ($\Delta\chi^2 = 19.92$, $\Delta \text{d.f.} = 6$, $p = .003$). Then, we performed a series of slope tests to examine the moderating effect of gender on each value. As shown in Table 5, as expected, the positive relationship between consumers' green consumption values and the recreational value ($\Delta \beta = 0.11$, $t = 2.34$, $p \leq 0.05$), the generative value ($\Delta \beta = 0.09$, $t = 2.53$, $p \leq 0.05$), and the protester value ($\Delta \beta = 0.09$, $t = 2.38$, $p \leq 0.05$) were found to have stronger effects among female consumers than among male consumers. Thus, H9a, H9b, and H9d are supported. Although there are no significant differences in the slope test for the economic value ($\Delta \beta = -0.06$, $t = 1.26$, $p > .05$) and the practical

Table 4

Result of the discriminant validity analysis.

Constructs	1	2	3	4	5	6	7	8	9	10
1. Economic value	.73									
2. Practical value	.18**	.83								
3. Recreation value	.38**	.27**	.74							
4. Generative value	.13**	.54**	.16**	.78						
5. Societal benefit value	.22**	.46**	.47**	.56**	.83					
6. Protester value	.25**	.34**	.30**	.50**	.56**	.79				
7. Consumers' green consumption values	.06*	.26**	.20**	.50**	.43**	.58**	.89			
8. Planned resale behavior	.33**	.12**	.19**	.04*	.12**	.15**	.04*	.82		
9. Strategic resale behavior in regard to unused items	.15**	.11**	.10**	.31**	.08**	.11**	.17**	.05*	.76	
10. Reseller behavior in regard to unused items	.42**	.34**	.29**	.32**	.34**	.27**	.17**	.35**	.42**	.72

Notes:

Square root of AVE in bold.

** Correlation is significant at the 0.001 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

Table 5

Key findings across baseline model, male, female samples.

		Basic model(n= 3256 ^a)		Male(n= 1264)		Female(n= 1983)		H9: Moderating effect of gender(comparison between male vs. female) ^b
		β	t value	β	t value	β	t value	
H1: RV	→ CGV	0.07**	3.28	0.01	0.33	.12**	4.03	H9a: $\Delta \beta = 0.11$, $t = 2.34^*$
H2: GV	→ CGV	0.26**	10.07	0.19**	4.36	.28**	9.12	H9b: $\Delta \beta = 0.09$, $t = 2.53^*$
H3: SV	→ CGV	0.06*	2.19	0.16**	3.32	.00	0.08	H9c: Reverse effect
H4: PRV	→ CGV	0.46**	18.13	0.40**	10.06	.49**	15.10	H9d: $\Delta \beta = 0.09$, $t = 2.38^*$
H5: EV	→ CGV	-0.09**	-4.49	-0.06	-1.86	-0.12**	-4.43	H9e: $\Delta \beta = -0.06$, $t = 1.26^{\dagger}$
H6: PV	→ CGV	-0.07**	-3.02	-0.03	-0.91	-0.08**	-2.94	H9f: $\Delta \beta = -0.05$, $t = 1.04^{\dagger}$
H7: CGV	→ SRB	0.26**	8.87	0.30**	7.39	0.22**	4.88	- ^c
Indirect effect		β (SE) (lower and upper CI)						
H8a: RV	→ SRB	.02 (0.01) **	(CI = [-0.007, 0.033])	- ^c		- ^c		- ^c
H8b: GV	→ SRB	.07 (0.01) **	(CI = [-0.047, 0.091])	- ^c		- ^c		- ^c
H8c: SV	→ SRB	0.02 (0.01)*	(CI = [-0.001, 0.032])	- ^c		- ^c		- ^c
H8d: PRV	→ SRB	.12 (0.02) **	(CI = [-0.092, 0.149])	- ^c		- ^c		- ^c
H8e: EV	→ SRB	-0.03 (0.01) **	(CI = [-0.037, -0.014])	- ^c		- ^c		- ^c
H8f: PV	→ SRB	-0.02 (0.01)**	(CI = [-0.032, -0.005])	- ^c		- ^c		- ^c
Control variables								
Age	→ SRB	-0.31**	-11.94	-0.33**	-8.97	-0.30**	-7.27	- ^c
Education	→ SRB	-0.06	-1.18	-0.02	-0.50	-0.01	-0.17	- ^c
Income	→ SRB	0.00	0.27	-0.04	-1.07	0.04	1.30	- ^c
$\chi^2/d.f.$		10.605		4.790		6.672		
RMSEA		.054		.055		.053		
NNFI		.908		.901		.905		
CFI		.916		.914		.918		
SRMR		.076		.079		.076		

Notes:

RV = Recreational value; GV = Generative value; SV = Societal benefit value; PRV = Protester value; EV = Economic value; PV = Practical value; CGV = Consumers' green consumption values; SRB = Sustainable resale behaviors.

** $p \leq 0.01$.* $p \leq 0.05$.^a Total sample size of 3256 consisted of 1264 male and 1983 female participants, whereas the remaining 9 participants did not disclose their gender.^b $\Delta \chi^2 = 19.92$, $\Delta d.f. = 6$, $p = .003$.^c We argued that a difference in term of the significance level of path estimates between the male vs. female structural model, although slope test did not show a significant result.^d Not included in the hypothesis development.^e $p = 0.056$.

value ($\Delta \beta = -0.05$, $t = 1.04$, $p > .05$), the negative relationships are not significantly found in the male model when compared with both significant negative results in the female model (the economic value: $\beta_{\text{female}} = -0.12$; $p \leq 0.01$ vs. $\beta_{\text{male}} = -0.06$; $p > .05$; the practical value: $\beta_{\text{female}} = -0.08$; $p \leq 0.01$ vs. $\beta_{\text{male}} = -0.03$; $p > .05$). As such, H9e and

H9f are supported.

Unexpectedly, the societal benefit value did not significantly predict consumers' green consumption values among female respondents ($\beta = 0.00$, $t = 0.08$, $p > .05$), whereas this effect was significantly and positively found in the male model ($\beta = 0.16$, $t = 3.32$, $p \leq 0.01$). Therefore,

H9c is not supported.

As shown in Fig. 2, our model demonstrated that the extended consumption values for using second-hand P2P platforms explain approximately 40 percent of consumers' variance on green consumption values ($R^2_{\text{basic}} = 42.7\%$; $R^2_{\text{male}} = 40.1\%$; $R^2_{\text{female}} = 44.0\%$); whereas the predictors of sustainable resale behavior explain around 66 percent of its variance ($R^2_{\text{basic}} = 68.3\%$; $R^2_{\text{male}} = 67.6\%$; $R^2_{\text{female}} = 66.0\%$).

6. Discussions

Our findings embrace the fact that the forming of consumers' green consumption values involves the extended consumption values of using a second-hand P2P platform, which subsequently results in sustainable resale behaviors. First, the current research sheds light on the positive and negative effects of context-specific consumption values on consumers' green consumption values. Importantly, we demonstrate that context-specific consumption values—including recreation (emotional), generative (conditional), societal benefit (social), and protester (epistemic) values—significantly and positively influence consumers' green consumption values, whereas economic and practical values resulted in a negative impact on the way in which consumers develop their green consumption values. This is explained by the egoistic-related value (Yadav, 2016); users focus on their personal benefits when reselling items on the second-hand P2P platform. In this regard, these motivations induce users to emphasize the extra profits and practical benefits gained when selling an unused item rather than pro-environmental values. In contrast, altruistic-related value—including the protector, societal benefit, and generative values—is more related to ethical consumption (Carrington et al., 2021; Nair and Little, 2016), shows unselfish concern for the welfare of others and increases one's tendency to appreciate green consumption values. An important note is that readers have to be cautious while interpreting the negative effects of economic and practical values on the consumer's green consumption value; this current study does not exclusively position

economic and practical values as never resulting in positive environmental effects as consumers might wish to save resources and materials for economic and practical reasons and they will indirectly contribute to saving the environment even if they are not aware of the positive consequences of performing such actions. Thus, the current study merely focuses on the consumer's conscious values and behaviors.

Second, the current findings are in line with the notion of a spillover effect (Reinikainen et al., 2021; White et al., 2019), which indicates that consumers' green consumption values significantly and positively predicated sustainable resale behaviors and that consumers' green consumption values significantly mediate both the positive and negative indirect effects of the investigated context-specific consumption values on sustainable resale behaviors.

Third, we demonstrate that stronger positive and negative spillover effects exist among female consumers compared with male consumers when relating the use of the second-hand P2P platforms to green consumption values, which is in line with previous studies that investigated the gender effect on sustainable behaviors (e.g., Wang et al., 2020). Somehow surprisingly, there is no significant effect found in the relationship between the societal benefit value and green consumption values among the female consumers. One possible explanation is that, in general, females are more empathic than males (Mestre et al., 2009), thus the societal benefit value may induce female consumers to get involved in directly feeling the emotions that a disadvantaged or unfortunate person is feeling—i.e., they get involved in emotional empathy, the reflection of another human's feeling—rather than getting involved in the life cycle of an unused item.

In sum, our findings confirm that the recreational, generative, societal benefit, and protector values of using second-hand P2P platforms positively influence consumers' green consumption values and, subsequently, increase their preparedness to engage in sustainable resale behaviors. On the other hand, while using second-hand P2P platforms, the consumers' focus on the economic and practical values has a negative impact on their green consumption values, and subsequently, this

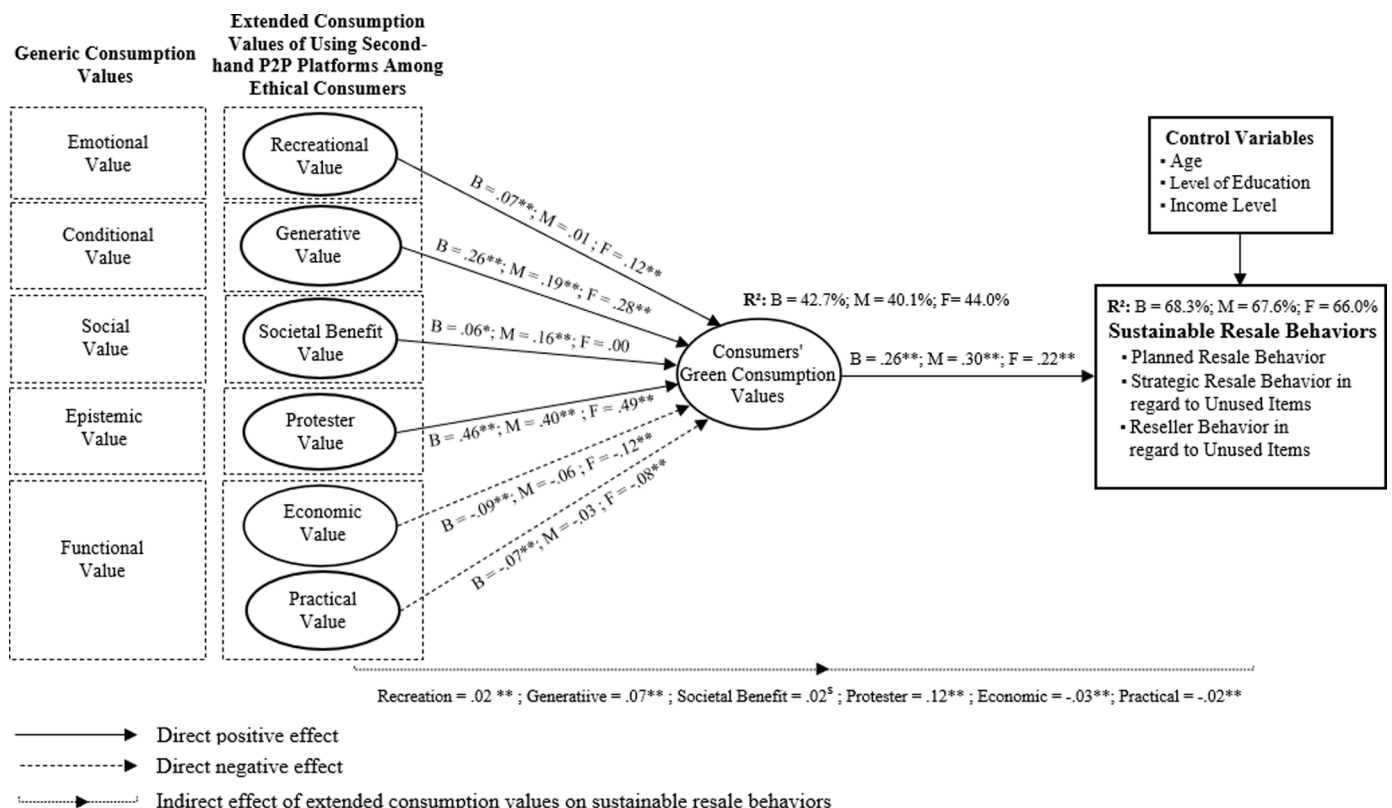


Fig. 2. Structural model with results.

weakens their willingness to engage in sustainable resale behavior.

7. Theoretical implications

This research provides a four-fold contribution. First, we contribute to the TCV (Sheth et al., 1991) by identifying a set of second-hand P2P platform-specific consumption values and its effects on consumers' overall values related to green consumption. Previous studies have mostly directly investigated the positive effects of consumption values on consumer choices and behaviors (e.g., Kaur et al., 2021; Tandon et al., 2021; Talwar et al., 2021), whereas we focus on how context-specific consumption values positively (e.g., epistemic value) or negatively (i.e., functional value) affect consumers' overall green consumption values and subsequently indirectly influence consumer choices and behaviors. In this regard, we demonstrate the importance of considering another value-related construct's roles in serving as an underlying psychological mechanism and which explain the connection between context-specific consumption values and sustainable consumer behavior, aspects that have not been investigated in previous studies (e.g., Carlson et al., 2019; Kaur et al., 2021; Mäntymäki and Salo, 2015; Tandon et al., 2021).

Previous studies have largely focused on how second-hand P2P platforms (or sharing economy platforms in general) positively affect ethical consumers' attitudes and intentions in regard to sustainable consumption (Bajaj et al., 2020; Oliveira et al., 2021; Parguel et al., 2017; Schallehn et al., 2019). However, our research focuses on the mediating roles of green consumption values, which sheds light on closing the ethical consumers' intention-behavior gap (Carrington et al., 2010) that is associated with their environmental protection values and sustainable consumption behavior through their usage of second-hand P2P platforms. In this sense, the degree to which consumers hold green consumption values serves to explain why some ethical consumers would strategically utilize second-hand P2P platforms in their sustainable purchase and resale behaviors. As such, green consumption values seem to stem more from cognitive processing rather than from emotional processing (van Tonder et al., 2020). This manifests in our results, showing that a cognitive construct (i.e., green consumption values) serves to influence ethical consumers' strategic behavior in supporting pro-environmental consumption.

Second, we add to sustainable consumption behavior literature (Chu and Liao, 2008; White et al., 2019) by demonstrating that a spillover effect exists among ethical consumers who are engaged in reselling behavior on a second-hand P2P platform that underlies the TCV (Sheth et al., 1991). This study shows that the application of the TCV in order to examine sustainable consumption behavior is acceptable, as evident from the fact that the model is able to explain more than 66% of the variance in sustainable consumption behavior. In the current research, three sustainable resale behaviors were identified: planned resale behavior, strategic resale behavior in regard to unused items, and reseller behavior in regard to unused items. In particular, we focus on the ethical consumers'/prosumers' planned consumption and strategic resale behavior while engaging with the second-hand P2P platforms (i.e., context-specific consumption values). In this regard, ethical consumers should plan to resell the items they intend to purchase as this affects the possibility of their unused items being transferred to other owners. Interestingly, among ethical consumers,¹ altruistic-related (vs.

egoistic-related) values of using the second-hand P2P platform were found to have significant positive (vs. negative) spillover effects on sustainable resale behavior via green consumption values, which highlights the importance of understanding technology-facilitated engagement in the context of sustainable consumption behavior (Hollebeek et al., 2019). In this sense, we argue that consumers' sustainable consumption behavior is heavily influenced and nurtured by their daily interactions with engagement-facilitating technologies rather than merely being influenced and nurtured by receiving information from different sources. Further, our results showed that the generative and protester values of using second-hand P2P platforms resulted in stronger spillover effects onto sustainable consumption behavior in comparison with the recreational and societal benefits values. Therefore, consumers' sustainable consumption behavior is motivated more by their commitment towards promoting the well-being of future generations (Schallehn et al., 2019) and by protesting against environmentally unfriendly consumption and retailing practices (Guiot and Roux, 2010).

Third, we contribute to sharing economy platforms literature (Eckhardt et al., 2019) by demonstrating that altruistic-related values of using second-hand P2P platforms (i.e., sharing economy platforms) are positively associated with consumers' green consumption values and sustainable resale behavior, whereas egoistic-related values of using second-hand P2P platforms negatively predicted consumers' green consumption values and sustainable resale behavior. Intuitively, a positive value (*consumption value* in this study), as opposed to a negative value, should result in a positive effect (e.g., Birch et al., 2018; Sreen et al., 2021; Tandon et al., 2021; Talwar et al., 2020). However, the current research challenges such conventional wisdom by empirically showing that egoistic-related values (i.e., a positive value) for using second-hand P2P platforms have resulted in negative consequences among ethical consumers. The reason given is that egoistic-related values focus on ethical consumers' self-centered benefits (Yadav, 2016) that preponderate over the consumers' tendency to display their concern about the well-being of the environment and society by their ethical acts and behavior. Similarly, to the explanation of possible selves (Tan et al., 2019), due to the situational factors that vary across different motivational factors, consumers may switch from an ethically oriented self (e.g., pro-environmental) to a financially focused self while participating in reselling activities on a second-hand P2P platform. In this regard, our findings further support the fact that ethical consumers may sometimes manifest environmentally unfriendly consumption behavior for temporary, self-centered benefits that are inconsistent with their values (Schwartz, 1973).

Fourth, our study contributes to gender literature related to the research on second-hand P2P platforms (e.g., Worsley et al., 2013; Ye et al., 2019). In line with previous studies (Lee and Kim, 2019; Northey and Brodie, 2020; Sands et al., 2020; Vehmas et al., 2018; Yan et al., 2015), our findings show that gender moderates the relationship between the consumption value of using second-hand P2P platforms and green consumption values, which confirms that female consumers are more sensitive towards environmental impacts when engaging in the sharing economy. Importantly, our study provides an alternate explanation for the insignificant moderating effect of gender found in the online food delivery research of Kaur et al. (2021). As shown in our study, the moderating role of gender is found in the association between the context-specific consumption values and consumers' green consumption values rather than in the relationship between the context-specific consumption values and consumer choices and behaviors. Moreover, we found that egoistic-related values have also resulted in a greater level of negative impacts on female consumers' green consumption values and their sustainable resale behavior. This is an important finding as it indicates that female (vs. male) consumers experience a higher degree of positive and negative valences in their responses to green consumption and sustainable resale behavior. As such, this is the first study that demonstrates how female consumers may amplify a positive effect on sustainable behavior but they may also have

¹ A post-analysis of the field data shows that the way in which participants evaluated themselves as ethical consumers is positively and significantly correlated with their egoistic value of using P2P flea market platforms ($r_{\text{economic motive}} = .05, p = .023$; $r_{\text{practical motive}} = .27, p < .001$), consumers' green consumption values ($r = .68, p < .001$), and sustainable resale behavior ($r = .20, p < .001$), which highlighted the importance of understanding how a spillover effect (rather than a correlation effect) may result in a negative impact on ethical consumers' intention-behavior gap.

a higher level of unwillingness to engage in sustainable behavior, which has not been investigated in previous studies (Kaur et al., 2021; Worsley et al., 2013; Ye et al., 2019).

8. Managerial implications

Various industries of today feature sharing economy applications and business models that complement, substitute, and sometimes even disrupt traditional business logic. Second-hand P2P platforms feature in an expanding area of the sharing economy that provides versatile opportunities both for consumers to diversify their consumption practices and for companies to leverage extended product life cycles for sustainable branding. In this regard, the second-hand P2P platforms comprise integrative re-commerce marketplaces not only between user and seller consumers but also between consumers and companies presented by their brands. The implications of the study results for the managers of second-hand P2P platforms and brand companies, as well as reasonably related to the metaverse.

Given the booming of second-hand P2P online platforms, various types of focused platform exist that fit different types of budgets, tastes, and product categories. The nuanced analysis presented in the study provides insights for the values-based segmentation of both selling and buying individual consumers and for crafting appealing arguments that support a positive platform image for both types of consumer. Based on identifying values beyond resale value and purchase value provides means for grouping sellers and buyers into different segments and crafting functionalities and meanings that support creating and capturing different types of value. For example, regarding how to support buyer and seller consumers in order to create and capture functional value, the seller monetizes his or her redundant consumables and the buyer finds a practical way to acquire the consumables in an inexpensive way. Guiding managerial principles should focus on issues such as what type of platform design and brand positioning would support such an economic/practical value-centric exchange and how to build the brand positioning of an easy-use platform that effectively matches needs with solutions. Given the increasing competition on second-hand markets, social and emotional values comprise opportunities for in-depth meaning making for consumers and means for segmentation and branding for competitive positioning. Respectively, a managerial question would be “Do platform and brand positioning attributes conflict with the social and emotional values sought by buyers and sellers?” For example, to what extent should one highlight and build on positioning the “pre-owned” or “pre-loved” dimension in order to link the consumer to a narrative in which the product links different types of owners and users in order to form a more sustainable and meaningful whole. This type of values-based approach would guide managers to go beyond demographics and tap into the elements that operate beyond the actual buying and selling behaviors. To leverage such effects, managers of the second-hand P2P platforms could initiate an online community that supports product-generative value (e.g., innovative uses for unused items) and pro-environmental value (created via a protest, e.g., the community supports the environment by reducing the demand for the new goods market and over-consumption). An accumulated and recognizable user identity could be created for those buyers and resellers who fulfill generative and pro-environmental values. That is, for each listed item on the second-hand P2P platforms, the reseller could provide further justifications for being categorized as holding those values; at the same time, the given justifications have to be verified by an authentic buyer. To further support this online community, free advertising vouchers from the second-hand P2P platforms could be given as rewards to those users who have met a certain level of recognition. Given the increasing popularity of P2P platforms and second-hand market buying and selling, the magnitude of opportunities for P2P platform companies are widening and such values-based segmentation and branding can be assumed to be a critical element in competition instead of simple commerce with high volumes between versatile buyers and sellers mixed

together.

For brand companies, the second-hand marketplace comprises a less controlled entity in terms of the condition or price of the products and their descriptions. Such a wild market can be a threat for a brand in exemplifying poor product quality, short-product life cycles, and low consumer valuation, which then create an uncontrolled identity for the company-designed brand identity in the primary markets. Furthermore, P2P platforms provide opportunities to demonstrate durability and high second-hand value, and also the opportunity to be a venue for getting detailed consumer insights into consumer-brand interaction and for boosting authentic brand discussions that feed the brand identity in the primary market. As the second-hand market is largely out of the control of the brand companies, the role of a P2P platform accentuates moderating consumer-brand interactions. Moreover, a second-hand P2P platform possesses consumer data that is potentially interesting and usable for brand companies in relation to understanding different purposes, situations, and meanings that are related to using and owning the products, which can then help the companies to develop their brands. This linchpin role of a P2P platform at the intersection of consumers and brands proposes that platform managers develop different types of services for brand companies to use in the primary markets, as well as services to build presence and cover the whole loop of the product, from its manufacture to disposal. The second-hand P2P platform may occupy a rather large role in the loop and companies need to transform from liner into circular business logic, according to which, the resale market and final disposal of the product should be accommodated into the product life cycle management agenda. In such a transition, second-hand P2P platforms may occupy a minor role of an information producer that assists in such a transformation or they may have a larger, integrative role in the reuse ecosystem and collaborate tightly with brand companies. For such opportunities, relevant managerial issues would be the level of big data management capabilities of the platform and the opportunities for such data to be refined into intelligence for different industries and companies. In line with this thinking, the consumer side of the platform needs to be systematically managed in order to attain high-quality data on the critical mass of relevant consumer segments and the product categories and brands in question.

9. Conclusion, limitations, and future research areas

Our proposed conceptual model was grounded in the theoretical framework of the TCV and tested through the large-scale field data of 3256 actual consumers from a Nordic second-hand P2P platform brand. Regarding the direct effects, the statistical analysis confirmed support for all our hypotheses (H1 to H7). Regarding the mediation effect of consumers' green consumption values, all positive and negative indirect effects were supported (H8a to H8f). Regarding the moderation effect of gender, H9a, H9b, H9d, H9e, and H9f were supported, but not H9c. Lastly, among the control variables, only age had a significant negative effect on sustainable resale behaviors whereas there were statistically non-significant effects due to educational background and annual disposable income level. The study thus contributes to the growing literature by advancing the growing research on the TCV, green consumption, and sustainable behavior (e.g., Panda et al., 2020; Talwar et al., 2021; Tandon et al., 2021; White et al., 2019).

In terms of theoretical limitations, this study only focuses on a uni-dimensional set of consumer's ethical values—green consumption values in regard to sustainable resale behavior—without investigating this from the individual level of psychological values in regard to sustainable consumption, such as prevention-type values versus promotion-type values (Miniero et al., 2014) or self-transcendent values versus self-enhanced values (Costa Pinto et al., 2014). A future study could integrate these constructs in a moderated mediation model in order to elucidate further insight into the effect with other possible sustainable resale behavior related to unused items. In terms of method, we used a large-scale field survey method to investigate the effects of six values for

using a second-hand P2P platform on consumers' green consumption values and sustainable resale behavior. Such a cross-sectional study involves inherent limitations; it does not capture the causal effect and there is no evidence of a temporal relationship between predictors and outcomes (Levin, 2006). A field experiment could be conducted in order to replicate the effects in other domains, for example, in the context of a Facebook resale group and/or a physical flea market. Further, future research on vector autoregressive modeling that incorporates users' profile, attitudinal data, and green consumption behavior, and a firm's second-hand market performance is needed in order to identify how sustainable resale behavior can be used as a part of metrics-based quantitative research. Lastly, this study only focuses on a second-hand P2P platform, which is C2C oriented, rather than focusing on B2C in the circular economy. Future research that includes seller/manufacturer refurbished products—such as Swappie, which focuses on refurbishing iPhones in European countries—is needed in order to provide a better understanding of how the life cycle of an unused item could be further accepted among ethical consumers in the circular economy.

10. Author statement

Teck Ming Tan: Conceptualization, Methodology, Data Analysis, Writing-Original Draft Preparation

Hannu Makkonen: Conceptualization, Data Collection, Writing-Original Draft Preparation

Puneet Kaur: Data analysis

Jari Salo: Conceptualization, Writing-Original Draft Preparation

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12. Informed consent

Informed consent was obtained from all individual participants included in the study.

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Declaration of Competing Interest

All authors declare that they have no conflict of interest.

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