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Resistance to the sharing economy: Why some consumers and providers do not participate in P2P sharing

Tin Huynh [a,b,*], Sebastian Gurtner [a]

[a] Bern University of Applied Sciences, Business School, Institute for Innovation & Strategic Entrepreneurship, Brückenstrasse 73, 3005, Bern, Switzerland
[b] École Polytechnique Fédérale de Lausanne, College of Management of Technology, Station 5, 1015, Lausanne, Switzerland

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ABSTRACT

This study examines the barriers that hinder individuals form participating in the sharing economy. It analyzes whether non-users' unfavorable perceptions of peer-to-peer (P2P) sharing (active resistance barriers), or their aversion to change and satisfaction with the status quo (passive resistance barriers) cause them to reject P2P sharing. By conducting separate structural equation modeling (SEM) analyses on a sample of 233 non-consumers and 240 non-providers, the study differentiates between resistance to P2P consuming and P2P providing. The findings reveal that non-users' resistance to P2P sharing is primarily driven by active resistance barriers. Non-consumers reject P2P consuming as a result of the usage barrier, value barrier, trust barrier and economic risks, whereas non-providers reject P2P providing due to the usage barrier and functional risks. This research contributes to the sharing economy literature by shedding light on the underexplored topic of resistance to P2P sharing, particularly emphasizing the overlooked role of P2P providing. It shows that P2P sharing possesses distinct characteristics resulting in unique resistance patterns that differ from those observed in B2C sharing. Furthermore, the study extends the innovation resistance literature by applying both active and passive resistance frameworks in the context of a service innovation, broadening the scope beyond the commonly studied active resistance to product innovations.

1. Introduction

The concept of sharing most likely constitutes the earliest form of economic exchange in hominid societies (Hellwig et al., 2015). Although sharing has been around for ages, it has recently experienced further advancements in reach and scale, and thus growing attention of practitioners and academics alike. More precisely, the development of information and communications technologies has resulted in the emergence of sharing platforms, that connect supply and demand on a broad level, allowing strangers to consume and provide objects outside of their inner circles. These platforms form the basis of the *sharing economy*, commonly defined as "consumers granting each other temporary access to under-utilized physical assets, possibly for money" (Frenken and Schor, 2017, pp. 4–5).

The sharing economy has been a growing consumer trend over the past decade and continues to be so (Mont et al., 2020). The ongoing expansion is reflected in its economic impacts, estimated at 373 billion USD global annual revenues in 2019 and predicted to reach 1.5 trillion USD by 2025 (McWilliams, 2020). In addition, the sharing economy is consistently praised for its ecological potentials (Curtis and Mont, 2020; Laukkanen and Tura, 2020), as it is said to reduce new product purchases and offset the harmful effects from primary production.

Yet, despite the significant growth potential, many platform operators were forced to realize that supply and demand for their offerings do not meet initial expectations (Bielefeldt et al., 2016). The market-leading peer-to-peer (P2P) accommodation platform in India Stayzilla, for example, terminated operations in 2017 for a lack of both P2P consumer and provider engagement (Hazée et al., 2020). The sharing platforms Tutorspree (P2P tutoring) and Blackjet (P2P travelling) also withdrew from their respective markets for the same reasons after only two years in operation (Hazée et al., 2020). Given that new products and services often require consumers to accept changes in price, performance, or design, or entail customers to break with established norms and habits, it should be no surprise that failure rates for P2P sharing are high (Claudy et al., 2015). In fact, P2P sharing users only make up a small minority of consumers. In the US for instance,

* Corresponding author. Bern University of Applied Sciences, Business School, Institute for Innovation & Strategic Entrepreneurship, Brückenstrasse 73, 3005, Bern, Switzerland.
E-mail address: tin.huynh@bfh.ch (T. Huynh).

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sharing users account for only 14% of the population (Statista, 2018). In order to advance diffusion, it is thus necessary to understand why non-users reject P2P sharing.

Although the literature on resistance to the sharing economy is scarce (Spindeldreher et al., 2019), early studies have identified several barriers to P2P sharing, including effort expectancy, process risk, and privacy concerns (Hawlitschek et al., 2018; Schaffner et al., 2017; Teubner and Flath, 2019). Yet, despite these initial insights, at least two questions remain unanswered. The first one refers to the difference between resistance to P2P consuming and P2P providing. Scholars often regard and treat P2P sharing as a single, inseparable act, even though it consists of two fundamentally different activities. Particularly the P2P providing perspective has been overlooked by previous research (Khalek and Chakraborty, 2023; Milanova and Maas, 2017), which is surprising given that P2P providers make up the supply side on P2P platforms. As P2P consuming and providing differ in their associated risks and hazards (Andreassen et al., 2018), their respective barriers are also expected to vary. This distinction has thus far only been addressed by Hazée et al. (2020), who find various differences between consumer and provider resistance in their qualitative analysis.

The second question pertains to the impact of *passive resistance* on resistance to P2P sharing. Unlike *active resistance* which results from an unfavorable evaluation of the innovation, passive resistance arises prior to innovation evaluation and stems from a general aversion to change (adopter-specific barriers) or satisfaction with the status quo (situation-specific barriers) (Heidenreich and Handrich, 2015). Prior studies on resistance to P2P sharing have exclusively examined active (i.e., functional, and psychological barriers), but not passive adoption barriers. This is surprising, as passive resistance is expected to be a key factor in resistance to P2P sharing, due to the drastic changes in behavior when transitioning from ownership-based consumption to sharing.

In light of these research gaps, this study contributes the literature in the following ways. First, it addresses the underexplored topic of resistance to P2P sharing in the sustainability literature (Spindeldreher et al., 2019). While previous studies have predominantly focused on consumer behavior in the context of business-to-consumer (B2C) sharing or product-service systems (e.g., D'Agostin et al., 2020; Hazée et al., 2017; Hazée et al., 2019), consumer behavior and resistance specifically related to P2P or consumer-to consumer (C2C) sharing, also known as "true sharing" (Belk, 2014, p. 14), has received far less attention. Although B2C and P2P platforms share the idea of accessing products rather than buying them, there are significant differences. In P2P sharing, providers are private entities, which not only makes the sharing experiences more personal and intimate, but also less reliable compared to traditional B2C sharing models. This increased personalization in P2P sharing introduces higher risks, which can hinder its adoption compared to more established forms of B2C sharing. By addressing this research gap, the study provides valuable insights into the dynamics of resistance within the P2P sharing context.

Second, this study adds to the sharing economy literature by establishing a preliminary understanding of the differences between resistance to P2P consuming and P2P providing. This is achieved by analyzing P2P sharing resistance using two separate and distinct samples, a sample non-consumer (n = 233) and non-providers (n = 240). By differentiating between these two dimensions of P2P sharing, the study offers insights into the unique resistance patterns and barriers within each group. The insights help better understand how individuals perceive and resist participation in different roles within the sharing economy.

Third, this study goes beyond the traditional focus on active resistance barriers (Heidenreich and Handrich, 2015), and incorporates passive resistance frameworks to provide a more comprehensive understanding of resistance to P2P sharing. As such it answers the question whether individuals refrain from P2P sharing, because they perceive it as too risky and unfavorable (active resistance), or because they are generally averse to change and satisfied with the status quo (passive resistance). By acknowledging the multifaceted nature of resistance, this study offers a more nuanced and complete picture of the factors influencing resistance to P2P sharing to the innovation resistance literature.

In the end, academics and practitioners agree that the long-term success of sharing platforms, and viability of P2P sharing as a whole, largely depend on consumers' ability to overcome adoption barriers and exhibit positive adoption behavior (Bielefeldt et al., 2016; Hamari et al., 2016). In that regard, the findings of this study help sharing platforms better understand how to modify their offerings to meet consumer needs and reduce resistance. Moreover, they provide valuable insights to regulators for developing measures and policies to mitigate resistance and promote P2P sharing.

2. Theoretical background

2.1. Adoption of the sharing economy

Promoting the use of an existing innovation requires understanding why current users adopt and why non-users do not adopt the innovation. In the context of this study, the term *users* refers to individuals who actively utilize P2P sharing platforms to engage in either *P2P consuming*, *P2P providing*, or both. P2P consuming denotes the practices of borrowing a product or utilizing a service from a fellow peer. For example, individuals may borrow tools, camping equipment, or seek services such as ride-sharing or temporary accommodations offered by other private individuals on these platforms. P2P providing refers to lending out a product or offering a service to a fellow peer. This includes activities like offering rides (e.g., Blablacar), providing accommodations (e.g., Couchsurfing), or sharing various items with others (e.g., Sharely). Conversely, the term *non-users* pertains to those who abstain from utilizing P2P sharing platforms for both P2P consuming and P2P providing activities.

Much research on the sharing economy has in fact revolved around determining why consumers engage in P2P sharing. The general consensus in the literature is that P2P sharing is mainly driven by economic, social, and environmental motives (Hawlitschek et al., 2018; Khalek and Chakraborty, 2023; Minami et al., 2021). Platform operators are mostly aware of these factors and apply that knowledge to promote their services. Sharely, for example, rewards new users with an initial credit of 10 CHF. Hygglo states on its website that P2P sharing is "Good for the Environment" (Hygglo, 2021, para. 8), whereas Pumpipumpe encourages sharing for a "lively neighborhood" (Pumpipumpe, 2021, para. 1). However, despite these efforts, most platforms only arrive at moderate adoption levels (Bielefeldt et al., 2016). One possible explanation is that these measures, while successful with existing users, are less effective when targeted at current non-users. This is because, the reasons for innovation adoption are qualitatively different from the reasons against adoption (Antioco and Kleijnen, 2010), meaning that the absence of sharing drivers does not necessarily explain the absence of sharing adoption. Therefore, understanding why consumers adopt an innovation does not imply understanding why they reject it. In order to do so, it is necessary to clarify why people typically reject innovations by taking a closer look at the general concept of and theory behind innovation resistance.

2.2. Consumer resistance to innovations

Innovations entail change for the consumer and resistance to change is a normal and rational consumer response (Ram, 1987). After all, not all change is good and seeking change for its own sake (pro-innovation bias) is as flawed as defaulting to opposition (status-quo bias). That being said, innovation resistance can be thought of a special type of resistance to change (Ram, 1987). Accordingly, for innovation resistance to occur, consumers must perceive change as a consequence of adoption. The rationale behind consumers' reluctance to change can be found in a subclass of psychological theory, known as consistency

theories (e.g., Heider's balance theory). By and large, these theories posit that individuals have a strong desire to maintain balance among their cognitions. Any change imposed on individuals can potentially offset this equilibrium. Individuals are thus more inclined to resist change and reject an innovation than to go through a disturbing process of readjustment (Ram, 1987).

Sheth (1981) additionally argues that innovation resistance is not only a function of perceived changes, but also of perceived risks. Prospect theory by Kahneman and Tversky (1979) provides an insight into why perceived risks or losses are major determinants of resistance. According to prospect theory individuals value gains and losses differently, seeking to avoid losses when there is a prospect of a sure gain. The underlying reason is that losses are perceived as psychologically more severe than equivalent gains. In short, the more risks an innovation carries, the less likely it is going to be adopted.

Building on the notions of perceived changes and perceived risks, Sheth (1981) evaluates innovations in terms of their likelihood of being rejected by consumers. In doing so the author uses the two dimensions *habit* (i.e., extent of perceived changes on consumers' habits) and *risk* (i.e., extent of perceived risks), to categorize innovations into four innovation types (see Fig. 2). So-called *habit resistance innovations* entail major changes in consumers' existing habits and practices but entail few risks (e.g., reusable produce bags). *Risk resistance innovations* by contrast are primarily rejected due to consumers' high risks perceptions, despite not affecting existing habits (e.g., COVID vaccines). No *resistance innovations* contain neither risk nor affect consumers' habits (e.g., LED light) and are most favorable for adoption (Ram, 1989; Sheth, 1981). *Dual resistance innovations* on the other hand are both high in implied risks and habit impairment (e.g., education and nutrition). As such, they have the highest prospect of failure.

2.3. Adoption barriers

Even though resistance most often leads to the rejection of the innovation in question, it does not mean that rejection must always follow resistance. In fact, innovation resistance is not the opposite of innovation adoption (Ram, 1987), but a response by the consumer which impedes adoption, rather than enforces rejection. As such it does not always explain innovation rejection. Hence, in order to understand why or for what exact reasons consumers do not adopt an innovation, it is necessary to take a closer look at the more immediate factors that actually prevent consumers from adopting the innovation i.e., *adoption barriers* (Bielefeldt et al., 2016).

Adoption barriers are highly effective at explaining innovation rejection, as they closely reflect the perceived risks and changes that cause both active and passive forms of innovation resistance. Barriers associated with passive resistance (i.e., resistance prior to innovation evaluation) are so-called adopter-specific barriers (i.e., general predisposition to resist change) and situation-specific barriers (i.e., overall satisfaction with the status quo) (Talke and Heidenreich, 2014). Barriers related to active resistance (i.e., resistance from an unfavorable evaluation of the innovation) are the functional and psychological barrier (Ram and Sheth, 1989). Functional barriers are composed of the usage barrier (i.e. innovation interferes with existing habits and practices), value barrier (i.e. innovation does not present an improved price-performance ratio) and trust barrier (i.e., uncertainty about reliability of peers), economic risk (i.e. uncertainty about costs) and functional risk (i.e. uncertainty about performance) (Kleijnen et al., 2009; Ram and Sheth, 1989). Psychological barriers by contrast are divided into the tradition barrier (i.e. innovation conflicts with societal norms or well-established traditions) and image barrier (i.e. innovation is associated with negative image perceptions) (Ram and Sheth, 1989). Table 1 provides an overview of the previously mentioned concepts and their respective definitions.

Notably, that all aforementioned barriers represent perceived obstacles to innovation adoption, as their perception varies among individuals. In fact, these barriers provide a more granular representation of the two primary dimensions of perceived changes and perceived risk (Ram and Sheth, 1989) which underlie individuals' resistance to innovations. Barriers associated with the perceived changes of innovation adoption are the adopter-specific and situation-specific barriers (passive resistance barriers), as well as the usage, and value, image, and tradition barriers (active resistance barriers). On the other hand, barriers reflecting the different risk perceptions of innovation adoption encompass economic risk, functional risk, and the trust barrier (active resistance barriers). To gain a more precise understanding of the rationale behind individuals' rejection decisions, it is necessary to further specify the overarching dimensions of perceived changes and risks into distinct and more refined adoption barriers. This refinement will allow the derivation of specific measures to effectively mitigate consumer resistance.

Moreover, it is worth noting that adoption barriers have been extensively applied and validated across various types of product innovations. Yet their application in the context of service innovations has been limited (Heidenreich and Kraemer, 2016; Laukkanen, 2016). Given that service innovations possess unique characteristics and interact differently with consumers and providers, further research is necessary to explore the relevance of these barriers in the context of service-oriented settings. Understanding the specific barriers to service innovations will help to develop tailored strategies that facilitate the adoption of service innovations and elevate overall user experience.

Table 1
Theoretical concepts.

Theoretical Concept	Definition	Reference
Innovation Resistance	"resistance… to changes imposed by innovations"	Ram (1987, p. 4)
Passive Resistance	"resistance… prior to new product evaluation"	Reinhardt et al. (2019, p. 141)
Active Resistance	"resistance… after an unfavorable new product evaluation"	Reinhardt et al. (2019, p. 141)
Rejection	"the choice of the consumer not to adopt an innovation"	Gurtner (2014, p. 4)
Adoption Barriers	"the factors that hinder people from completing the innovation adoption"	Bielefeldt et al. (2016, p. 6)
Adopter-Specific Barriers	"general inclination to resist change"	adapted from Reinhardt et al. (2019)
Situation-Specific Barriers	"satisfaction with the status quo"	adapted from Reinhardt et al. (2019)
Usage Barrier	"innovation interferes with existing habits and practices"	adapted from Reinhardt et al. (2019)
Value Barrier	"innovation does not offer a superior price-performance ratio"	Reinhardt et al. (2019, p. 141)
Trust Barrier	"uncertainty about the reliability of peers"	adapted from Möhlmann (2016)
Economic Risk	"uncertainty about… costs"	Reinhardt et al. (2019, p. 141)
Functional Risk	"innovation may not function as expected"	Reinhardt et al. (2019, p. 141)
Tradition Barrier	"innovation conflicts with societal norms or well-established traditions"	adapted from Reinhardt et al. (2019)
Image Barrier	"innovation is associated with negative image perceptions"	adapted from Reinhardt et al. (2019)

2.4. Consumer resistance and barriers to sharing economy adoption

Innovation resistance to sharing has been studied across various contexts, including car sharing (Bielefeldt et al., 2016; Lamberton and Rose, 2012), bike sharing (Akbar and Hoffmann, 2018), clothes sharing (Armstrong et al., 2015, 2016), furniture sharing (Edbring et al., 2016),

and most prominently accommodation sharing (e.g., Mahadevan, 2018; Mao and Lyu, 2017; So et al., 2018; Tussyadiah and Pesonen, 2018; Yi et al., 2020). The majority of these studies primarily examine consumer resistance to business-to-consumer (B2C) platforms. These platforms serve as commercial service providers that own and lease shared objects to consumers in exchange for a fee. Prominent examples include Lime, an e-scooter sharing service, Citi Bike, a bike sharing system in New York, or Share Now, a carsharing service jointly operated by Daimler and BMW. These B2C services can be classified as product-service systems (PSS), defined as "products and services capable of jointly fulfilling a user's need … provided either by a single company or by an alliance of companies" (Goedkoop, 1999, p. 18). PSS align closely with the concept of access-based services (ABS), which are "service innovations that provide consumers with temporary access to physical objects in return for access fees" (Hazée et al., 2019, p. 256). In both PPS and ABS the sharing of property occurs "from the company that owns the object of consumption rather than through sharing of personal property among consumers" (Bardhi and Eckhardt, 2012, pp. 882–883). In this sense, PSS and ABS differ from the concept of the sharing economy, defined as "consumers granting each other temporary access to under-utilized physical assets" (Frenken and Schor, 2017, pp. 4–5), in that PSS and ABS are based on B2C interactions involving commercial entities as providers, whereas the sharing economy is built on consumer-to-consumer (C2C) or P2P interactions among consumers (Belk, 2007). As such the sharing economy closely resembles the idea of collaborative consumption (CC), which describe systems enabling "consumers to both obtain and provide … resources or services through direct interaction with other consumers or through a mediator" (Ertz et al., 2016, p. 1).

Codagnone and Martens (2016) employ a two-by-two matrix (Fig. 1) to visually depict the differences between the different forms of sharing. The first dimension (horizontal axis) distinguishes between B2C and P2P interactions, the second dimension (vertical axis) differentiates between for-profit and not-for-profit activities. Quadrant (1) captures "true" sharing activities such as the collective use of tools in a residential community, carpooling to work, or not-for-profit neighborhood-type sharing platforms like Pumpipumpe in Europe. Quadrant (2) encompasses commercial P2P sharing platforms operating under a triadic business model involving a P2P-provider, -consumer, and mediator (i.e., the platform) which typically charges a commission for the sharing transaction. Prominent examples include Fat Llama in the UK, Hygglo in Sweden, and Sharely in Switzerland. Quadrant (3) reflects the concepts of PPS and ABS. Lastly, quadrant (4) marks the "empty set", as businesses are by definition profit oriented. The focal point of this study, the sharing economy as defined by Frenken and Schor (2017), is represented in both quadrant (1) and (2).

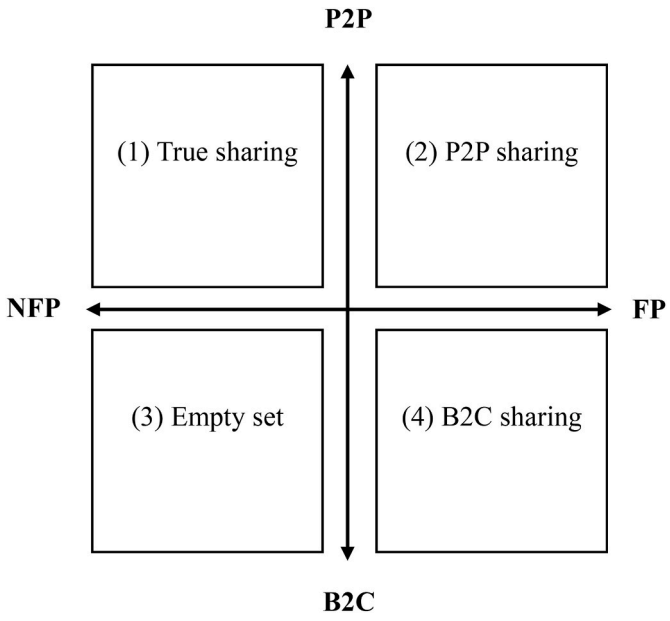

Fig. 1. Classification matrix.

The question of whether a platform operates under a B2C or P2P sharing model has shown to affect various dimensions relevant to consumers, one of which is the perception of functional value. In B2C sharing contexts, consumers are primarily motivated by cost savings, whereas for P2P sharing adoption, sustainability-related aspects play a more prominent role (Hartl et al., 2018). This observation corresponds to the proposition made by Wilhelms et al. (2017) that findings within the B2C sharing context may not fully apply to P2P services. Therefore, current research highlights the importance of distinguishing between P2P and B2C sharing when studying consumer behavior (Habibi et al., 2017).

Another key implication of the difference B2C and P2P sharing platforms is the need for the latter to attract a sufficient number of users to serve as product or service providers. Unlike B2C platforms, which typically own the shared assets, P2P sharing platforms rely on the consumer community to offer their personal resources for sharing. This underscores the importance of effectively incentivizing and engaging both sides of the P2P sharing ecosystem to ensure a wide range of available resources for sharing. Moreover, P2P providers are crucial for building trust and fostering a sense of community to contribute to a social sharing experience (Hansmann and Binder, 2023). This social experience, next to economic and environmental motives, has shown to be a key motive for the adoption of sharing (Barnes and Mattsson, 2017; Bucher et al., 2016; Hawlitschek et al., 2018; Oyedele and Simpson, 2018; Schaffner et al., 2017). Therefore, the success of P2P platforms hinges on their ability to attract and engage P2P providers and consumers equally.

In sum, due to the significant differences between the P2P and B2C sharing, it is crucial to study resistance to P2P sharing separately from resistance to PSS and ABS. Moreover, the fact that P2P sharing platforms equally depend on P2P providers and P2P consumers emphasizes the significance of P2P providers as users and warrants the study of resistance to P2P consuming and P2P providing as distinct topics.

The rising popularity and economic growth of PSS and ABS have led to an increase in research on the adoption and resistance to PSS and ABS over the past decade. That being said, there is still a lack of research specifically on acceptance and resistance to P2P sharing (Spindeldreher et al., 2019). Although various studies have explored acceptance and resistance with regards to short-term accommodation platforms like Airbnb (e.g., Mahadevan, 2018; Mao and Lyu, 2017; So et al., 2018; Tussyadiah and Pesonen, 2018; Yi et al., 2020), there is no consensus on whether Airbnb qualifies as a P2P or B2C platform. However, there is considerable evidence pointing to the commercialization of Airbnb, as a growing majority of properties are rented out on a frequent basis, while casual listings account for a smaller and decreasing percentage (Cansoy and Schor, 2023). For this reason, this study excludes short-term accommodation platforms from its analysis.

Prior research has examined resistance to P2P consuming both through qualitative (Catulli et al., 2017; Hazée et al., 2017, 2019; Spindeldreher et al., 2018, 2019), and quantitative approaches. The body of quantitative research has substantiated several of the findings from the qualitative studies and established the following barriers to P2P consuming: effort expectancy (Hawlitschek et al., 2018), process risk (Hawlitschek et al., 2018), privacy concerns (Teubner and Flath, 2019), prestige of ownership (Moeller and Wittkowski, 2010), and independence of ownership (Hawlitschek et al., 2018).

Although these findings provide insights into some of the immediate barriers to P2P consuming, they do not fully capture how non-consumers respond to the fundamental concerns of innovation resistance that are grounded in the theory underlying innovation resistance (e.g., prospect theory or balance theory). For instance, it is uncertain

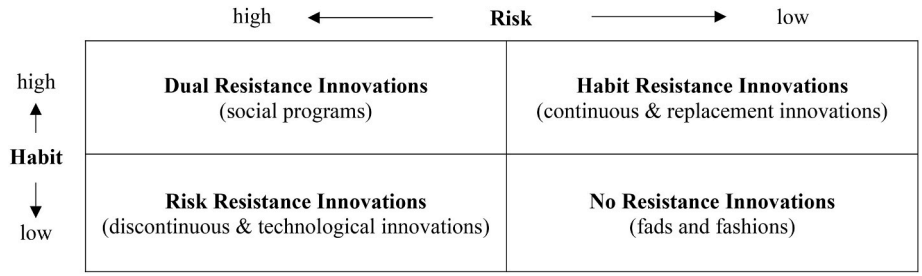

Fig. 2. A Typology of Innovation Resistance
Note. Adapted from "Psychology of Innovation Resistance: The Less Developed Concept in Diffusion Research" by J. Sheth (1981), p. 4.

whether non-consumers generally perceive P2P consuming as valuable (value barrier), compatible with their habits (usage barrier) and traditions (tradition barrier), or consistent with their self-image (image barrier). To develop a comprehensive understanding of resistance to P2P consuming, it is thus crucial to explore the fundamental and established factors that underlie consumers' rejection decisions. Moreover, the aforementioned barriers prestige of ownership and independence of ownership do not speak to the inhibiting characteristics of P2P consuming, but rather to the benefits of alternatives, leaving unclear whether non-consumers view the prestige and inflexibility of P2P consuming itself, or the lack thereof, as barriers. In conclusion, additional research is needed to capture non-consumers' concerns about the inhibiting characteristics of P2P consuming.

Resistance to P2P providing has received much less attention, with the study by Hazée et al. (2020), being the only study to explore resistance to P2P providing (together with resistance to P2P consuming) via a qualitative approach. The authors applied the well-established framework of active resistance to categorize and make sense of their results from the qualitative analyses. Their findings reveal that functional barriers (complexity, value, and risk) and psychological barriers (compatibility, contamination, image, and responsibility) may hinder the adoption of both P2P consuming and providing, though with differences across the various barriers. For instance, non-consumer customers express concerns about the reliability of P2P providers and the functionality of their assets, since the latter are non-professionals, while non-providers fear financial losses and perceive P2P consumers as unreliable. In terms of the value barrier, non-consumers express concerns about the commission charged by platforms, while non-providers are uncertain about the economic value as they cannot reliably predict future earnings.

Given the limited research on resistance to P2P providing and the qualitative nature of the existing study, further investigation employing quantitative analysis is needed to validate and expand upon existing findings. Furthermore, to gain a comprehensive understanding of resistance to both P2P consuming and P2P providing, it is necessary to examine these topics from the perspectives of both active and passive resistance frameworks. The findings will complement the currently fragmented picture of resistance to P2P sharing by indicating whether the innovation itself and its inherent characteristics, or if non-users' satisfaction with the status quo and general resistance to change are the primary drivers of resistance.

3. Hypotheses

The following part further elaborates on the distinct characteristics of the various active and passive adoption barriers, examining how these barriers may prompt resistance behavior towards both P2P consuming and P2P providing. Each section concludes with a set of hypotheses that articulate the potential implications of these barriers on non-sharers' inclination to reject P2P consuming and P2P providing. The initial sections focus on passive adoption barriers, namely adopter-specific barriers, and situation-specific barriers. Subsequently, the sections examine active resistance barriers, encompassing the usage barrier, value barrier, trust barrier, economic risk, functional risk, tradition barrier, and image barrier. All of these barriers play distinct roles in impeding individuals' participation in P2P consuming and P2P providing.

3.1. Adopter-specific barriers

Adopter-specific barriers consist of a person's (i) reluctance to lose control (i.e., fear of loss of control over life situations), (ii) cognitive rigidity (i.e., unwillingness to consider alternatives), (iii) lack of psychological resilience (i.e., limited ability to cope with changes), (iv) intolerance to adjustment (i.e., tendency to avoid high effort in the short-term), (v) preference for low levels of stimulation (i.e., low need for novelty), and (vi) reluctance to give up old habits (Oreg, 2003; Talke and Heidenreich, 2014). There are several reasons why individuals with pronounced adopter-specific barriers might refrain from innovative services such as P2P sharing. For instance, P2P sharing consumers often face performance uncertainty, as P2P shared products and services do not undergo (strict) quality controls compared to new or B2C shared products and services (e.g., commercial mobility and housing services). Providers, by contrast, hand over much control of their belongings when lending out their objects. Accordingly, consumers and providers who are reluctant to lose control are less likely to consider and fully evaluate P2P sharing. Moreover, the fact that most P2P sharing platforms are still at an early stage and have yet to reach mainstream popularity does not encourage rigid consumers or individuals with low needs for stimulation to use them. Furthermore, individuals with low resilience capabilities might be strongly concerned about potential complications in P2P sharing, such as performance issues or fraud. They might thus not make the effort to learn about measures that platforms have implemented to mitigate such issues, e.g., built-in insurances and user ratings. Similarly, consumers with low tolerance for adjustment introduce are less likely to explore the benefits of P2P sharing, as they are deterred by the required steps to get started (e.g., app installation, identity verification, profile setup). Lastly, people who are disinclined to give up old habits are also less likely to consider P2P sharing as a solution or substitution to their tried and tested ways of consuming and providing products. In sum, *adopter-specific* barriers drive individuals' inclination to resist changes, making them less likely to evaluate both P2P consuming and P2P providing as viable options. Therefore, this study predicts.

Hypothesis 1a. Adopter-specific barriers positively affect the rejection of P2P consuming.

Hypothesis 1b. Adopter-specific barriers positively affect the rejection of P2P providing.

3.2. Situation-specific barriers

There are two *situation-specific barriers* driving passive innovation resistance (Talke and Heidenreich, 2014). The first one describes a person's preference for the prevailing situation, regardless of whether

changing it leads to higher utility or not (Falk et al., 2007; Talke and Heidenreich, 2014). This decision anomaly, also known as status quo-bias, can be explained by prospect theory which postulates that the disadvantages of leaving an existing situation are psychologically more severe than equivalent advantages from changing the situation. It is evident that P2P sharing brings about numerous disadvantages compared to traditional ways of consuming and providing products. For instance, P2P consumers must contend with availability issues, increased effort, and performance uncertainty. P2P providers by contrast must factor in potential damage or loss of their items, but also endure increased effort. All these inconveniences do not have to be considered when purchasing a product or lending it out to family and friends. Therefore, consumers who are loss averse are not easily persuaded by P2P sharing's benefits, and thus less likely to evaluate and adopt it. The second situation-specific barriers is the psychological attachment consumers have to their objects (Talke and Heidenreich, 2014). This often emotional attachment develops when consumers use to their products on a regular basis and grow accustomed to them (Bagozzi and Lee, 1999). Such consumers are less inclined to follow new product developments and switch to a better product, because they enjoy the certainty of knowing how their products work and the comfort of not having to acquire additional skills to use new products. This in turn also means that consumers who are accustomed to certain ways of consuming products and services are less likely to consider P2P sharing as an alternative form of consumption. On the other hand, providers who are attached to more traditional ways of disposing objects such as reselling them or giving them away are less willing share them on a platform. In short, individuals who are biased towards the status quo and personally attached to particular ways of consuming and disposing objects are more likely to overlook and disregard P2P consuming and providing as alternative options. Therefore, this study predicts.

Hypothesis 2a. Situation-specific barriers positively affect the rejection of P2P consuming.

Hypothesis 2b. Situation-specific barriers positively affect the rejection of P2P providing.

3.3. Usage barrier

Strong habits are the most powerful driver of consumers' resistance to change (Sheth, 1981). The stronger the habit linked to a behavior, the greater the resistance to the innovation associated affecting that behavior. The underlying reason can be found in various consistency theories, such Heider's balance theory, which ultimately claim that "human tendency is to strive for consistency and status quo rather than to continuously search for, and embrace new behaviors" (Sheth, 1981, p. 275). However, it is not only the strength of habit associated with the behavior, but also the quantity of affected acts within a behavioral stream that will determine the degree of resistance to the innovation in question (Sheth, 1981). For instance, replacing traditional product purchases or B2C rentals with P2P sharing not only affects the selection of products (i.e., used products and non-professional services), but also the process of acquiring the products or services (i.e., going to a stranger's home, interacting socially, returning the product etc.), as well as the use of the product (i.e., less care and psychological attachment). Furthermore, the habit of buying a product or alternatively renting it from family and friends has been the dominant practice and thus habit for most people. P2P sharing by contrast is still in its infancy, and in addition mostly only prevalent in urban environments. In sum, given that P2P consuming and providing drastically affect various behavioral acts, this study predicts.

Hypothesis 3a. The usage barrier positively affects the rejection of P2P consuming.

Hypothesis 3b. The usage barrier positively affects the rejection of P2P providing.

3.4. Value barrier

Consumers will not adopt an innovation, if it does not offer a better price-performance or price-effort ratio, i.e. more value, than existing alternatives (Ram and Sheth, 1989). That being said, willingness to pay and willingness to compromise on effort and performance usually vary across individuals, meaning that different consumers are willing to accept different price-performance and price-effort ratios. For instance, consumers with low willingness to pay and high willingness to compromise, e.g., students, are generally more willing to accept performance drawbacks or increased effort in return for a low price. Consumers with a high willingness to pay and a low willingness to compromise, by contrast, typically value performance reliability and low effort more than the economic or ecologic benefits of P2P sharing and are thus less likely to adopt it. Such consumers might for instance opt for a hotel instead of a privately rented Airbnb apartment or purchase a product online instead of borrowing it from a peer. They might also prefer giving away items to family and friends or reselling them, instead of sharing them on a platform. Prior research supports the notion that such ratios are major impediments to P2P sharing adoption. Disbelief in sufficient monetary returns (Hazée et al., 2020) and high effort expectancy (Hawlitschek et al., 2018) are both identified as key barriers to P2P sharing. In sum, consumers who consider P2P sharing's price or expected effort as high and its performance as low are expected to reject it. Therefore, this study predicts.

Hypothesis 4a. The value barrier positively affects the rejection of P2P consuming.

Hypothesis 4b. The value barrier positively affects the rejection of P2P providing.

3.5. Trust barrier

The question of trust is usually not a major issue when it comes to new product purchases. Accordingly, prior research has not established trust or the lack thereof as one of the main barriers to innovation adoption. The context of P2P sharing, however, differs from traditional settings in many ways. First, products and services are offered by non-professionals. This has implications on various dimensions, such as cleanliness when renting kitchen utensils, reliability when borrowing outdoor equipment, or safety when renting or sharing a stranger's car. Second, there is often no prior history between peers. This can be especially problematic when providing items. There is no guarantee, that objects are handled with care or privacy is respected when renting out apartments. Recent findings support the idea that trust or lack of it plays an important role in P2P sharing adoption (Hansmann and Binder, 2023; Köbis et al., 2021; Kozlenkova et al., 2021; Laurenti and Acuña, 2020). Bielefeldt et al. (2016) for example find that the perceived lack of trust negatively influences a person's attitude towards P2P sharing. On the other hand, studies on P2P sharing motivation show that consumers, who do trust each other are much more likely to adopt P2P sharing than those who do not (Mittendorf, 2018; Möhlmann, 2015b; Wu et al., 2017). In fact, trust is so important that it is even considered "the oil that lubricates the engine driving the sharing economy" (Moehlmann, 2019, para. 9). In sum, the particularities of P2P sharing, and recent findings both suggest that trust is an important barrier to both P2P consuming and providing. Hence, this study predicts.

Hypothesis 5a. The trust barrier positively affects the rejection of P2P consuming.

Hypothesis 5b. The trust barrier positively affects the rejection of P2P providing.

3.6. Economic risk

The higher the cost of an innovation, the higher the perceived

economic risk of that innovation (Ram and Sheth, 1989). Economic risk has mostly been applied to in the context of product rather than service innovations. It is suggested that consumers wait out on innovations, because they anticipate declining prices or gradual performance improvements (Ram and Sheth, 1989). This technology-dominant logic is, however, not directly applicable in the case of P2P sharing. Economic risks for P2P consumers and providers are different in nature. P2P consumers might fear that their money is not wisely spent and do not get the level of quality and comfort they expect. Moreover, they might believe that it is more financially wise to purchase a product if they will use it often. Furthermore, many consumers might favor the usually free option of borrowing from family and friends. Economic risk is, however, most pertinent to P2P providers. Shared items such as vehicles or specialized equipment often hold considerable monetary value. When lending out these items, providers often receive a small return relative to the value that can be destroyed, if the product is damaged. In the end non-users might thus conclude that P2P consuming and providing are not worth the (economic) risk. Therefore, this study predicts.

Hypothesis 6a1. Economic risk positively affect the rejection of P2P consuming.

Hypothesis 6b1. Economic risk positively affect the rejection of P2P providing.

3.7. Functional risk

Functional risk refers to the uncertainty that the innovation might not function properly or reliably (Ram and Sheth, 1989). From a sharing consumer's perspective, functional risks can come in the form of product availability issues e.g., when a product or service is not available at the time and place needed, in the from false promises e.g., when a product or service is not as described, or broken engagements e.g., when ride-sharing drivers arrive late at the meeting point or drive carelessly. From a provider's perspective, *functional risks* can be uncertainties as to whether items are handled with care, returned late, or in an uncleanly or damaged condition. These concerns are particularly strong when consumers feel psychologically attached to their objects. Laurenti and Acuña (2020) and Hawlitschek et al. (2018) find that *process risk* (i.e., the idea that something might go wrong in the process) acts as a key barrier to P2P sharing adoption. Similarly, Hazée et al. (2020) find that *risk* associated with the asset's and actor's performance constitutes an important impediment to P2P sharing. All things considered this study predicts.

Hypothesis 7a1. Functional risk positively affects the rejection of P2P consuming.

Hypothesis 7b1. Functional risk positively affects the rejection of P2P providing.

3.8. Tradition barrier

The higher the perceived level of cultural change from innovation adoption, the stronger the *tradition barrier* to that innovation (Ram and Sheth, 1989). Put differently, innovations that force consumers to depart from established norms and traditions will be rejected. Consuming via P2P sharing can conflict with said norms and traditions in multiple ways. For instance, the tradition of newly purchasing items has grown to become the dominant consumption pattern in the western world, especially since the post-war period. This has led to material ownership being associated with status and achievement. Switching at least partly to P2P consuming would mean owning fewer items. Such a change might not be welcomed by individuals who strongly identify with ownership as a status symbol. It will also be opposed by individuals who value the possibility of using items whenever they want, or who enjoy the peace of mind from having that possibility. In that regard, Hazée et al. (2020) support the pertinence of tradition barriers, finding that "social norms and values" inhibit P2P sharing adoption. Taken altogether, this study predicts.

Hypothesis 6a2. The tradition barrier positively affects the rejection of P2P consuming.

Hypothesis 6b2. The tradition barrier positively affects the rejection of P2P providing.

3.9. Image barrier

The *image barrier* refers to the degree to which an innovation and its brand, class or industry is perceived as having an unfavorable image (Ram and Sheth, 1989). This conceptualization originally emerged in the context of product innovations (Kleijnen et al., 2009), and is not directly applicable to service innovations, as it does not capture all their complexities (Hazée et al., 2020). That being said, with respect to P2P sharing, the *image barrier* can be thought of the degree to which the activity of P2P sharing is perceived as negative. For example, consumers who view the general idea of borrowing or P2P sharing purely as a necessity for low-income people are not inclined to engage in it, as doing so might not align with their self-image. By the same token, consumers who primarily think of P2P sharing as a form of environmental or social activism, are less likely to adopt it, if they regard such actions as unfavorable. Accordingly, Hazée et al. (2020) find that the *image barrier* significantly impedes the adoption of P2P sharing. Taken altogether, this study predicts.

Hypothesis 7a2. The image barrier positively affects the rejection of P2P consuming.

Hypothesis 7b2. The image barrier positively affects the rejection of P2P providing.

Fig. 3 displays the constructual model and the hypothesized relationships.

4. Methodology

4.1. Data collection

The data were collected through two large-scale surveys distributed via the crowdsourcing platform Amazon MTurk. Before distribution, the surveys were pre-tested by three senior researchers, who carefully assessed respondent comprehension and burden, evaluated question relevance and sensitivity, and tested the surveys' validity and reliability. Based on the researchers' feedback, the surveys were slightly adapted and shortened to enhance efficiency.

The decision to choose MTurk was supported by several factors. First, MTurk has consistently demonstrated its ability to produce high-quality results, that are at least as reliable as those obtained through traditional methods (Buhrmester et al., 2011; Casler et al., 2013; Goodman et al., 2013). Second, MTurk workers exhibit greater socio-economic and ethnic diversity than typical student samples (Buhrmester et al., 2011; Casler et al., 2013), making them more representative of the general population. This diversity allows for a more comprehensive understanding of consumer resistance to P2P sharing. Third, considering the study's focus on resistance to P2P sharing on online platforms, it was deemed appropriate to collect the data through an online crowdsourcing platform like MTurk. Lastly, the use of MTurk has been widely embraced in other reputable studies on the sharing economy (e.g., Akbar and Hoffmann, 2018; Costello and Reczek, 2020; Hazée et al., 2019).

However, when collecting data from crowdsourcing platforms, precautions must be taken and responses must be carefully screened to address potential shortcomings such as participants' non-investment (Oppenheimer et al., 2009). For instance, to increase response process validity, only MTurk workers with a minimum acceptance rate of 95% were eligible to participate, indicating that they have consistently

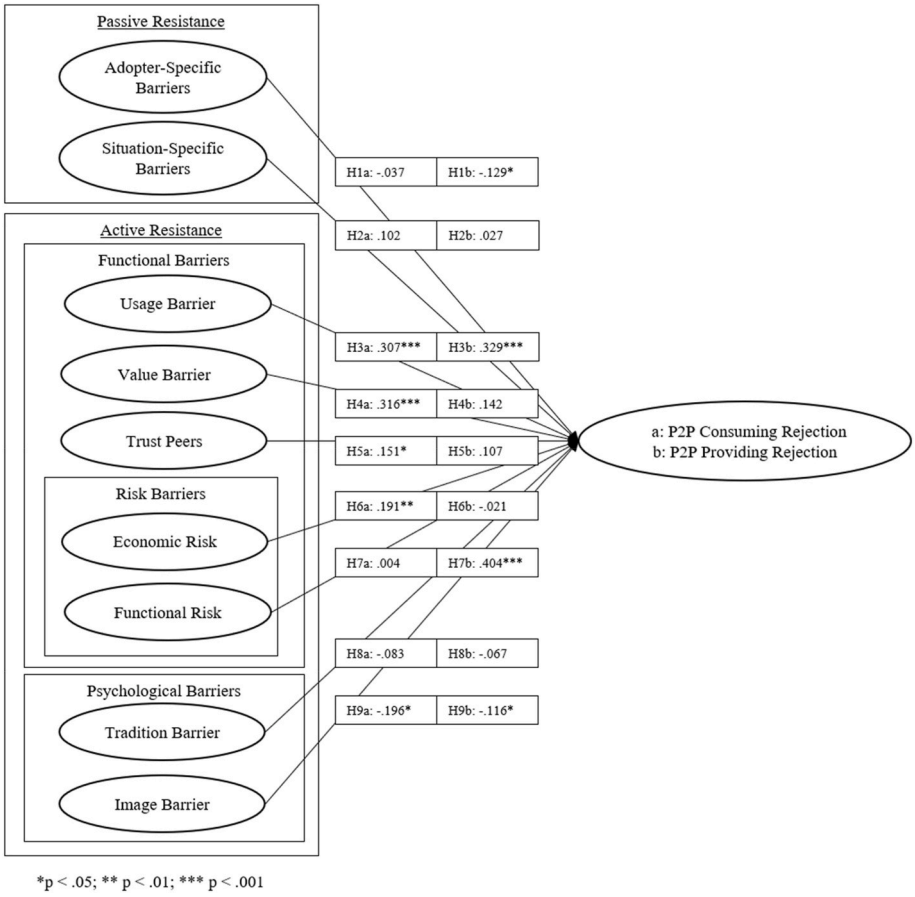

Fig. 3. Constructual model and hypotheses.

produced reliable work (Casler et al., 2013). Additionally, to avoid low-effort responses from workers who raced through the surveys, responses with a process time below or equal to 90 s were deleted (Mason and Suri, 2012). For the same reason, participants with low-entropy response patterns were removed (i.e., participants who chose the first response to every question or alternated between the first and last responses) by discarding responses with two or fewer unique values (Zhu and Carterette, 2010).

Moreover, only deliberate non-users of ICT-based P2P sharing, i.e., deliberate non-consumers and non-providers, were eligible to participate. To exclude undeliberate non-users, both surveys were exclusively conducted in countries (Switzerland, Sweden, United Kingdom, Spain, Germany, France, USA) in which large and prominent P2P sharing platforms – other than AirBnB – such as Sharely, Hygglo or Fat Llama operate. To exclude past or current users, subjects were initially asked, if they had previously borrowed or provided an object or service via a P2P sharing platform and restricted from participating, if they answered that they did.

A total of 244 non-consumers and 264 non-providers were initially admitted to the survey on resistance to P2P consuming and the survey on resistance to P2P providing, respectively. After removing (i) responses with a progress rate below 94%, (ii) responses with two or fewer unique response values, (iii) responses with a process time below or equal to 90 s, (iv) and data outliers using the Cook's distance estimate, the final samples were reduced to 233 non-consumers and 240 non-providers.

4.2. Sample characteristics

Both samples, the 233 non-consumers and 240 non-providers, were surveyed in terms of their age, gender, education, income (as an indicator of economic necessity for P2P sharing), household size (as an indicator of practical necessity for P2P sharing), and size of their place of residence (as an indicator of P2P sharing availability). The median age and income bracket of the 233 non-consumers are 33 years and $30,000 - $39,999, respectively. The median age and income bracket of the 240 non-providers on the other hand are 39 years and $50,000 - $59,999. The median size of non-consumers' as well as non-providers' places of residence is 50.000–100.000. Of the 233 non-consumers 152 (65.2%) are male, 78 (33.5%) are female, 2 identify as non-binary (0.09%) and 1 person (0.04%) did not provide gender information. By contrast, 149 (62.1%) of the 240 non-providers are male, 88 (36.7%) are female, and 3 respondents (0.13%) did not provide gender information.

4.3. Operationalization

All constructs in this study are measured using existing scales (see Appendix A and B). These scales were originally devised to assess resistance to product innovations rather than service innovations, requiring slight adjustments in item phrasing to align with the context of P2P sharing. For instance, the adopter- and situation-specific barriers employ item scales from Heidenreich and Handrich (2015), with minor modifications such as replacing "Past technological products" with "Past consumption models", resulting items like: "Past consumption models fully met my requirements". Similarly, the usage barrier, value barrier and functional risk rely on item scales from Heidenreich and Kraemer (2016) and were adapted by replacing "This product" with "Borrowing objects" or "Lending objects", resulting in items such as: "Borrowing objects via PPS platforms is not compatible with my lifestyle". The measurements of economic risk and the trust barrier rely on scales from Wiedmann et al. (2011) and Möhlmann (2021), respectively, both with similar adjustments in item phrasing. Lastly, the scale for the tradition barrier is derived from Antioco and Kleijnen (2010) and the scale for the

image barrier is adapted from Hawlitschek et al. (2018), both with similar adaptations in wording. All items are measured on seven-point Likert-type scales.

4.4. Analysis

The hypotheses are tested using partial least squares structural equation modeling (PLS-SEM). PLS-SEM is a multivariate analytic technique that combines factor analysis, path analysis and multiple regression into a single framework. PLS-SEM is preferred over covariance-based SEM, because PLS-SEM is regarded as more suitable to inspect early stage research models (Joreskog, 1982), and as the primary goal of this research is to identify key driver constructs (Hair et al., 2011). In order to test the hypotheses, two structural equation models were formulated: model 1 (Hypotheses 1a – 9a) containing the 233 non-consumers as cases and P2P consuming rejection as the dependent variable, and model 2 (Hypotheses 1b–9b) with the 240 non-providers as cases and P2P providing rejection as the dependent variable. However, before testing the hypotheses, i.e., the proposed relationships between the constructs in the structural equation models, it was necessary to examine the validity and reliability of the measures in the measurement models. To increase validity and reliability of the outer models, two confirmatory factor analyses (CFA) were performed (one for each measurement model). The CFAs resulted in the deletion of two and three observed variables in the measurement model containing the 233 non-consumers and measurement model containing the 240 non-providers, respectively. Lastly, the measurements were checked for biases. The following paragraphs provide further details on the various checks.

4.5. Measurement validation

4.5.1. Validity

Validity of the measurement model is assessed by means of its content validity and construct validity. Content validity refers to how well a survey or test measures the constructs that it is supposed measure. Content validity was ensured by two experts in the field of innovation resistance and two senior researchers who evaluated and pre-tested both surveys. Construct validity refers to the degree to which a set of items reflects the latent construct to be measured. Determining construct validity requires two tests, a convergent validity and discriminant validity test (Fornell and Larcker, 1981). The tests on convergent validity are passed, as the average variance extracted (AVE) of each construct in both measurement models is greater than 0.50 (Fornell and Larcker, 1981). The tests on discriminant validity are also passed, as the square root of each construct's AVE is higher than its correlation with another construct (Henseler et al., 2015), and since all heterotrait-monotrait ratios are below 0.9 (Gold et al., 2001). As a result, validity of both measurement models can be confirmed.

4.5.2. Reliability

Reliability of the measurement model is assessed by evaluating its indicator reliability and construct reliability. Indicator reliability describes the proportion of indicator variance that is explained by the latent variable. Since all loadings in both measurement models are above 0.7, indicator reliability is given for both measurement models (Hair et al., 2021). Construct reliability describes the internal consistency of items that propose to measure the same construct. The most common ways to assess construct reliability are via the Cronbach's alpha (CA) and composite reliability (CR) coefficients. That being said, modern views suggest that the rho_A coefficient, which returns a mean value between the CA and CR score, is the more appropriate measure (Dijkstra and Henseler, 2015). Construct reliability of both measurement models is ensured, as all rho_A coefficients are above 0.7 (Wong, 2019). In conclusion, both measurement models are measured with reliability.

5. Results

Path significance between the constructs of the structural equation models was tested via bootstrapping – a resampling method that uses random sampling with replacement. The bootstrapping calculations were run in Smart- PLS 3.0 with 1000 bootstrapping samples and two-tailed significance tests. Table 2 reports the results of the hypotheses tests.

Model 1, testing the adoption barriers of non-consumers (H1a-H9a), accounts for 61.5% (adjusted R^2) of the total variance in P2P consuming rejection. Four of its nine hypotheses are accepted. The value barrier has the strongest positive effect on P2P consuming rejection ($b = 0.316$, $p < .001$), Hence H4a finds strong support. Its effect is closely followed by that of the usage barrier ($b = 0.307$, $p < .001$), showing that H3a is also strongly supported. Economic risk ($b = 0.191$, $p < .01$) and the trust barrier ($b = 0.151$, $p < .05$) are significant though slightly weaker barriers to P2P consuming rejection. Nonetheless, the results provide support for H5a (trust barrier) and H6a (economic risk). Adopter-specific barriers (H1a), situation-specific barriers (H2a), functional risk (H7a), the tradition barrier (H8a) and image barrier (H9a) do not prove to be significant barriers to P2P consuming rejection. Interestingly, however, the image barrier ($b = -.196$, $p < .5$) has a significant effect in the opposite direction, indicating that the more non-consumers disapprove of material possessions as status symbols, the more they reject P2P consuming. Regarding the control variables (age, gender, education, income, household size, size of place of residence) only the dummy variably High School Education ($b = .194$, $p < .01$) significantly predicted P2P consuming rejection. This means that non-consumers whose highest formal degree is a high school degree significantly

Table 2
Results.

Path from	To	Path Coefficient	Hypothesis	Result
Adopter-Specific Barriers	P2P Consuming Rejection	−.037	H1a	Reject
	P2P Providing Rejection	−.129*	H1b	Reject
Situation-Specific Barriers	P2P Consuming Rejection	.102	H2a	Reject
	P2P Providing Rejection	.027	H2b	Reject
Usage Barrier	P2P Consuming Rejection	.307***	H3a	**Accept**
	P2P Providing Rejection	.329***	H3b	**Accept**
Value Barrier	P2P Consuming Rejection	.316***	H4a	**Accept**
	P2P Providing Rejection	.142	H4b	Reject
Trust Barrier	P2P Consuming Rejection	.151*	H5a	**Accept**
	P2P Providing Rejection	.107	H5b	Reject
Economic Risk	P2P Consuming Rejection	.191**	H6a	**Accept**
	P2P Providing Rejection	−.021	H6b	Reject
Functional Risk	P2P Consuming Rejection	.004	H7a	Reject
	P2P Providing Rejection	.404***	H7b	**Accept**
Tradition Barrier	P2P Consuming Rejection	−.083	H8a	Reject
	P2P Providing Rejection	−.067	H8b	Reject
Image Barrier	P2P Consuming Rejection	−.196*	H9a	Reject
	P2P Providing Rejection	−.116*	H9b	Reject

*p < .05; **p < .01; ***p < .001.

reject P2P consuming more than those with a professional, bachelor's, or master's degree.

Model 2, testing the adoption barriers of non-providers (H1b-H9b), explains 55.8% (adjusted R^2) of the total variance in P2P providing rejection. Two of its nine hypothesis, namely H3b (usage barrier) and H7b (functional risk), are supported. Functional risk ($b = 0.404$, $p < .001$) appears to be strongest barrier, though the usage barrier ($b = 0.329$, $p < .001$) also shows to be a crucial barrier to P2P providing rejection. The other hypothesized relationships in model 2 are not supported. Similar to non-consumers, non-providers also show a negatively significant relationship between the image barrier and P2P providing rejection. Different to non-consumers, however, the sample of non-providers shows that adoption-specific barriers negatively affect P2P providing rejection. Hence, the findings suggest that the more generally open non-providers are to change, the stronger they reject P2P providing.

6. Discussion

6.1. Main findings

This study examines why some individuals do not participate in P2P sharing. More specifically, it determines whether unfavorable perceptions of the innovation (active resistance barriers) or individuals' aversion to change and satisfaction with the status quo (passive resistance barriers) cause them to reject P2P consuming and P2P providing, both of which make up P2P sharing. The findings show that active resistance barriers are the primary drivers of resistance to both P2P consuming and providing. Non-consumers reject P2P consuming as a result of the value barrier, usage barrier, trust barrier and economic risk. Non-providers reject P2P providing due to the usage barrier and functional risk. Passive resistance barriers do not significantly contribute to P2P sharing rejection.

Previous research has identified several barriers to resistance to P2P sharing, such as effort expectancy (Hawlitschek et al., 2018), process risk (Hawlitschek et al., 2018), privacy concerns (Teubner and Flath, 2019), prestige of ownership (Moeller and Wittkowski, 2010), and independence of ownership (Hawlitschek et al., 2018). The aforementioned findings expand on existing knowledge by identifying novel and distinct barriers to P2P sharing and by differentiating between barriers to P2P consuming and P2P providing. This differentiation is important as P2P consuming and providing have distinct characteristics and therefore strongly differ in their associated risks and impacts on individuals' habits and routines. By considering the unique barriers associated with each aspect of P2P sharing, this study provides a more nuanced understanding of the factors that influence individuals' resistance to engaging in P2P sharing practices. This nuanced understanding in turn accurately reflects the intricate nature of P2P sharing and the complexities of user behavior in the context of P2P sharing.

Additionally, the barriers identified in this study are grounded in the psychological theory that underly resistance to change (e.g., prospect theory and balance theory). They reflect individuals' concerns and aversion to adopting new practices or deviating from their existing consumption and ownership patterns. By connecting the identified barriers to the broader theoretical framework of innovation resistance, this study contributes to the theoretical understanding of resistance phenomena in the context of P2P sharing. The following paragraphs elaborate on the academic implications of each particular finding.

This study marks the first scholarly work to analyze and establish the usage barrier as a key barrier to P2P sharing. It highlights the perception among both non-consumers and non-providers that P2P consuming and providing disrupt their established habits. The finding contributes to our understanding of resistance to P2P consuming and providing as it sheds light on resistance stemming from the perceived impact on established consumption patterns. The reluctance to adopt P2P sharing may be attributed to concerns about losing familiarity and the comfort associated with existing consumption practices. The significance of this finding lies in its portrayal of resistance not only as a result of practical inconveniences but also as an outcome of the perceived impact on personal routines and comfort. This understanding underlines the complexities of behavioral change and underscores the necessity of developing strategies that address the psychological aspects of resistance.

Moreover, this study identifies the value barrier as a multifaceted concern encompassing cost, convenience, and benefits associated with P2P consuming. While bearing similarities to effort expectancy, another recognized barrier, the value barrier offers a comprehensive perspective on the challenges in P2P consuming by also including considerations of benefits. This distinction is vital, as it unveils the nuanced factors that influence non-users' decisions to reject P2P consumption. Our findings thus provide a holistic comprehension of the barriers at play, enabling platforms and stakeholders to tailor interventions that encompass a wider spectrum of concerns.

In addition, the findings shed light on the previously unexplored barrier to P2P sharing economic risk. This pioneering insight demonstrates that despite the potential for substantial cost savings, individuals refrain from P2P consuming due to uncertainties about shared item performance and financial implications. Moreover, it supports the observation from the qualitative analysis by Hazée et al. (2020), that non-consumers are concerned about the high commission charged by platform operators. Finally, this finding offers platforms valuable insights into the factors inhibiting potential consumers and highlights the importance of transparent pricing structures and trustworthy transactions.

The trust barrier represents concerns about the reliability, ability, and integrity of other peers. This study is the first one to establish the trust barrier as a direct impediment to P2P consuming intention. In that regard, this study complements previous findings by Bielefeldt et al. (2016), who find that the lack of trust negatively influences a person's attitude towards P2P sharing. It suggests that non-consumers hesitate to engage in P2P consuming due to concerns about issues like the reliability of shared items, competence of others, and integrity of transactions.

Functional risks emerge as the second main barrier to P2P providing. They reflect uncertainties about whether consumers handle items with care, return them on time and in their original state. The finding is consistent with the results by Hawlitschek et al. (2018), who inspect nine related articles and detect that process risk concerns are a key barrier to P2P sharing adoption. This study, however, provides additional context to the understanding of functional risks, by demonstrating that such concerns strongly inhibit P2P providing, but not P2P consuming. Furthermore, the findings underscore the importance of establishing trust and confidence among participants. This emphasizes the need for future research to delve deeper into the mechanisms and strategies that can mitigate functional risks and foster trust within P2P sharing platforms.

When comparing the barriers to P2P consuming with the barriers to B2C sharing, similarities in resistance patterns emerge. For instance, similar to the barrier economic risk in P2P consuming, the barrier economic reasons, which pertains to the preference for buying and owning the product, is a significant barrier to B2C sharing (Annarelli et al., 2016; Catulli et al., 2017; Edbring et al., 2016; Piscicelli et al., 2015; Tukker, 2015). This similarity emphasizes the importance of recognizing individuals' preferences for product ownership and the potential impact on their willingness to participate in sharing activities. Furthermore, the concept of effort expectancy, another important barrier to B2C sharing (Lamberton and Rose, 2012), shares similarities with the value barrier in P2P consuming, as both reflect perceptions of the activity being cumbersome. This insight underscores the need to address concerns related to the ease and convenience of sharing practices to promote adoption and overcome resistance. Lastly, it is worth noting that trust plays a significant role in driving the adoption of various B2C sharing

services (Barnes and Mattsson, 2017; Mahadevan, 2018; Möhlmann, 2015a; Oyedele and Simpson, 2018). However, it is important to distinguish this finding from the observations made in the present study, which indicate that the absence of trust acts as a barrier to B2C sharing. Thus, while trust serves as a facilitator for B2C sharing adoption, the absence of trust operates as presents a distinct challenge, hindering individuals from engaging in P2P sharing activities. This disparity underscores the nuanced nature of trust and its differential effects on adoption and rejection behaviors within the context of sharing economies. Overall, these insights enhance our understanding of the complex dynamics and factors influencing participation in both P2P and B2C sharing, contributing to the knowledge base in the sharing economy literature.

Finally, upon revisiting the typology of innovations by Sheth (1981), it becomes evident that P2P sharing can be categorized as a dual resistance innovation. The rationale behind this classification lies in the perception that P2P sharing significantly impairs existing habits, while also being associated with functional and economic risks. Consequently, the resistance demonstrated by individuals towards P2P sharing and its relatively low adoption rates are not unexpected outcomes. This classification guides platform operators and regulators in designing targeted interventions that alleviate discomfort and mitigate the perceived risks associated with P2P sharing.

6.2. Practical implications

The findings of this research study carry significant practical implications for stakeholders involved in promoting and facilitating P2P sharing practices. Notably, this study reveals that resistance to P2P sharing is primarily influenced by active resistance barriers rather than passive resistance barriers. This suggests that individuals' reluctance to adopt P2P sharing is not driven by their general resistance to change or satisfaction with the status quo, but by their negative perceptions of P2P sharing itself. Therefore, addressing these negative perceptions becomes crucial to tap into the large population of non-users who represent a substantial customer base.

Platform operators can leverage these insights to develop tailored strategies that target the specific concerns of non-consumers and non-providers. For example, the insights into the value barrier and economic risk highlight the importance of addressing uncertainties surrounding the perceived value and economic benefits of P2P consuming. To alleviate these concerns, platform are advised to effectively communicate the diverse benefits of P2P consuming (Hansmann and Binder, 2023), encompassing not only financial savings but also environmental and social advantages. For instance, platforms may indicate the potential reduction in CO2 emissions when users opt to borrow instead of buy a certain product (e.g., a drill), thus promoting sustainability as a tangible benefit. Moreover, to foster a sense of community among sharing users, platforms can organize in-person events in regions with high concentrations of users (Hansmann and Binder, 2023). Such initiatives may help create familiarity and facilitate interpersonal interactions, ultimately enhancing the social appeal and the adoption of P2P consuming practices.

In promoting the value and benefits of P2P consuming, platforms are advised to adopt a provider-focused over a platform-focused communication strategy (Costello and Reczek, 2020). By emphasizing the role of providers, users are more likely to perceive P2P consuming as helping a peer, thus adopting an "empathy lens" (Costello and Reczek, 2020, p. 22), which, in turn, increases their likelihood of P2P consuming and willingness to pay. Next to communication efforts, platforms should also prioritize overseeing and investing in the quality of their service providers to address economic risk and value-related concerns (Cao et al., 2022). One effective method is to implement training programs for providers, ensuring they possess the necessary skills and knowledge to deliver high-quality services. In addition, well-designed incentive systems can significantly boost service provider quality (Cao et al., 2022). Platforms can introduce performance-based rewards to incentivize providers who consistently offer exceptional services. Such incentivization encourages providers to maintain high standards and continuously improve their offerings, ultimately enhancing the overall user experience.

The insights into trust as a barrier to P2P consuming, alongside previous findings on trust as an enabler (Mittendorf, 2018; Möhlmann, 2015b; Wu et al., 2017), underscore the importance of recognizing trust as both a facilitator and barrier to P2P sharing. This highlights the need to foster trust among current users and address the perceived lack of trust among non-users as a distinct challenge. To enhance trust, sharing platforms may require users to verify their identities using their ID cards or driver's licenses, similar to practices employed by B2C ride- and car-sharing services like Uber and Share Now (Everett, 2021). Platforms may also enhance trust and transparency by implementing a reciprocal review and evaluation system (Cao et al., 2022; Davlembayeva et al., 2020), as seen on Airbnb and Blablacar. Moreover, trust in platforms can be further strengthened by obtaining third-party trust badges (Khalek and Chakraborty, 2023), and ensuring the secure treatment, storage, and use of personal data (Nguyen et al., 2023). By prioritizing efforts to strengthen trust, sharing platforms can instill user confidence, facilitate more transactions, and cultivate a thriving P2P sharing community.

Additionally, supplementing trust mechanisms with preventive measures such as clear guidelines for item handling, tracking systems, and insurance coverages can effectively, promote responsible behavior, mitigate functional risks in P2P providing, and create a more supportive sharing environment. In particular, platforms may insure shared products optionally or per default (Hansmann and Binder, 2023), as for example implemented by Sharely and Hygglo.

The findings related to the usage barrier contribute to our understanding of the challenges inherent in behavioral change and the importance of addressing concerns related to familiarity, comfort, and convenience. To promote the adoption of P2P consuming and providing, it is crucial to implement strategies that facilitate behavioral change and encourage individuals to overcome their inertia. In this regard, Cao et al. (2022) propose the use of compelling storytelling techniques to illustrate how platforms and providers collaborate to simplify users' lives, shifting the focus towards fulfilling users' needs, rather than solely emphasizing the specific service. By adopting this approach, P2P platforms can create a more compelling and user-oriented narrative, ultimately encouraging greater participation in P2P sharing practices.

Lastly, the comparisons between barriers to P2P consuming and B2C sharing reveal similarities in resistance patterns, particularly regarding economic reasons, effort expectancy, and trust. Recognizing these similarities can guide practitioners in designing strategies that leverage existing knowledge and best practices from B2C sharing (e.g., identity validation, evaluation systems, and provider training) to address similar barriers in P2P consuming. It also underscores the need to address concerns related to ownership preferences, convenience, and trust in both P2P and B2C sharing contexts.

Overall, this research provides actionable insights for stakeholders to create thriving P2P sharing communities, expand the user base, and contribute to the growth of the sharing economy. By addressing negative perceptions, adopting user-centric strategies, fostering trust, and leveraging successful approaches from related contexts, P2P sharing platforms can pave the way for a more interconnected and sustainable future.

7. Limitations and future research needs

While this study provides valuable insights into the barriers to P2P sharing, it is important to acknowledge its limitations and consider potential avenues for future research. First, the study primarily focuses on the perspectives of non-consumers and non-providers, neglecting the viewpoints of active users. Future research could include a more comprehensive analysis that incorporates the experiences and attitudes

of active participants to gain a more holistic understanding of P2P sharing. Second, the study primarily relies on self-report measures, which may be subject to response biases or social desirability effects. Future research could employ objective measures or observational methods to provide a more objective assessment of individuals engagement and behaviors in P2P sharing. Third, the overrepresentation of males in both surveys (65.2% and 62.1%) poses limitations in terms of generalizability and gender bias. Particularly, it hinders the representation of non-male resistance perspectives which might differ to those from males. For instance, Nakamura et al. (2021) find that females in Japan are more resistant to B2C sharing, due to the "anxiety about sharing with strangers" (p. 1). Future research should thus strive for a more balanced and diverse sample, allowing for a comprehensive understanding of gender differences in resistance to P2P sharing. Fourth, the study uses data from a crowdsourcing platform which bears potential limitations like the overrepresentation of individuals with high technology-related skills and interests. Future research could validate the results using alternative samples and data collection methods such as in-person or telephone interviews. Fifth, the study focusses on a specific context or platform. P2P sharing practices can vary across different industries, platforms, and cultural contexts. Future research could explore the generalizability of the findings by examining a wider range of P2P sharing platforms and contexts. Sixth, the study primarily examines individual-level barriers to P2P sharing. It would be valuable for future research to investigate the influence of contextual factors, such as platform design, social norms, and regulatory environments, on individuals' adoption and rejection of P2P sharing. Seventh, this study focuses on barriers to P2P sharing and does not extensively explore the strategies or interventions to overcome these barriers. Future research could delve into the development and effectiveness of interventions aimed at mitigating the identified barriers and promoting P2P sharing adoption. Lastly, the study primarily adopts a cross-sectional design, limiting the ability to establish causal relationships or track changes over time. Future research could employ longitudinal or experimental designs to better understand the dynamic nature of resistance to P2P sharing and the effectiveness of interventions in promoting behavior change. By addressing these gaps, researchers can further enhance our knowledge of the barriers and facilitators of P2P sharing and contribute to the development of effective strategies and interventions in this domain.

8. Conclusion

This research study sheds light on the barriers to P2P sharing and offers practical implications for various stakeholders involved in promoting and facilitating P2P sharing practices. The findings highlight the significance of active resistance barriers, such as the value barrier, usage barrier, trust barrier, and economic risk, in driving individuals' rejection of P2P consuming and providing. By recognizing the unique barriers associated with each aspect of P2P sharing, platform operators can develop tailored strategies to address these concerns and encourage participation. The study also contributes to the theoretical understanding of resistance phenomena by grounding the identified barriers in psychological theories underlying resistance to change. Additionally, the study identifies similarities and differences between P2P consuming and B2C sharing, providing valuable insights for practitioners to leverage existing knowledge and best practices. However, the study has limitations, including a focus on non-consumers and non-providers, reliance on self-report measures, and a specific context. Future research should address these limitations and further explore interventions, contextual factors, and diverse perspectives to deepen our understanding of P2P sharing and promote its sustainable growth. Overall, this study contributes to the knowledge base in the sharing economy literature and provides actionable guidance for stakeholders to overcome barriers and foster a supportive environment for P2P sharing initiatives.

CRediT authorship contribution statement

Tin Huynh: Conceptualization, Methodology, Software, Validation, Formal analysis, Investigation, Resources, Writing – original draft, Writing – review & editing, Visualization, Supervision, Project administration. **Sebastian Gurtner:** Conceptualization, Methodology, Resources, Supervision, Project administration, Funding acquisition.

Declaration of competing interest

The authors declare the following financial interests/personal relationships which may be considered as potential competing interests: Tin Huynh reports financial support was provided by Swiss National Science Foundation.

Data availability

Data will be made available on request.

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Appendix A

Operationalization Resistance to P2P Consuming

Item	Measure	Loading
Adopter-Specific Barriers (Heidenreich and Handrich, 2015); AVE = .826; rho_A = .810		
X_1	Often, I feel a bit uncomfortable even about changes that may potentially improve my life.	.892
X_3	I sometimes find myself avoiding changes that I know will be good for me.	.926
Situation-Specific Barriers (Heidenreich and Handrich, 2015); AVE = .840; rho_A = 1.768		
X_5	In my opinion, past ways of consumption were completely satisfactory so far.	.842
X_6	Past consumption models fully met my requirements.	.985
Usage Barrier (Heidenreich and Kraemer, 2016); AVE = .796; rho_A = .880		
X_7	Borrowing objects via PPS platforms is not compatible with my lifestyle.	.889
X_8	Borrowing objects via PPS platforms is not compatible with my needs.	.888
X_9	Borrowing objects via PPS platforms does not fit with the way I like to get things done.	.899

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(*continued*)

Item	Measure	Loading
Value Barrier (Heidenreich and Kraemer, 2016); AVE = .691; rho_A = .785		
X_{10}	Borrowing objects via PPS platforms does not offer advantages compared to buying them or borrowing them from family and friends.	.864
X_{11}	Borrowing objects via PPS platforms is, in my eyes, inferior to buying them or borrowing them from family and friends.	.817
X_{12}	Borrowing objects via PPS platforms does not solve a problem that I cannot solve with buying them or borrowing them from family and friends.	.813
Economic Risk (Wiedmann et al., 2011); AVE = .677; rho_A = .802		
X_{13}	I can spend my money in a better way than for borrowing an object via a PPS platform.	.836
X_{14}	I would be concerned that the financial investment in borrowing objects via PPS platforms would not be wise.	.749
X_{15}	I would be concerned that I would not get my money's worth from borrowing objects via PPS platforms.	.878
Functional Risk (Möhlmann, 2021); AVE = .649; rho_A = .738		
X_{16}	I am not confident that borrowing objects via PPS platforms will perform as intended.	.813
X_{17}	I am not certain that borrowing objects via PPS platforms will work satisfactorily.	.780
X_{18}	I doubt that borrowing objects via PPS platforms is reliable in use.	.823
Tradition Barrier (Antioco and Kleijnen, 2010); AVE = .761; rho_A = .945		
X_{19}	To what extent does borrowing objects via PPS platforms comply with prevailing traditions and norms?	.908
X_{20}	Borrowing objects via PPS platforms is traditionally acceptable versus traditionally unacceptable.	.857
X_{21}	Borrowing objects via PPS platforms is culturally acceptable versus culturally unacceptable.	.852
Image Barrier (Hawlitschek et al., 2018); AVE = .740; rho_A = .898		
X_{22}	People with many possessions have more prestige than those with less.	.771
X_{23}	People with many possessions have a high profile.	.922
X_{24}	Having many possessions is a status symbol.	.880
Rejection (Szmigin and Foxall, 1998); AVE = .797; rho_A = .885		
X_{25}	It is unlikely that I will borrow objects via a PPS platform in the near future.	.889
X_{26}	Borrowing objects via PPS platforms is not for me.	.907
X_{27}	I don't need to borrow objects via PPS platforms.	.882

Appendix B

Operationalization Resistance to P2P Providing

Item	Measure	Loading
Adopter-Specific Barriers (Heidenreich and Handrich, 2015); AVE = .801; rho_A = .752		
X_1	Often, I feel a bit uncomfortable even about changes that may potentially improve my life.	.900
X_2	When someone pressures me to change something, I tend to resist it even if I think the change may ultimately benefit me.	.889
Situation-Specific Barriers (Heidenreich and Handrich, 2015); AVE = .816; rho_A = .977		
X_5	In my opinion, past ways of consumption were completely satisfactory so far.	.954
X_6	Past consumption models fully met my requirements.	.849
Usage Barrier (Heidenreich and Kraemer, 2016); AVE = .797; rho_A = .886		
X_7	Lending objects via PPS platforms is not compatible with my lifestyle.	.882
X_8	Lending objects via PPS platforms is not compatible with my needs.	.913
X_9	Lending objects via PPS platforms does not fit with the way I like to get things done.	.883
Value Barrier (Heidenreich and Kraemer, 2016); AVE = .747; rho_A = .833		
X_{10}	Lending my objects via PPS platforms does not offer advantages compared to selling, donating, or keeping them.	.894
X_{11}	Lending my objects via PPS platforms is, in my eyes, inferior to selling, donating, or keeping them.	.852
X_{12}	Lending my objects via PPS platforms does not solve a problem for me.	.846
Economic Risk (Wiedmann et al., 2011); AVE = .762; rho_A = .713		
X_{14}	I would be concerned that the financial investment in lending objects via PPS platforms would not be wise.	.843
X_{15}	I would be concerned that I would not get my money's worth from lending objects via PPS platforms.	.902
Functional Risk (Möhlmann, 2021); AVE = .654; rho_A = .735		
X_{16}	I am not confident that lending objects via PPS platforms will perform as intended.	.814
X_{17}	I am not certain that lending objects via PPS platforms will work satisfactorily.	.795
X_{18}	I doubt that lending objects via PPS platforms is reliable in use.	.815
Tradition Barrier (Antioco and Kleijnen, 2010); AVE = .788; rho_A = .878		
X_{19}	To what extent does lending objects via PPS platforms comply with prevailing traditions and norms?	.864
X_{20}	Lending objects via PPS platforms is traditionally acceptable versus traditionally unacceptable.	.897
X_{21}	Lending objects via PPS platforms is culturally acceptable versus culturally unacceptable.	.902
Image Barrier (Hawlitschek et al., 2018); AVE = .775; rho_A = .863		
X_{22}	People with many possessions have more prestige than those with less.	.897
X_{23}	People with many possessions have a high profile.	.890
X_{24}	Having many possessions is a status symbol.	.854
Rejection (Szmigin and Foxall, 1998); AVE = .823; rho_A = .905		
X_{25}	It is unlikely that I will lend objects via PPS platforms in the near future.	.902
X_{26}	Lending objects via PPS platforms is not for me.	.917
X_{27}	I don't need to lend objects via PPS platforms.	.903

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