

# The role of intrinsic and extrinsic motivations in sharing economy post-adoption

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## The role of intrinsic and extrinsic motivations in sharing economy post-adoption

**Purpose:** The paper examines use and sharing economy (SE) continuance intention, and [the mediation effects of use between individuals' motivations and SE continuance intention](#). A theoretical model is developed to explain use and SE continuance intention as intrinsic and extrinsic motivated behaviour, as proposed by self-determination theory. Factors are derived from SE context and supported by published research on SE.

**Design/methodology/approach:** The Partial Least Squares Path Modelling (PLS-PM) technique is used to test the model in a quantitative study involving 256 users of SE services.

**Findings:** Findings suggest that use and SE continuance can be explained by concurrent intrinsic and extrinsic motivations. Moreover, high environmental concerns may restrain the use of sharing economy services. Findings show that continuance intention is influenced by current use of SE services. Moreover, the study emphasizes the mediation effect of use between intrinsic and extrinsic motivation and SE continuance intention.

**Research limitations/implications:** The analysis of use behaviour should be complemented with other measures of use and with data provided by qualitative methods of research. Further research should also consider the effect of different control variables and mediation effects.

**Practical implications:**

Brand managers and companies providing services through digital platforms should address individuals' needs in order to stimulate voluntary engagement in persistent SE practices.

**Social implications:** This study informs the consumer in general so that the sharing economy can develop its potential alongside an economy based on the ownership of private property.

**Originality/value:** This study extends findings on continuance intention research by offering internal motivation factors as predictors of post-adoption behaviour and emphasizes the role of use on SE continuance intention.

**Keywords:** sharing economy; collaborative consumption; continuance intention; self-determination theory; intrinsic motivations; extrinsic motivations.

# The role of intrinsic and extrinsic motivations in sharing economy post-adoption

## 1. Introduction

In recent years, individuals' preferences across the globe have shifted from product acquisition to the shared use of resources (Cohen and Kietzmann, 2014). Evidence comes from the 2017 PWC report on the SE, which analyses the size and acceptance of the phenomenon in Austria, Belgium, Germany, the Netherlands, Switzerland, and Turkey. Media and entertainment have the most attractive offers for individuals, in which the highest usage rate is 28%, followed by hotel and accommodation offers with a 20% usage rate.

Different sharing practices (bartering, second-hand purchases, reselling, swapping, lending and borrowing), are now being boosted and reinvented with the development of mobile communication technologies, especially when mediated by digital platforms. Their main role is to coordinate the transactions between individuals prepared to share their resources (service providers) to others prepared to pay to use them (consumers) (Cho *et al.*, 2019). A viable and long-term successful digital platform relies upon a decentralized network of service providers and consumers (Frenken and Schor, 2017; Wang, Lin, *et al.*, 2019; Xu and Gursoy, 2020). Therefore, understanding what motivates the use of SE services and continuance intention has become a fundamental research path and one that leads to the development of strategies to retain and win back profitable service providers and consumers (Kumar *et al.*, 2018). Moreover, SE platforms (i.e. Airbnb) are particularly interested in individuals who exhibit both behaviours (share and use), as their presence expands community appeal to newcomers (Hermes *et al.*, 2020) and increases demand from within the network providing it with greater capacity to service that demand (Lang *et al.*, 2020). Furthermore, as the benefits of a given technology can be attained only through use and continued use (Bhattacharjee and Barfar, 2011; Shaikh and Karjaluo, 2015), understanding the underlying motivation will help to better stimulate individuals' engagement with SE platforms and ultimately capitalize on the benefits promised by the SE.

Early empirical studies explore individuals' drivers to adopt SE practices (see Appendix A). Research on post-adoption behaviours in SE remains scarce (Hamari *et al.*, 2015). In fact, few studies further examine use of SE services and continuance intention (see Table 1). If accessing users directly is typically a time consuming and costly task (Liang *et al.*, 2018), the novelty of SE makes it even more difficult to assess users beyond the initial adoption stage. Academic contributions analysing use of SE services and continuance intention already shed some light on motives behind use (e.g. Lin, Wang, & Wu, 2017) and continuance intention of service providers (e.g. Wang *et al.*, 2020) and consumers (e.g. Shao *et al.*, 2020). Additionally, studies focus on at least one specific sharing sector ranging from accommodation, transportation, energy (Tsou *et al.*, 2019), and retail, or firm (usually Airbnb). To date, no study has addressed the use of SE services and continuance intention and sharing practices of access, renting, and selling, regardless of the product or service being shared. Furthermore, no study assesses the impact of use of the abovementioned sharing practices on continuance intention, explores mediation effects of use between individuals' motivations and their SE continuance intention. Therefore, our study seeks to fill these gaps by proposing and testing a research model tailored to SE context and anchored in self-determination theory (SDT). *SDT has proven to be useful in explaining participation in SE (e.g., Hamari et al., 2015; Li & Wen, 2019), and continued use of social networking tourism sites (French et al., 2017). However, existing research focuses on a limited set of motives. Moreover, SDT can be instrumental in fostering commitment (Ryan and Deci, 2000a), and should thus also be considered to explain continuance intention.* The purpose of this study is (1) to explore the motivations behind use and SE continuance intention of three different sharing practices mediated by digital platforms: access to goods and services,

and renting and selling personal goods, and (2) the mediation effects of use between individuals' motivations and SE continuance intention.

The study makes important contributions. First, it contributes to the academic literature on continuance intention in the context of the sharing economy. The relationship between use and continuance intention is already explored in IT continuance (Martins *et al.*, 2019), but to our knowledge our contribution at the individual level is novel in the context of the sharing economy, namely in exploring the motivation to use SE services mediated by digital platforms allowing access to goods and services, renting, and selling privately owned property. Second, this study assesses in a holistic manner the direct and indirect effects of individuals' motivations on SE continuance intention and reports findings that are valuable to SE companies and brand managers. Recommendations for increasing the use of SE services and fostering individuals' long-term engagement in SE services are provided. Third, using SDT as a theoretical lens offers a deeper understanding of individuals' real needs and tackles the real reasons behind use and intention to continue to use SE services. Finally, our study informs consumers in general, so that SE can develop its potential alongside an economy based on ownership of private property.

We next provide an overview of the SE definitional issues, SE context, related literature on SE post-adoption outcomes, and self-determination theory (SDT). The research model and hypotheses are then presented. Then, methods are provided including a quantitative survey to test the research model hypotheses. The paper ends with a discussion of the results, including implications for theory and practice, and further possible research directions are outlined.

## 2. Theoretical Background

### 2.1. Sharing economy definition

The sharing economy has been described as a "product-service system" (Mont, 2002), "collaborative consumption" (Botsman & Rogers, 2010), "access-based consumption," (Bardhi and Eckhardt, 2012), "peer economy" (Bellotti *et al.*, 2015) "gig-economy" (Cockayne, 2016), and "on-demand economy" (Friedman, 2014). Together, all these designations testify to the complexity of the phenomenon and the difficulty with respect to agreeing on its boundaries and impacts (Richardson, 2015).

The sharing economy is mainly viewed as an umbrella concept covering related phenomena such as "collaborative consumption" and "access-based consumption" (e.g. Chasin & Scholta, 2015; Sach, 2015). An umbrella concept helps to connect phenomena but makes theorization difficult (Acquier *et al.*, 2017). However, if the definition emphasizes only certain attributes of the phenomenon such as compensation or true sharing, some activities – peer production or commercial transactions – will be excluded from SE. Recent research proposes the use of organizational frameworks to avoid incomplete and dissenting definitions of the phenomenon, find a balance between extreme positions (e.g. Acquier *et al.*, 2017; Ertz, Durif, & Arcand, 2018; Martin, 2016), and shape a holistic portrait of SE (Davlembayeva *et al.*, 2020). In order to position our work from academic and practical perspectives we use the organizational framework presented in Ertz, Durif, & Arcand's (2018) work. Thus, we consider that participants in SE have the capacity to be both service providers and consumers; interaction is facilitated or mediated by a digital platform or an application and at a cost. We analyse three specific SE practices, namely access, renting, and selling.

### 2.2. Sharing economy context

Even though no commonly accepted definition of SE exists, researchers agree on some important features that shape the phenomenon (Cho *et al.*, 2019; Ye *et al.*, 2017). First, transactions comprise exchange of

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3 underused resources or resources with excess capacity. In fact, the rise of the SE is often linked to the  
4 2008 global recession, which forced individuals to develop a preference for reusing and giving new  
5 purposes to their belongings and engaging in new arrangements to manage their possessions (Krush *et*  
6 *al.*, 2015).  
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9 On the other hand, transacting underused resources emphasizes shared ownership (Zhang *et al.*, 2018).  
10 While putting aside ownership and choosing access-only, individuals not only reduce time and effort with  
11 management and maintenance of personal property, this choice also provides easy access to products  
12 and services (Ertz *et al.*, 2017). Consequently, costs are reduced, convenience is boosted, and access to  
13 products and services otherwise not accessible is gained (Sorensen, 2002).  
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16 Furthermore, transacting underused resources contributes to a more sustainable development. In fact,  
17 the benefits of these new resource-distribution practices go beyond the individual. While avoiding the  
18 destruction of value, SE practices also reduce waste. Sparing the use of scarce resources involved in the  
19 production of new products (e.g. Piscicelli *et al.*, 2015; Stokes *et al.*, 2014) seems to be a solution for  
20 problems such as overproduction and overconsumption (European Economic and Social Committee,  
21 2014) affecting society.  
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24 Second, transactions are usually triadic exchanges (Benoit *et al.*, 2017), including a digital platform  
25 (enables exchange), a service provider (individual prepared to share her/his underused resources), and a  
26 consumer (individual who needs the resource). Unlike traditional companies, companies managing SE  
27 platforms do not own or produce the goods or services being transacted and rely on resources of service  
28 providers to fulfil the needs of consumers. Moreover, service providers and consumers are usually  
29 organized in communities rather than hierarchies as in traditional companies (Benkler, 2017). A robust  
30 community of individuals, capable of handling both supply and demand sides, is therefore vital for a  
31 successful sharing business (Kumar *et al.*, 2018). Consumers and service providers are actively involved in  
32 the creation of value with the digital platform (Hermes *et al.*, 2020). While service providers give  
33 information about themselves or the product or service being transacted, consumers leave comments  
34 rating their use experience, which involves the product or service and the service provider. Both benefit  
35 from network effects. Furthermore, individuals' roles evolve and service providers become consumers  
36 and vice-versa (Ertz *et al.*, 2018; Lusch and Nambisan, 2015).  
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41 Third, trust is a feature of transactions in SE. As individuals transacting in SE are usually perfect strangers,  
42 transactions involve higher risks (Frenken and Schor, 2017). Digital platforms elicit trustworthiness of  
43 individuals using their services and of the resource being shared. Moreover, the digital platform is also  
44 subject to trust concerns (Hawlitschek, Teubner and Weinhardt, 2016).  
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47 Fourth, digital platforms rely on information technologies, the internet (Belk, 2014a), and ubiquity of  
48 mobile devices to coordinate interaction amongst service providers and consumers (Jiang and Tian, 2015).  
49 Technology is used to reduce the costs of transactions and to match up consumers and service providers  
50 in real time (Benkler, 2004; Mair and Reischauer, 2017). All communication between consumers and  
51 service providers is internet-mediated from first contact to payment (Gupta *et al.*, 2019; Lu *et al.*, 2019).  
52 Moreover, technology is also used by digital platforms to secure and legitimize transactions (Sutherland  
53 and Jarrahi, 2018), and also to boost trust amongst individuals and on the platform itself (Kumar *et al.*,  
54 2018). Smartphones and tablets offer permanent and speedy internet connection, generating flexibility  
55 and convenience for individuals partaking in SE, allowing them to choose when and how to participate,  
56 doing things more quickly and independently (Radka and Margolis, 2011).  
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3 We contend that the SE context plays an important role in shaping individuals' use and continued use of  
4 SE services, i.e. the social, environmental, economic, and functional contexts provide the motives of use  
5 and SE continuance intention, as we will explain below.  
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### 8 *2.3. Related literature on sharing economy post-adoption outcomes*

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10 We identified and analysed nine studies on SE post-adoption behaviours. Findings are summarized in  
11 Table 1. Use (Albinsson *et al.*, 2019), positive word of mouth (Kong *et al.*, 2020), recommendation and  
12 switch intention (Wang, Lin, *et al.*, 2019), and SE continuance intention (Wang *et al.*, 2020) are the post-  
13 adoption behaviours addressed by recent SE research. Through a combination of factors and theories (see  
14 Table 1) sectors analysed by recent research include accommodation, transportation, and energy (Tsou  
15 *et al.*, 2019). Specific SE services targeted by researchers include home sharing, bicycle sharing and car  
16 hailing, workspace sharing, technology and digital sharing. Airbnb is the platform most frequently  
17 targeted.  
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21 Only two studies focus on use as the dependent variable. Findings from (Lin *et al.*, 2017) were anchored  
22 on the second extension of Unified Theory of Acceptance and Use of Technology and show that habit,  
23 facilitating conditions, and behavioural intention have significant positive effects on use behaviour.  
24 Albinsson, Perera, Nafees, & Burman's (2019) study on the distinctive factors between collaborative  
25 consumption (CC) usage and collaborative consumption non-usage in the United States and Indian  
26 markets was informed by published research findings. Their study shows that perceived sustainability is  
27 the most important driver for CC use, followed by trust, possessiveness, generosity, risk-seeking,  
28 materialism, power distance, long-term orientation, and collectivism. Findings also point to similarities  
29 between CC users and non-users in both markets, suggesting the emergence of a global consumer.  
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33 Two main theories and respective extensions have been used to explain SE continuance intention. SE  
34 continuance intention is explained through the interaction between people and technology posited by  
35 social technical theory. Studies consider social and technical antecedents of trust to explain SE  
36 continuance intention (Kong *et al.*, 2020; Wang *et al.*, 2020). Findings from both studies suggest that  
37 together, social and technical enablers are important in the development of trust and that SE continuance  
38 intention is likely to depend upon the formation of trust. Other studies' main explanation for SE  
39 continuance intention relies on Expectation-Confirmation Theory (ECT) (Shao *et al.*, 2020; Wang, Lin, *et*  
40 *al.*, 2019). Both studies extend ECT by including antecedents of confirmation. The former included five  
41 service quality-related dimensions described in the SERVQUAL model and the latter included perceived  
42 risk.  
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46 We argue that these studies do not tackle the real reasons behind use and SE continuance intention. It is  
47 necessary to understand and address individuals' fundamental needs, and we suggest doing so by  
48 studying individuals' motivations to use SE services. Like Hamari *et al.* (2015) and Li & Wen (2019), we  
49 adopt SDT as a theoretical lens (see next section). However, our set of motives influencing SE use is  
50 derived from the SE context besides being more comprehensive and supported by research. Also, we posit  
51 that greater use of SE services will lead to SE continuance intention. To the best of our knowledge no  
52 study has assessed this relationship and its contribution to explain SE continuance intention. Furthermore,  
53 no study explores mediation effects of use between individuals' motivations and their SE continuance  
54 intention. We address these gaps by presenting and testing a comprehensive framework in which  
55 motivation to use and SE continuance intention results from the combination of social, environmental,  
56 economic, and functional contextual factors. Our study provides the support that SE platforms need to  
57 maintain existing customers and build up a decentralized network who will make their business viable and  
58 successful in the long term.  
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**Table 1 - Research on post-adoption behaviours**

Study	Dependent variable	Independent variable	Theoretical framework	Sharing services	Method	Sample
French et al. 2017	Continued use intention, attitude, satisfaction, bridging social capital, bonding social capital	Economic value, Networking value, trust	Theory of planned behavior, Social Capital, Self-determination Theory	SNETT - Social Network Tourism Sites (couchsurfing.com)	Interviews+survey	593 couchsurfing.com users (survey)
Lin, Wang & Wu 2017	Use behavior, behavioral intention	Performance expectancy, effort expectancy, social influence, facilitating conditions, hedonic motivation, price value and habit	UTAUT 2	Acommodation (Airbnb)	Survey	408 Airbnb guests
Na & Kang, 2018	Behavior intention, Shared value, Distinctive competitive advantage	Visibility, scarcity, imperfectly imitable, non substitutable, socialization, externalization, integration, internalization	Resource based theory	consumers that have used sharing economy business services	Survey	534 university students and office workers that have used sharing economy services
Albinson & perera.,2019	Use	Perceived Sustainability as the strongest predictor of usage followed by Trust, Possessiveness, Generosity, Risk-seeking, Materialism, Power Distance, Long-term orientation and Collectivism	Based on extant research findings on CC.	car/ride-hailing, bike-sharing, and home/accommodation-sharing, technology/digital sharing (e.g. music and movie file sharing), and workspace sharing	Survey	784 consumer panel in the U.S. and a Marketxcel consumer panel in India
Wang, Lin & Liu, 2019	Rcomendation, Continuance, Switch intention, Service Satisfaction, Service Dissatisfaction, Confirmation	Perceived Performance, Perceived risk	Expectation-confirmation theory	Bycicle sharing services	Survey	460 customers of bicycle-sharing services China
Tsou, Chen, Chou and Chen, 2019	Continued sharing energy intention, Utilitarian value, Hedonic value	Service experience	Dramaturgical theory	Energy network (Gogoro)	Survey (paper and web based)	460 Taiwanese users of Gogoro energy sharing services
kong et al., 2020	Continued use and positive word-of mouth, trust	Social referrals, information quality, transaction safety	Socio-technical theory	Accommodation (Airbnb)	Survey	211 active Airbnb millennial users
Shao,Li, Guo & Zhang 2020	Continuance intention, Satisfaction, Confirmation, Perceived usefulness	Location Reliability, Prompt Response, Transaction Assurance, customization and vivid appearance	Service quality theory, Expectancy confirmation theory	Dockless Bicycle sharing services	Survey	437 users of dockless bicycle sharing services
Wang et al., 2020	Continuance intention, trust	User experience, Social utility of sharing, System quality, Service quality, Information quality, Extrinsic reward, Perceived effectiveness of industry self-regulation, perceived effectiveness of privacy policy	Sociotechnical theory and the information systems success model, privacy concerns and economic value perspectives	Accommodation (Airbnb)	Survey	606 active Airbnb hosts

#### 2.4. Self-determination theory (SDT) and the sharing economy

In order to understand use and SE continuance intention, individuals' motivations must be taken into consideration. SDT has proven to be relevant in explaining participation in SE (e.g. Hamari et al., 2015; Li & Wen, 2019) and it can be instrumental in fostering commitment (Ryan and Deci, 2000a) and thereby help to explain use and continued use intention among individuals using SE services. SDT focuses on human motivation and personality. Developed by psychologists Edward Deci and Richard Ryan, this theory suggests that voluntary and persistent behaviours, emanating from individuals' sense of self, are determined by the needs for competence (comparable to Bandura's self-efficacy (2001)), relatedness (the need to feel supported by important people such as family, peers, or supervisors), and autonomy (the

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3 desire to self-organize one's actions). Individuals become self-motivated when they experience all three.  
4 Self-determined behaviour is considered more efficient and voluntarily persistent (Ryan and Deci, 2000a).  
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6 SE services represent an alternative to traditional modes of consumption, offering an option over  
7 ownership. It is a choice that makes individuals less dependent on companies and allows access to  
8 products and services otherwise not accessible (Radka and Margolis, 2011). Individuals interact directly  
9 with each other, forming a non-hierarchical community in which members rely on the opinions of  
10 strangers of reference and less on advertising (Radka and Margolis, 2011). Securing behaviour on the  
11 opinions of the majority facilitates decision making and integration in the community (Zhao *et al.*, 2018).  
12 Moreover, individuals face fewer barriers to participate when compared to traditional labour markets.  
13 They can choose to participate at need, and often have the chance to self-organize their time and activities  
14 (Sutherland and Jarrahi, 2018). SE services thus empower individuals, whose decision making is supported  
15 within SE communities and who can then act more freely, self-directing own action. Consequently, SE  
16 services satisfy the three basic needs mentioned above.  
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20 SDT distinguishes between intrinsic and extrinsic motivated behaviours. Intrinsic motivated behaviour is  
21 performed simply because it is innately stimulating or pleasing (Ryan and Deci, 2000b) and is deeply  
22 connected with internal psychological processes such as self-fulfilment and achievement. Lindenberg  
23 (2001) argues that an individual is not only enjoyment-driven but also obligation-driven. Hence, the need  
24 to act appropriately, based on principles and reflecting social norms, is also a type of intrinsic motivation.  
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27 Individuals using SE services mediated by digital platforms experience joy and emotional pleasure (Li and  
28 Wen, 2019), but also satisfy philanthropic needs by reducing waste and saving resources when giving new  
29 purposes to their underutilized belongings (Hwang and Griffiths, 2017; Li and Wen, 2019). Moreover,  
30 using SE services helps individuals to deal with the ethical concern of loss of value, when there is the  
31 recurrent thought that the product sitting idle could be of use to someone else (Radka and Margolis,  
32 2011). At the same time, individuals transacting in SE also experience a sense of belonging (Möhlmann,  
33 2015), as they become part of a community that they wish to relate to and join (Radka and Margolis,  
34 2011). They seek opinions they respect in search of things they personally value, by relying on friends and  
35 trusted sources (Shmidt, 2020). Trust is a psychological expectation governing all interactions, a safeguard  
36 of transactions between perfect strangers (Frenken and Schor, 2017). Therefore, social and environmental  
37 contexts are rich in factors that are deeply connected with internal and psychological processes of the  
38 individual and that determine intrinsic motivated behaviour. Consequently, in our study, factors  
39 determining intrinsic motivated behaviour include enjoyment, trust, sense of community, social influence,  
40 and sustainability.  
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45 According to SDT, individuals' behaviour is not only intrinsically motivated. Unlike intrinsic motivated  
46 behaviour, extrinsic motivated behaviour is externally driven, as it is performed because it leads to a  
47 distinct outcome. Presumed value is associated to some outcome detached from the behaviour (Ryan and  
48 Deci, 2000b). Extrinsically motivated behaviour can be performed without deliberately valuing the  
49 behavioural goal, i.e., to respond an external demand, achieve an externally imposed reward, avoid guilt  
50 or anxiety, and demonstrate self-worth and value (Ryan and Deci, 2000a). Extrinsic motivated behaviour  
51 can also reflect personal importance attributed to a behaviour and its acceptance or total assimilation by  
52 the self. Expectations of economic rewards and monetization of assets (in the case of hosts), as well as  
53 utility are external consequences of using SE services. Economic and utilitarian rewards benefit either  
54 individuals who use SE services without truly believing in its advantages as a sustainable form of  
55 consumption, and those who see it as a solution to overconsumption. Technological factors (internet and  
56 mobile device) reinforce and facilitate the sense of flexibility and convenience (Radka and Margolis, 2011).  
57 Therefore, economic and functional contexts are rich in valuable external outcomes resulting from  
58 choosing SE services and that determine extrinsic motivated behaviour. Consequently, in our study,  
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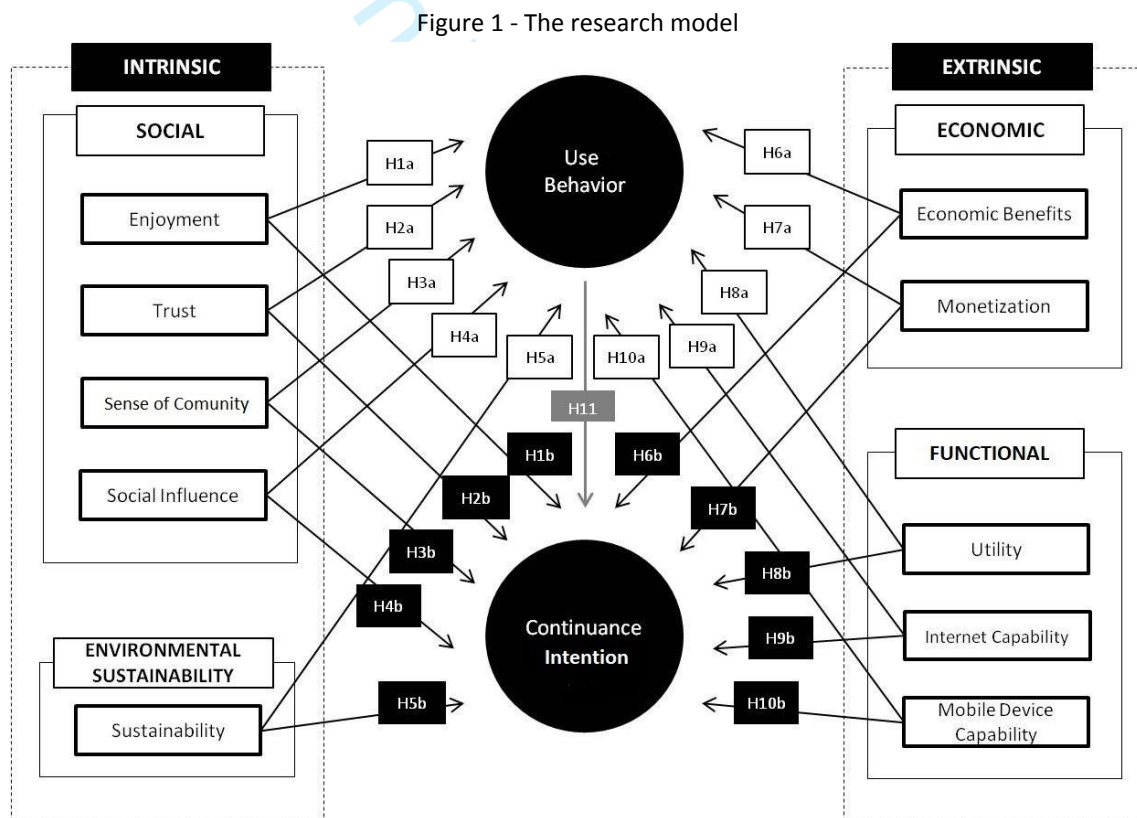


factors determining extrinsic motivated behaviour include economic benefits and monetization, utility, internet capability, and mobile device capability.

### 3. Research model and hypotheses

This study seeks to explain use and SE continuance intention, the two dependent variables of our study. SE continuance intention is defined as an individual's likelihood of continuing to use SE services.

We posit that individuals use behaviour in SE is determined by intrinsic and extrinsic motivations. Likewise, we posit that the same intrinsic and extrinsic motivations explaining use also lead to SE continuance intention. SDT is the theoretical lens chosen to theorize the relationship between individuals' motivations use of SE services and SE continuance. Moreover, according to SDT, after experiencing the benefits of use individuals are more likely to voluntarily engage in persistent SE practices, and consequently we posit that greater use of SE services will increase the likelihood of continued use of SE services. Exploration of use mediation effects between the chosen set of motives and SE continuance intention is also tested. The research model is shown in Figure 1.



#### 3.1 Social context hypotheses

Enjoyment is defined as the degree to which the activity of using a specific system is perceived to be pleasing and entertaining, regardless of any performance consequences resulting from system use (adapted from Venkatesh, 2000). Individuals using SE services available on an SE platform are not drawn to a website or app by potential economic or financial benefits only (Ek Styvén and Mariani, 2020; Shmidt, 2020; Xu and Schrier, 2019). Individuals using SE services mediated by digital platforms seek multi-sensory and emotional aspects while using a sharing service (Hwang and Griffiths, 2017), namely fun, enjoyment, and fantasy (Liu *et al.*, 2020). For instance, a consumer of accommodation services may choose between

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3 several types of accommodation on Airbnb: apartments, treehouses, houseboats, tents and tepees, old  
4 barns, castles, or even a blockbuster video store. The variety of options presented by Airbnb aims to  
5 produce a fun and memorable experience (Hwang and Griffiths, 2017) as opposed to an interesting  
6 shopping task. Previous research has shown that the enjoyment of interacting with others and  
7 contributing to the community has a positive effect on behavioural intentions in SE (Barnes and Mattsson,  
8 2017; Bellotti *et al.*, 2015; Hamari *et al.*, 2015; Li and Wen, 2019; Lin *et al.*, 2017; Tsou *et al.*, 2019).  
9 Enjoyment also arises from prosocial action that makes individuals feel socially connected to the cause  
10 they are helping (i.e. sustainability) or allows them to foresee the impact of their contribution (Albinsson  
11 and Yasanthi Perera, 2012; Hui and Kogan, 2018). Also, when individuals have a pleasurable experience  
12 using SE services, they recognize the value of sharing services and are more likely to engage in sharing  
13 practices. Thus, we posit:

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17 **H1a.** Enjoyment positively influences use of SE services.

18 **H1b.** Enjoyment positively influences SE continuance intention.

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21 Trust exists when an individual has confidence in an exchange partner's reliability and integrity (Morgan  
22 and Hunt, 1994). It is a psychological expectation governing all SE transactions as these occur between  
23 individuals that are often complete strangers. Research has analysed the role of trust, which has proven  
24 to be essential for choosing SE services (Ballús-Armet *et al.*, 2014; Möhlmann, 2015; Tussyadiah, 2015a).  
25 Empirical evidence also suggests that intentions to consume and provide goods or services in SE are  
26 positively influenced by trust toward peers, the digital platform, and the product being shared  
27 (Hawlitschek, Teubner and Weinhardt, 2016). Findings in the context of social networking from French *et*  
28 *al.*'s (2017) study show the relationship between trust and social capital and the contribution of both to  
29 the continued use of social networking sites. The impact of trust in CC usage has also been proven  
30 (Albinsson *et al.*, 2019). Airbnb users (both service providers and consumers) are more likely to continue  
31 using sharing economy services and disseminate their consumption experience once trust is built  
32 (Albinsson *et al.*, 2019; Wang *et al.*, 2020). Also, when trust is built individuals recognize the value of  
33 sharing services and are more likely to engage in sharing practices. Thus, we hypothesize that:

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37 **H2a.** Trust positively influences use of SE services.

38 **H2b.** Trust positively influences SE continuance intention.

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41 Sense of community is theorized in this study as a sense of belonging and identification with the  
42 community. It rests upon ideas of relatedness, expectation of fitting into a group and being a part of it,  
43 feelings of acceptance by the group, and a willingness to do something beneficial for the group (McMillan  
44 and Chavis, 1986). Indeed, sense of community was found to be an important driver for collaborative  
45 consumption and sharing in non-monetary contexts and an outcome of sharing (Albinsson and Yasanthi  
46 Perera, 2012). Evidence shows that sense of community has a positive impact on user satisfaction and the  
47 likelihood of choosing a car-sharing option again (Möhlmann, 2015). It is also a strong motivation for live-  
48 stream engagement (Hilvert-Bruce *et al.*, 2018) and knowledge sharing in social networking sites (Mojdeh  
49 *et al.*, 2018). In the context of social networking tourism sites, individuals use the website not to establish  
50 deep relationships with others but to have valuable connections that give them the opportunity to gather  
51 information about their destination and find a free place to stay. (French *et al.*, 2017). When individuals  
52 experience sense of belonging to a community, they recognize the value of sharing services and are more  
53 likely to engage in sharing practices. Thus, we hypothesize:

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57 **H3a.** Sense of community positively influences use of SE services.

58 **H3b.** Sense of community positively influences SE continuance intention.

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3 Social Influence is defined as the extent to which an individual perceives that important persons of  
4 reference believe he or she should use sharing services (Venkatesh *et al.*, 2012).

5 When choosing SE services, individuals might experience acceptance or disapproval from friends and  
6 family. Individuals' decisions toward sharing services will also be affected by online reviewers, usually  
7 total strangers. Consequently, review quality is used by individuals to enhance their knowledge on a  
8 sharing service and better assess it (Zhao *et al.*, 2018). Furthermore, high quality and consistent reviews  
9 allow individuals to associate with strangers of reference providing online reviews, assuring community  
10 integration. In both cases, individuals accept the influence of important persons of reference by complying  
11 with a specific behaviour and accepting common orientation when engaging in sharing activities. Direct  
12 and indirect forms of social influence on individuals' sharing behaviour have been identified by previous  
13 research (e.g. Bellotti *et al.*, 2015; Hawlitschek, Teubner, & Gimpel, 2016; Lutz, Hoffmann, Bucher, &  
14 Fieseler, 2018; K. Zhao *et al.*, 2018). Amongst them are individuals' social environment, reciprocation,  
15 persuasion, social referrals (Kong *et al.*, 2020), and social utility (Wang *et al.*, 2020). When individuals  
16 perceive that their behaviour is supported by important persons of reference, they recognize the value of  
17 sharing services and are more likely to engage in sharing practices. Therefore, the fourth hypotheses read  
18 as follows:  
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21

22  
23 **H4a.** Social influence positively influences use of SE services.

24 **H4b.** Social influence positively influences SE continuance intention.

### 25 26 27 3.2. Environmental context hypotheses

28 The idea that SE services are environmentally friendly is intrinsically related to sustainability. Choosing SE  
29 services is believed to reduce consumption because they make use of the idle resource capacity and  
30 diminish the manufacture of new products (Stokes *et al.*, 2014; Tussyadiah, 2015a). Moreover, SE is an  
31 ecological option as it preserves natural resources and is energetically efficient (Albinsson *et al.*, 2019). SE  
32 provides a sustainable mode of consumption essential for reducing negative environmental impacts  
33 (Piscicelli *et al.*, 2015) and an option for those guided by ideology concerns such as anti-consumption or  
34 the preference for greener consumption (Eckhardt *et al.*, 2010). Research has shown that increasing  
35 awareness of sustainability issues among Millennials translates into empathetic feelings toward SE services  
36 (Hwang and Griffiths, 2017). Contradictory findings indicate that although SE offers additional forms of  
37 consumption, it does not disrupt prevailing forms (Martin, 2016). Instead, it adjusts and adapts itself to  
38 the legal requirements of each specific sector (Geissinger *et al.*, 2019). Research also suggests that  
39 collaborative effort is required to control and measure externalities caused by SE and minimize negative  
40 environmental and social impacts such as the inefficient use of resources, tax evasion, and housing  
41 shortages (Leung *et al.*, 2019). When individuals can see the impact of their behaviour toward a  
42 sustainable environment, they recognize the value of sharing services and are more likely to engage in  
43 sharing practices. Therefore, we hypothesize that:  
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48 **H5a.** Sustainability positively influences use of SE services.

49 **H5b.** Sustainability positively influences SE continuance intention.

### 50 51 52 3.3. Economic context hypotheses

53 While using SE services individuals improve their financial situation, either because they receive extra  
54 money or save money. These are external rewards that prompt the use of SE services. In previous studies,  
55 economic benefits are the main expected outcome reported by participants in SE (Lee *et al.*, 2019) and a  
56 major driver for participants' intention to use SE services (Lee *et al.*, 2018). Economic value and reward  
57 were also found to be a motivation of hosts' continued use intention toward SE services (French *et al.*,  
58 2017; Wang *et al.*, 2020), and can be used to reinforce hosts' engagement in sharing activities by meeting  
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3 or even exceeding expected economic outcomes (Lee *et al.*, 2019). Economic benefits include price,  
4 money saving, reduced costs, financial flexibility, and lower ownership costs (Hamari *et al.*, 2015;  
5 Lambertson and Rose, 2012; Tussyadiah, 2015b; Wang, Xiang, *et al.*, 2019). When individuals experience  
6 economic benefits, they recognise the value of the sharing service and are more likely to engage in sharing  
7 practices. Therefore, we hypothesize that:  
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9

10 **H6a.** Economic benefits positively influence use of SE services.

11 **H6b.** Economic benefits positively influence SE continuance intention.  
12

13  
14 The monetization of excess inventory is one of the economic drivers behind the sharing economy as per  
15 the Owyang, J., Tran, C., & Silva (2013) market report. Monetization or making financial profit from  
16 personal property, such as homes, cars, bicycles, driveways, skills, or other idle or underutilized assets is  
17 the basis of the sharing economy (Lampinen *et al.*, 2015). Evidence from a qualitative study with Airbnb  
18 hosts indicates that monetization of unused space helps hosts select guests according to their preferences  
19 and control the volume and type of demand (Ikkala and Lampinen, 2015). When individuals make financial  
20 profit from personal property, they recognize the value of the sharing service and are more likely to  
21 engage in sharing practices. This leads us to the following hypotheses:  
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23

24 **H7a.** Monetization positively influences use of SE services.

25 **H7b.** Monetization positively influences SE continuance intention.  
26  
27

### 28 *3.4 Functional context hypotheses*

29  
30 Utility from using SE services derives from avoiding initial purchase costs and maintenance costs and the  
31 possibility of using products otherwise not affordable, or, in the case of hosts, utility is connected to  
32 maintenance costs reduction by sharing more and owning less. It is an external reward that prompts the  
33 use of SE services. In fact, consumers prefer to avoid the burdens of ownership but expect more  
34 advantages (European Economic and Social Committee, 2014). For instance, while measuring the utility  
35 of sharing against ownership in car-sharing, findings from Lambertson & Rose (2012) show that the price  
36 of sharing and the inconvenience of having to learn different car controls and setting the respective  
37 features to meet user preferences (technical costs) have a negative influence on the likelihood of choosing  
38 a sharing option. On the other hand, deal value perceived by the customer (transaction utility) and the  
39 number of places where cars are at a consumer's disposal (mobility utility) have a positive effect on the  
40 likelihood of choosing a sharing option. Utility is also instrumental for explaining participants' actions and  
41 decisions in crowdsourcing (Koch, 2017). Substitutability of SE services in comparison with other non-  
42 sharing options like ownership, has also an impact on the likelihood to choose SE services (Lambertson and  
43 Rose, 2012; Möhlmann, 2015). Utility is valued as an important attribute of SE services driving individuals  
44 to choose SE products or services and the sharing economy as substitutes for traditional products or  
45 services and traditional markets. Findings of Tsou *et al.* (2019) suggest that high utilitarian value from SE  
46 services can raise consumers' intention to continue using SE services. When individuals experience utility,  
47 they recognize the value of sharing services and are more likely to engage in sharing practices. This leads  
48 us to the following hypotheses:  
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52 **H8a.** Utility positively influences use of SE services.

53 **H8b.** Utility positively influences SE continuance intention.  
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57 Internet availability is an external trigger of use of SE services. As a technological platform itself, the  
58 Internet is creating more accessible and efficient alternative forms of consumption such as sharing,  
59 borrowing, and lending among individuals (Belk, 2014b; Davidson *et al.*, 2018). The Internet enables  
60 consumers to perform tasks faster and autonomously, eliminating the need for additional products and

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3 services (Radka and Margolis, 2011). Internet technology reduces the costs of transactions and matches  
4 consumers and service providers in real time (Benkler, 2004; Mair and Reischauer, 2017). The Internet is  
5 now critical for communication and accessing information in everyday life. Moreover, all communication  
6 between consumers and service providers is Internet-mediated from first contact to payment (Gupta *et*  
7 *al.*, 2019; Lu *et al.*, 2019). When individuals experience the abovementioned benefits, they recognise the  
8 value of sharing services and are more likely to engage in sharing practices. Accordingly, we hypothesize  
9 that:

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11  
12 **H9a.** Internet capability positively influences use of SE services.

13 **H9b.** Internet capability positively influences SE continuance intention.

14  
15  
16 Smartphones and tablets are external triggers of the use of SE services. They offer permanent and speedy  
17 internet connection, providing prompt access to information and services, regardless of time and space.  
18 Smartphone locating capabilities allow exact location of an individual or entity. Several applications  
19 employing these positioning features are available online and can be downloaded directly onto a  
20 smartphone. These applications are revolutionizing the transportation industry, enhancing ride and car  
21 sharing: consumers can locate a car in their immediate surroundings and promptly visualize the route to  
22 walk to the vehicle on the smartphone screen (Möhlmann, 2015). Smartphones are more efficient while  
23 obtaining user-tailored information during travel planning (Huang *et al.*, 2017), they guide people to and  
24 around cities and their attractions, enhance leisure experiences (Kirova and Vo Thanh, 2018), and  
25 negotiate immediate visitor needs. These new devices enable consumers to make informed and  
26 sustainable choices regarding resources and their alternative uses (Haucke, 2017; Pitt *et al.*, 2011). They  
27 also facilitate product sharing among consumers on a massive scale (Jiang and Tian, 2015). When  
28 individuals experience the abovementioned benefits, they recognize the value of sharing activities and  
29 are more likely to engage in sharing activities. This leads us to the following hypotheses:

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33 **H10a.** Mobile device capability positively influences use of SE services.

34 **H10b.** Mobile device capability positively influences SE continuance intention.

### 35 36 37 3.5 Use behaviour

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39 In fact, after accepting technology mediated SE services, individuals begin to actually use them. During  
40 this stage the assessment occurs of the benefits and impacts of use experience, which will increase the  
41 likelihood of continuing to use SE services. A recurrent and sustained use of SE services will contribute to  
42 the formation of a decentralized network of service providers and consumers, vital for a successful SE  
43 platform (Wang, Lin, *et al.*, 2019). Furthermore, recurrent and continued use will allow individuals to  
44 capitalize economic benefits and obtain the advantages of a product or service without the burdens of  
45 ownership. As with other technologies, the promise of SE depends on the use of its services  
46 (Bhattacharjee, 2001; Shaikh and Karjaluo, 2015). If individuals do not recognize the value of using SE,  
47 it is likely that they will stop using SE services. This leads us to the following hypothesis:

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50  
51 **H11.** Use behaviour positively influences SE continuance intention.

#### 52 53 3.5.1 The mediating effect of use behaviour between individuals' motivations and SE continuance 54 intention

55  
56 **We argue that individuals' motivations are fundamental to support their continued use of SE services  
57 through SE use.** Organizational context use has been proven to be a mediator in the relationships amongst  
58 technology, organizational and environment contexts, and SE continuance intention (Martins *et al.*, 2019).  
59 **We posit a similar role for SE use at the individual level. When using SE services individuals are intrinsically**  
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3 motivated by social and environmental concerns, but also extrinsically motivated by external rewards  
4 associated with the economic and functional contexts that lead to separate outcomes. Both types of  
5 motivations address the satisfaction of real needs. When individuals satisfy their real needs, they  
6 recognize the value of SE services and perceive use of SE services to be more positive. Consequently,  
7 greater use of SE services will increase the likelihood of continuing to use SE services.  
8

#### 9 10 *Social and environmental context hypotheses*

11  
12 Individuals using SE services need and want an experience that is both fun and memorable (Hwang and  
13 Griffiths, 2017). Individuals experience enjoyment from interacting with others (Barnes and Mattsson,  
14 2017) and through prosocial action (Hui and Kogan, 2018); Trust is a psychological expectation required  
15 to share with total strangers. Individuals need to have confidence in other users and in a service provider's  
16 ability to deliver a good service and take care of their needs (Wang *et al.*, 2020). Sense of community and  
17 social influence address the innate needs to connect with others and act based on principles. Research  
18 has proven that individuals are more willing to share when they belong to a group with similar interests  
19 and become actively involved with the local community (Hilvert-Bruce *et al.*, 2018; Mojdeh *et al.*, 2018);  
20 at the same time, having one's decisions secured by important persons of reference facilitates individuals'  
21 decision making (Zhao *et al.*, 2018). Sustainability concerns are addressed when individuals perceive that  
22 using SE services might help to preserve natural resources and is more energy efficient. It is then more  
23 likely that they increase their use of SE services (Albinsson and Yasanthi Perera, 2012). Memorable and  
24 meaningful use experiences and offering the opportunity to interact with others are important drivers of  
25 use behaviour in the sharing economy. Moreover, individuals seek to connect use with opinions that they  
26 respect to help them identify things they personally value, but also avoiding waste and destruction of  
27 value. When individuals experience these benefits, they will increase their use of SE services, and  
28 consequently the likelihood of continuing to use SE services will also increase.  
29

30  
31 **H1c.** The relationship between enjoyment and SE continuance intention is mediated by use behaviour.

32  
33 **H2c.** The relationship between trust and SE continuance intention is mediated by use behaviour.

34  
35 **H3c.** The relationship between sense of community and SE continuance intention is mediated by use  
36 behaviour.

37  
38 **H4c.** The relationship between social influence and SE continuance intention is mediated by use  
39 behaviour.

40  
41 **H5c.** The relationship between sustainability and SE continuance intention is mediated by use behaviour.  
42

#### 43 *Economic and functional context hypotheses*

44  
45 Economic benefits, the possibility to monetize idle resources, and utility are desirable extrinsic rewards.  
46 Individuals participating in the sharing economy improve their financial situation, either by saving or  
47 earning extra money (Lee *et al.*, 2018). They can also monetize idle resources using valuable personal  
48 items as a source of additional income (Lampinen *et al.*, 2015); they avoid initial purchase costs and  
49 maintenance costs, or obtain access to products otherwise not affordable. Therefore, individuals using SE  
50 services feel less dependent on companies and consequently more skilled. Their sense of empowerment  
51 and autonomy is reinforced by internet and mobile device capabilities. These technologies enable  
52 consumers to make informed and sustainable choices regarding resources and their alternative uses  
53 (Haucke, 2017; Pitt *et al.*, 2011), allowing them to participate when they want and need and self-organize  
54 their time (Radka and Margolis, 2011). When individuals experience these benefits, they will increase use  
55 of SE services, and consequently the likelihood of continuing to use SE services will also increase. Thus,  
56 we hypothesize:  
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**H6c.** The relationship between economic benefits and SE continuance intention is mediated by use behaviour.

**H7c.** The relationship between monetization and SE continuance intention is mediated by use behaviour.

**H8c.** The relationship between utility and SE continuance intention is mediated by use behaviour.

**H9c.** The relationship between internet capability and SE continuance intention is mediated by use behaviour.

**H10c.** The relationship between mobile device capability and SE continuance intention is mediated by use behaviour.

#### 4. Research methods

##### 4.1. Sample and data collection

An online survey was used to collect data. A prior test was conducted within a group of 30 individuals, not included in the main study, to examine whether the respondents experienced difficulty understanding the questions, as well as to test the reliability and validity of the scales. As the survey was administered in Portugal, the English version was independently translated into Portuguese by a professional translator. At the beginning, the survey provided a clear description of the sharing economy and examples to better target respondents. Then, statements representing the independent, dependent, and control variables (age and gender) were presented. Respondents were asked to indicate the extent to which they agreed with the statements. Finally, respondents were asked to provide general information and demographic data.

Data were collected using an online survey targeting users who already had experience with digital platforms in different sectors: accommodation, car and ride sharing, professional services, renting and selling pre-owned goods. The survey provided a clear description and examples of the sharing economy, to identify sharing economy users experienced in accessing products and services, renting or selling privately owned goods using digital platforms. An e-mail invited subjects to participate. 307 responses were collected, and 51 surveys were eliminated due to incomplete answers. 256 valid responses were left for subsequent analysis (143 early respondents and 113 late respondents). Of the 256 participants, 3% were service providers, 6% were consumers and 91% played both roles. As most respondents uses SE platforms to access, rent and sell privately owned goods, it would be more accurately to say that our sample focus on consumers of crowdsourced goods and services, partaking in both the demand and supply sides (Benoit *et al.*, 2017). Table 2 shows respondents' characteristics. 50.8% were men; almost 47% were older than 35 years old, and 49.2% were undergraduate students.

**Table 2** - Descriptive statistics of respondents' characteristics

Measure	Value	Frequency	%
Gender	Female	126	49.2
	Male	130	50.8
Age	<20	3	1.2
	20-24	20	7.8
	25-29	35	13.7
	30-35	79	30.9
	>35	119	46.5
Education	None or high School	52	20.3
	Undergraduate	126	49.2
	Graduate degree	78	30.5

#### 4.2. Development of measures

Measures were derived from prior research and wording was slightly adapted to fit the research context. Whereas content validity is assured by literature review, research variables are operationalized according to Appendix B. All items were measured using a seven-point range scale. Enjoyment, trust, sense of community, social influence, sustainability, economic benefits, monetization, utility, internet capability, mobile device capability, use behaviour, and continuance intention were measured on an interval ranging from “strongly disagree” to “strongly agree”. Gender and age were included as control variables in the research model.

### 5. Data analysis

#### 5.1 Preliminary analysis

Non-response bias was assessed by comparing early and late respondent groups. Kolmogorov–Smirnov (K–S) test results revealed an absence of non-response bias and as shown in Table 3, differences between sample distributions of the two groups were not statistically significant (Ryans, 1974). *As data were self-reported and respondents were asked to rate their perceptions on several variables, common method bias may arise (Shiau et al., 2020).* It was assessed with two procedures. First, we used Harman’s one-factor test and found that none of the factors individually explained the majority of the variance (Podsakoff et al., 2003; Podsakoff and Organ, 1986), i.e., the first factor explains 40.0% of the variance. Second, we used a marker-variable technique (Chin et al., 2012; Lindell and Whitney, 2001), which showed a theoretical variable in the research model. This irrelevant marker had 0.040 (4.0%) as the maximum shared variance with other variables, a value considered low according to Johnson, Rosen, & Chang (2011). No significant common method bias was found.

**Table 3 – Early and late respondents**

Constructs	Early (n=143)		Later (n=113)		Kolmogorov–Smirnov (K–S)
	Mean	S.D.	Mean	S.D.	P-value
Enjoyment (Enj)	4.924	1.078	4.979	1.307	0.519
Trust (Tru)	4.586	1.132	4.782	1.138	0.279
Community (Com)	4.402	1.230	4.618	1.377	0.134
Social influence (SI)	3.658	1.359	3.513	1.465	0.321
Sustainability	4.954	1.258	4.821	1.497	0.552
Economic benefits (EC)	5.069	1.294	4.941	1.485	0.985
Monetization (Mon)	5.103	1.278	5.053	1.222	0.968
Utility (Uti)	4.158	1.357	4.470	1.402	0.457
Internet capability (IC)	6.270	1.044	6.112	1.141	0.325
Mobile device capability (MDC)	5.558	1.439	5.417	1.479	0.676
Use behaviour (UB)	4.050	1.442	4.011	1.581	0.952
Continuance intention (INT)	4.702	1.670	4.582	1.695	0.667

#### 5.2 Data Analysis Procedures

Data were carefully assessed to detect missing values, suspicious response patterns, outliers, and data distribution (Hair et al., 2014). The research model was estimated and validated using the variance-based Partial Least Squares Path Modelling (PLS-PM) technique. Suitable for structural equation modelling (SEM), prediction, and theory building, PLS-PM analyses and assesses the significance of causal relationships among a set of latent variables. This technique seeks to maximize the explained variance in endogenous constructs and the predictive power of exogenous constructs (Hair et al., 2011). PLS-PM is not particularly demanding in terms of original data distribution and sample size, achieving good results



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3 with small samples (Hair *et al.*, 2012). It is also appropriate for studying complex models with several  
4 constructs (Chin, 1998). Since our aim is to predict use behaviour and continuance intention in the  
5 emergent phenomenon of the sharing economy, and data distribution was not normal ( $p < 0.01$  based on  
6 Kolmogorov–Smirnov’s test), PLS is the most appropriate method for this study (Hair *et al.*, 2014).  
7

8  
9 SmartPLS 3.0 software was used to assist in the process (Ringle *et al.*, 2015) and the two-step approach  
10 recommended by Anderson & Gerbing (1988) was followed. First, the global model fit was assessed using  
11 the standardized root mean square residual (SRMR), an approximate measure of model fit that quantifies  
12 the discrepancy between the empirical and estimated covariance matrices (Khan *et al.*, 2019). SRMR  
13 values below 0.08 suggest that the discrepancy is not substantial (Henseler *et al.*, 2016), suggesting a  
14 tenable model fit. Then, the measurement model was first tested for reliability and validity, and then the  
15 structural model was assessed. This approach tests the required psychometric properties of the scales  
16 used to measure the variables in the model, assuring valid assumptions concerning the strength and  
17 direction of the relationships among the variables (Wixom and Watson, 2001).  
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21 The analysis of each indicator’s reliability, composite reliability (CR), convergent validity of indicators  
22 associated with latent variables, and discriminant validity is included in the assessment of the reflective  
23 measurement model. Single indicator reliability was measured through each resulting loading, with 0.7  
24 being the required threshold of indicator reliability (Henseler *et al.*, 2009). Composite reliability assesses  
25 indicator suitability to define a latent variable and the threshold required is 0.70 (Hair *et al.*, 2012).  
26 Cronbach’s Alpha Coefficient supplements the analysis (Gefen and Straub, 2005), however, limitations to  
27 this measure have been pointed out by Hair *et al.* (2012). Average variance extracted (AVE) was used to  
28 assess convergent validity. AVE scores are expected to exceed 0.50 (Hair *et al.*, 2011). Verification of  
29 indicator loading significance is an important complementary analysis.  
30  
31

32  
33 Discriminant validity is the degree to which a latent variable’s indicators diverge from other latent variable  
34 indicators which form part of the model (Hair *et al.*, 2019). Two criteria were used to assess discriminant  
35 validity. Traditional metrics of discriminant validity include the observation of cross-loadings, as it requires  
36 a certain latent variable to share more variance with associated indicators than with those related to other  
37 latent variables of the model (Hulland, 1999). Additionally, the presence of discriminant validity is  
38 traditionally confirmed when the square root of the AVE for each construct is greater than the correlations  
39 between the construct in question and all the other constructs (Fornell and Larcker, 1981). However,  
40 recent research has proposed the replacement of traditional metrics by the Heterotrait–Monotrait Ratio  
41 of correlations (HTMT) as an alternative approach to assess discriminant validity (see Henseler, Ringle, &  
42 Sarstedt, 2015). If the value of the HTMT is lower than 0.9, discriminant validity is then confirmed.  
43  
44

45  
46 Analysis of the structural model includes the assessment of the determination coefficient,  $R^2$ . This  
47 coefficient represents the amount of variance of each latent endogenous variable explained by the model.  
48  $R^2$  parameters of 0.75, 0.50 or 0.25 are labelled as substantial, moderate, and weak, respectively (Hair *et al.*,  
49 2011). [Multicollinearity issues amongst independent variables are detected using the variance  
inflation factor \(VIF\). Absence of multicollinearity is suggested when VIF is less than the recommended  
threshold of 5 \(Sarstedt \*et al.\*, 2014\).](#) The analysis continues with the observation of the structural model’s  
50 path coefficients, signals, magnitudes, and statistical significance. The bootstrap resampling method was  
51 used to estimate the statistical significance of path coefficients (Henseler *et al.*, 2009), with 500 iterations  
52 of resampling (Chin, 1998). [Mediation is assessed following the guidelines of Zhao, Lynch, & Chen \(2010\).  
Indirect effects and its significance are first assessed, as a significant indirect effect is the main prerequisite  
to establish the presence of a mediating effect. We then assess the significance of direct effects, and  
whenever both effects are significant, we calculate the product of indirect and direct effects.](#)  
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## 6. Results

SRMR results (0.050) support a tenable model fit. Presented below are the assessments of both measurement and structural models.

### 6.1. Evaluation of the measurement model

Table 4 shows that all constructs exceed the suggested thresholds, with CR values ranging from 0.878 to 0.974, AVE values ranging from 0.737 to 0.957, and except for UB3, all item loadings exceeded 0.70, suggesting adequate convergent validity. UB3 loading is quite close to 0.7 and above the minimum (0.4) required by Hair, J. F., Hult, G. T. M., Ringle, C. M., & Sarstedt (2014), and was therefore not eliminated from the model.

**Table 4 - Quality criteria and factor loadings**

Constructs	Item	Loading	AVE	CR	CA	t-value
Enjoyment (Enj)	Enj1	0.875	0.751	0.923	0.889	16.353
	Enj2	0.848				16.885
	Enj3	0.881				18.805
	Enj4	0.862				16.008
Trust (Tru)	Tru1	0.916	0.784	0.916	0.862	17.138
	Tru2	0.861				11.755
	Tru3	0.879				13.744
Community (Com)	Com1	0.867	0.737	0.918	0.882	12.511
	Com2	0.874				12.834
	Com3	0.810				10.875
	Com4	0.880				13.341
Social influence (SI)	SI1	0.899	0.762	0.905	0.840	13.606
	SI2	0.937				18.996
	SI3	0.775				9.574
Sustainability	Sus1	0.928	0.829	0.951	0.932	18.234
	Sus2	0.917				13.359
	Sus3	0.891				9.349
	Sus4	0.907				12.145
Economic benefits (EC)	EB1	0.937	0.848	0.944	0.911	26.129
	EB2	0.903				23.123
	EB3	0.923				24.018
Monetization (Mon)	Mon1	0.891	0.800	0.923	0.875	17.634
	Mon2	0.891				19.532
	Mon3	0.900				18.747
Utility (Uti)	Uti1	0.849	0.741	0.896	0.825	15.218
	Uti2	0.902				20.017
	Uti3	0.831				15.008
Internet capability (IC)	IC1	0.966	0.924	0.973	0.959	24.995
	IC2	0.968				23.914
	IC3	0.950				19.491
Mobile device capability (MDC)	MDC1	0.964	0.926	0.974	0.960	32.368
	MDC2	0.969				36.092
	MDC3	0.955				27.711
Use behaviour (UB)	UB1	0.881	0.644	0.878	0.814	20.309
	UB2	0.883				21.242
	UB3	0.699				11.980
	UB4	0.730				14.632
Continuance intention (INT)	INT1	0.966	0.957	0.989	0.985	67.735
	INT2	0.986				81.817
	INT3	0.985				100.235
	INT4	0.975				80.758

**Note:** Average variance extracted (AVE), composite Reliability (CR), and Cronbach's alpha (CA).

As shown in Table 5, the square roots of AVEs (diagonal elements) are larger than the correlation between each pair of constructs (off-diagonal elements), indicating proper discriminant validity. Analysis of the cross-loadings table in Appendix C reveals that indicator loadings are larger than cross-loadings, providing additional support for discriminant validity. HTMT ratios are all below the recommended threshold of 0.9 (see Table 6), thus supporting discriminant validity.

**Table 5** - The square root of AVE (in bold diagonally) and factor correlation coefficients

	Mean	SD	Enj	Tru	Com	SI	Sus	EB	Mon	Uti	IC	MDC	UB	INT
<b>Enj</b>	4.948	1.183	<b>0.867</b>											
<b>Tru</b>	4.673	1.136	0.594	<b>0.886</b>										
<b>Com</b>	4.498	1.299	0.527	0.506	<b>0.859</b>									
<b>SI</b>	3.594	1.406	0.450	0.388	0.510	<b>0.873</b>								
<b>Sus</b>	4.895	1.367	0.487	0.389	0.554	0.374	<b>0.911</b>							
<b>EB</b>	5.013	1.381	0.497	0.434	0.550	0.392	0.591	<b>0.921</b>						
<b>Mon</b>	5.081	1.251	0.457	0.333	0.401	0.249	0.440	0.626	<b>0.894</b>					
<b>Uti</b>	4.296	1.383	0.454	0.405	0.449	0.331	0.468	0.484	0.518	<b>0.861</b>				
<b>IC</b>	6.200	1.088	0.501	0.365	0.257	0.171	0.381	0.442	0.491	0.304	<b>0.961</b>			
<b>MDC</b>	5.496	1.456	0.507	0.319	0.270	0.210	0.294	0.470	0.469	0.342	0.673	<b>0.962</b>		
<b>UB</b>	4.033	1.502	0.519	0.432	0.479	0.464	0.348	0.530	0.471	0.560	0.333	0.421	<b>0.803</b>	
<b>INT</b>	4.649	1.679	0.538	0.402	0.374	0.398	0.379	0.584	0.521	0.502	0.468	0.531	0.648	<b>0.978</b>

**Note:** SD: Standard deviations; Enj: Enjoyment; Tru: Trust; Com: Sense of Community; SI: Social influence; Sus: Sustainability; EB: Economic benefits; Mon: Monetization; Uti: Utility; IC: Internet capability; MDC: Mobile device capability; UB: Use behaviour; INT: Continuance intention.

**Table 6** - Hetrotrait–Monotrait ratio

Constructs	Enj	Tru	Com	SI	Sus	EB	Mon	Uti	IC	MDC	UB	INT
<b>Enj</b>												
<b>Tru</b>	0.675											
<b>Com</b>	0.586	0.574										
<b>SI</b>	0.520	0.453	0.596									
<b>Sus</b>	0.529	0.428	0.605	0.418								
<b>EB</b>	0.551	0.487	0.615	0.448	0.638							
<b>Mon</b>	0.517	0.379	0.451	0.288	0.477	0.698						
<b>Uti</b>	0.528	0.474	0.518	0.395	0.530	0.560	0.610					
<b>IC</b>	0.540	0.397	0.271	0.188	0.394	0.471	0.534	0.343				
<b>MDC</b>	0.547	0.347	0.286	0.235	0.303	0.502	0.510	0.387	0.701			
<b>UB</b>	0.591	0.509	0.563	0.564	0.383	0.605	0.553	0.669	0.363	0.462		
<b>INT</b>	0.573	0.433	0.391	0.437	0.386	0.616	0.560	0.557	0.481	0.545	0.710	

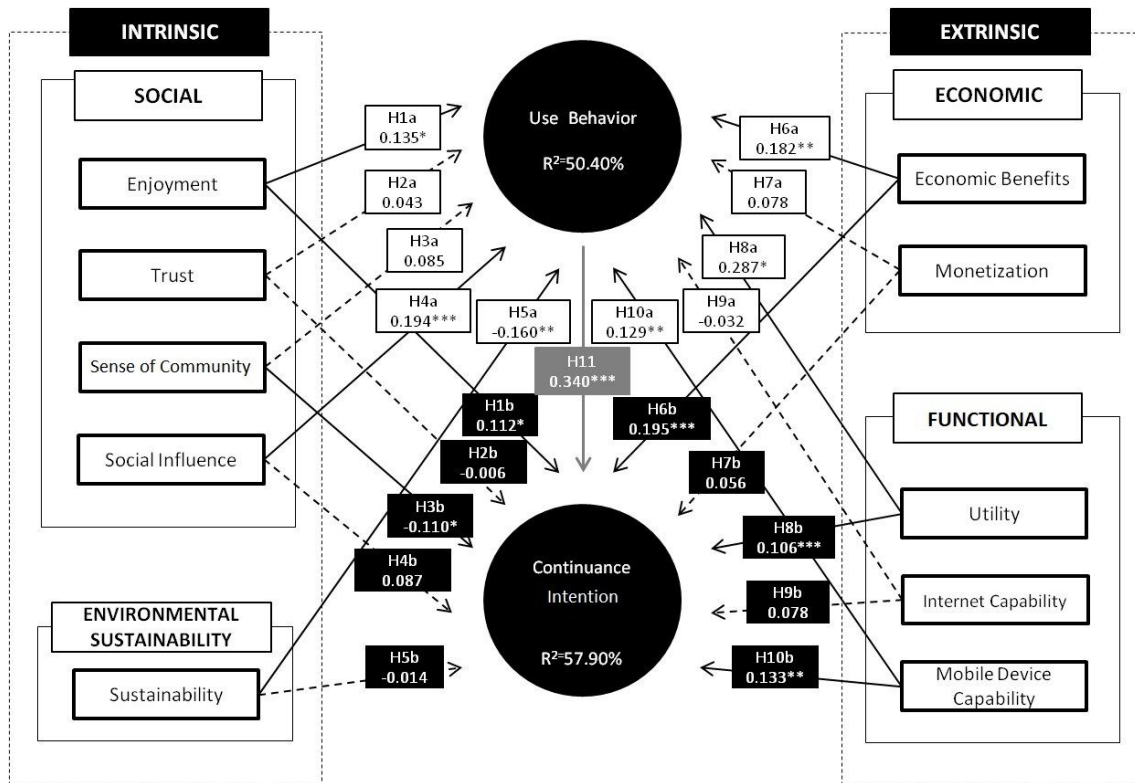
**Note:** Enj: Enjoyment; Tru: Trust; Com: Sense of Community; SI: Social influence; Sus: Sustainability; EB: Economic benefits; Mon: Monetization; Uti: Utility; IC: Internet capability; MDC: Mobile device capability; UB: Use behaviour; INT: Continuance intention.

The criteria for construct reliability, indicator reliability, convergent validity, and discriminant validity were fulfilled, legitimizing the choice of the scales used for measurement (Möhlmann, 2015).

## 6.2. Evaluation of the structural model

The research model explains 50.4% of the variation in use behaviour and 57.9% of the variation in continuance intention. VIF ranges from 1.099 (lowest) to 2.518 (highest), indicating absence of multicollinearity. The analysis of hypotheses and construct relationships was based on the examination of path coefficients, their signal, and statistical significance, as illustrated in Figure 2.

Figure 2 – Structural model results.



**Note:** \*\*\* p value < 0.01; \*\* p value < 0.05; \* p value < 0.10; significant. Dashed line arrow represents not statically significant path coefficients.

Our findings on use behaviour were as follows: (i) enjoyment ( $\hat{\beta} = 0.135$ ,  $t\text{-value}=1.938$ ,  $p\text{-value}<0.10$ ) and social influence ( $\hat{\beta} = 0.194$ ,  $t\text{-value}=3.564$ ,  $p\text{-value}<0.01$ ) exerted a positive and statistically significant effect on use behaviour, supporting H1a and H4A. Trust ( $\hat{\beta} = 0.043$ ,  $t\text{-value}=0.656$ ,  $p\text{-value}>0.10$ ) and sense of community ( $\hat{\beta} = 0.085$ ,  $t\text{-value}=1.150$ ,  $p\text{-value}>0.10$ ) exerted a positive influence on use behaviour, but not statistically significant. Thus, H2a and H3a are not supported. (ii) sustainability ( $\hat{\beta} = -0.160$ ,  $t\text{-value}=2.247$ ,  $p\text{-value}<0.05$ ) exerted a negative and statistically significant effect on use behaviour. Thus, H5a is not supported. (iii) economic benefits ( $\hat{\beta} = 0.182$ ,  $t\text{-value}=2.664$ ,  $p\text{-value}<0.05$ ) exerted a positive and statistically significant effect on use behaviour, supporting H6a, while monetization ( $\hat{\beta} = 0.078$ ,  $t\text{-value}=1.120$ ,  $p\text{-value}>0.10$ ) exerted a positive effect on use behaviour, but not statistically significant. Thus, H7a was not supported. (iv) utility ( $\hat{\beta} = 0.287$ ,  $t\text{-value}=4.285$ ,  $p\text{-value}<0.10$ ) and mobile device capability ( $\hat{\beta} = 0.129$ ,  $t\text{-value}=2.000$ ,  $p\text{-value}<0.05$ ) exerted a positive and statistically significant effect on use behaviour, supporting H8a and H10a, while internet capability ( $\hat{\beta} = -0.032$ ,  $t\text{-value}=0.549$ ,  $p\text{-value}>0.10$ ) exerted a positive effect on use behaviour, but not statistically significant. Thus, H9a was not supported.

Our findings on continuance intention were as follows: (i) enjoyment ( $\hat{\beta} = 0.112$ ,  $t\text{-value}=1.683$ ,  $p\text{-value}<0.10$ ) exerted a positive and statistically significant effect on continuance intention, supporting H1b. Sense of community ( $\hat{\beta} = -0.110$ ,  $t\text{-value}=1.750$ ,  $p\text{-value}<0.10$ ) exerted a negative and statistically significant effect on continuance intention. Thus, support was not found for H3b. Trust ( $\hat{\beta} = -0.006$ ,  $t\text{-value}=0.103$ ,  $p\text{-value}>0.10$ ) and social influence ( $\hat{\beta} = 0.087$ ,  $t\text{-value}=1.574$ ,  $p\text{-value}>0.10$ ) exerted a non-statistically significant effect on continuance intention. Thus, H2b and H4b were not supported. (ii) sustainability ( $\hat{\beta} = -0.014$ ,  $t\text{-value}=0.216$ ,  $p\text{-value}>0.10$ ) exerted a non-statistically significant effect on continuance intention. Thus, H5b was not supported. (iii) economic benefits ( $\hat{\beta} = 0.195$ ,  $t\text{-value}=2.606$ ,  $p\text{-value}<0.01$ ) exerted a positive and statistically significant effect on continuance intention, supporting H6b, while monetization ( $\hat{\beta} = 0.056$ ,  $t\text{-value}=0.870$ ,  $p\text{-value}>0.10$ ) exerted a positive but non-statistically significant effect on continuance intention. Thus, H7b was not supported. (iv) utility ( $\hat{\beta} = 0.106$ ,  $t\text{-value}=1.06$ ,  $p\text{-value}>0.10$ ) exerted a positive effect on continuance intention, but not statistically significant. Thus, H8b was not supported. (v) internet capability ( $\hat{\beta} = 0.078$ ,  $t\text{-value}=0.78$ ,  $p\text{-value}>0.10$ ) exerted a positive effect on continuance intention, but not statistically significant. Thus, H9b was not supported. (vi) mobile device capability ( $\hat{\beta} = 0.133$ ,  $t\text{-value}=1.33$ ,  $p\text{-value}>0.10$ ) exerted a positive effect on continuance intention, but not statistically significant. Thus, H10b was not supported.

value=1.809, p-value<0.01) and mobile device capability ( $\hat{\beta} = 0.133$ , t-value=1.946, p-value<0.05) exerted a positive and statistically significant effect on continuance intention, supporting H8b and H10b, while internet capability ( $\hat{\beta} = 0.078$ , t-value=1.417, p-value>0.10) exerted a positive but not statistically significant effect on continuance intention. Thus, H9b was not supported. (v) use behaviour ( $\hat{\beta} = 0.034$ , t-value=4.918, p-value<0.01) exerted a positive and statistically significant effect on continuance intention, supporting H11.

In summary, with respect to use behaviour, hypotheses H1a, H4a, H6a, H8a, and H10a were supported and hypotheses H2a, H3a, H5a, H7a, and H9a were not supported. Furthermore, regarding continuance intention, hypotheses H1b, H6b, H8b, H10b, H11 were supported and hypotheses H2b, H3b, H4b, H5b, H7b, and H9b were not supported.

### 6.3 Mediation testing

The study explores the mediation effects of use behaviour. Hypotheses H1c to H10c posit that use of SE services mediates the effect of individuals' motivations on SE continuance intention. Following the procedures explained in Section 5.2, we obtained the results reported in Table 7. Both indirect and direct effects of enjoyment, economic benefits, utility, and mobile device connectivity on SE continuance intention are significant and point in the same direction (a x b x c is positive), thereby supporting H1c, H6c, H8c, and H10c and confirming complementary mediation. Although the indirect effects of social influence and sustainability on SE continuance intention are significant, direct effects are not. H4c and H5c are thus supported, confirming the presence of indirect-only mediation. Only the direct effect of sense of community on SE continuance is significant. Therefore, H3c is not supported and evidence of non-mediation is provided. No mediating effects of use behaviour were found between trust, monetization, and internet capability on SE continuance intention, meaning that H2c, H7c, and H9c are not supported and evidence of non-mediation is provided.

**Table 7 – Hypotheses testing on mediation**

Effect of	Indirect effect (a x b) (t-value)	Direct effect (c) (t-value)	Sign (a x b x c)	Interpretation	Conclusion
Enj -> UB -> INT	0.046 * (1.874)	0.112 * (1.683)	+	Complementary mediation	H1c supported
Tru -> UB -> INT	0.015 ns (0.653)	-0.006 ns (0.096)	N.a	No effect non-mediation	H2c not supported
Com -> UB -> INT	0.029 ns (1.128)	-0.110 * (1.737)	N.a	Direct-only non-mediation	H3c not supported
SI -> UB -> INT	0.066 *** (2.728)	0.087 ns (1.568)	N.a	Indirect-only mediation	H4c supported
Sus -> UB -> INT	-0.054 ** (2.003)	-0.014 ns (0.201)	N.a	Indirect-only mediation	H5c supported
EB -> UB -> INT	0.062 ** (2.297)	0.195 *** (2.607)	+	Complementary mediation	H6c supported
Mon -> UB -> INT	0.026 ns (1.103)	0.056 ns (0.847)	N.a	No effect non-mediation	H7c not supported
Uti -> UB -> INT	0.097 *** (3.448)	0.106 * (1.796)	+	Complementary mediation	H8c supported
IC -> UB -> INT	-0.011 ns (0.543)	0.078 ns (1.324)	N.a	No effect non-mediation	H9c not supported
MDC -> UB -> INT	0.044 ** (1.993)	0.133 * (1.892)	+	Complementary mediation	H10c supported

Note: \* |t| > 1.64 and p-value = 0.10.; \*\* |t| > 1.96 and p-value = 0.05; \*\*\* |t| > 2.57 and p-value = 0.01.

## 7. Discussion

This study aims to understand the role of intrinsic and extrinsic motives on individuals' use and SE continuance through the lens of SDT, and consequently offer useful insights to brand managers and companies providing services through digital platforms on the SE. Consistent with findings at the organizational level, our findings show that individuals' SE continuance is significantly influenced by their

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2  
3 use of SE services. Moreover, use and SE continuance are both intrinsic and extrinsic motivated  
4 behaviours. Extrinsic factors are more prominent than intrinsic factors in explaining both use of SE services  
5 and SE continuance. Namely, use is the major and strongest predictor of SE continuance, followed by  
6 economic benefits, mobile device capability, enjoyment, utility, and sense of community. Utility is the  
7 major and strongest predictor of use, followed by social influence, economic benefits, enjoyment, mobile  
8 device capability, and sustainability.  
9

#### 10 11 *Social context*

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13  
14 Enjoyment was found to have a positive and statistically significant impact on both use and SE continuance  
15 intention. These findings extend the ones from early research (i.e. Bellotti et al., 2015; Hamari et al., 2015)  
16 explaining participation in SE, and supporting findings from research on continuance intention (Gan and  
17 Li, 2018; Lin et al., 2017; Tsou et al., 2019). This suggests individuals also value hedonic motivations past  
18 the initial stage of adoption, more specifically, greater enjoyment and excitement will lead to greater use  
19 of SE services.  
20

21  
22 Trust did not exert a significant effect on either use behaviour or continuance intention. These findings  
23 are unexpected and contrary to published research findings that provide evidence for trust as a facilitator  
24 of continuance intention (Kong et al., 2020). An explanation might be that specific features should be  
25 accounted for when conceptualizing trust. Examples include service provider profile picture (Abramova  
26 et al., 2015) or other attributes of the product, familiarity with the digital platform (Mittendorf, 2018),  
27 security mechanisms offered by digital platforms, especially those related to the product being shared.  
28 Moreover, when conceptualizing trust, it is important to explicitly address trust toward peers, the digital  
29 platform or the product being shared.  
30

31  
32 Unlike Albinsson et al.'s (2019) study, which provides evidence for the impact of "we" identity on use,  
33 sense of community did not exert a significant impact on use. Also, but unexpected, sense of community  
34 has a negative impact on continuance intention. This is not consistent with previous findings on the  
35 likelihood of choosing a sharing economy service again (Möhlmann, 2015). Findings might indicate that a  
36 high sense of community inhibits SE continuance intention. One possible explanation might be that  
37 renting or selling personal goods and accessing products and services in a sustained manner, individuals  
38 become members of several communities, making it difficult to accept the influence of a single community  
39 or creating a sense of identification with a single community (Cheung et al., 2011).  
40  
41

42  
43 Social influence was found to have a positive and statistically significant effect on use behaviour. Following  
44 utility, social influence was the second strongest predictor of use. In line with (Lutz et al., 2018) study, our  
45 results show norms are extremely important and that the greater the support provided by important  
46 persons of reference, the greater the use of SE services. This means that the intention to continue to use  
47 SE services is not contingent on social approval. Moreover, this findings are in line with Lambertson and  
48 Rose (2012) research, which shows that benefits accrued in the form of support by important groups of  
49 reference do not have a significant effect on consumers' propensity to choose commercial sharing rather  
50 than an ownership option. Likewise, Lin et al. (2017) research also provides evidence for the lack of  
51 significant influence of social influence on the use of Airbnb services.  
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#### 54 55 *Environmental context*

56  
57 Sustainability has a negative and statistically significant effect on use behaviour. Although evidence of  
58 effect is provided, the sign is reversed. This finding is not shared by Albinsson et al. (2019), who find that  
59 perceived sustainability is the strongest predictor of use of four different SE services. Research on sharing  
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1  
2  
3 economy suggests that while digital platforms facilitate access to goods and services, they also increase  
4 consumption. The findings of our study might suggest that individuals with high environmental concerns  
5 may restrain use of SE services. While unexpected, these results are consistent with the conceptualization  
6 of sustainable consumption by Ozanne & Ballantine (2010), which emphasizes acts of rejecting and  
7 reducing. Similar findings in relation to satisfaction with P2P accommodation were obtained by  
8 Tussyadiah (2016). Guests advocating a sustainable lifestyle had a less satisfying stay. Ultimately, this may  
9 also indicate that individuals do not choose SE services for environmental reasons. Findings related to  
10 sustainability's effect on continuance intention were not statistically significant.  
11  
12

#### 13 *Economic context*

14  
15  
16 Findings from our study show that economic benefits are the third strongest predictor of use of SE  
17 services. This is consistent with early research (Hamari *et al.*, 2015; Lamberton and Rose, 2012;  
18 Tussyadiah, 2015a), suggesting that saving money and improving one's financial situation are the most  
19 expected outcomes of individuals using SE services. Economic benefits not only explain intention to  
20 participate in the sharing economy (Lee *et al.*, 2018), but also predict use and SE continuance intention.  
21 Our study shows that economic benefits are the main extrinsic reward explaining SE continuance  
22 intention, supporting the results of previous studies (French *et al.*, 2017; Wang *et al.*, 2020).  
23  
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25 The effects of monetization on use and continuance intention are not significant.  
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#### 28 *Functional context*

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30 Utility is the strongest predictor of SE use. Findings related to utility are consistent with early research  
31 positing the influence of utility on use of SE services (Lamberton & Rose, 2012; Möhlmann, 2015). This  
32 means maximalization of utility is a powerful extrinsic motivation responsible for SE use. Individuals  
33 believe that sharing is as good as owning and that they prefer sharing economy over the traditional  
34 economy. Our study also provides evidence for the positive effect of utility on SE continuance intention,  
35 demonstrating that intention to continue to use a SE is extrinsically motivated by utility, in a way that it  
36 well substitutes ownership. However, utility plays a lesser role when compared to use. Similarly to  
37 published research utility is outplayed by enjoyment while explain SE continuance intention (Tsou *et al.*,  
38 2019).  
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41 The effects of internet capability on use and continuance intention are not significant. Findings show that  
42 although individuals find the internet useful and convenient, other external factors lead to increased use  
43 and greater continuance intention. These findings echo the results presented by Möhlmann (2015).  
44  
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46 Findings related to mobile device capability are consistent with early research positing the influence of  
47 mobile device capability on use of SE services (Möhlmann, 2015). Our study also provides evidence for  
48 the positive effect of mobile device capability on SE continuance intention, demonstrating that higher  
49 instrumental value from using mobile devices while using SE services fosters individuals' intention to  
50 continue using SE services (Tsou *et al.*, 2019).  
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53 Results from our study provide evidence for the positive influence of use on continuance intention. Results  
54 show that greater use of SE services will lead to greater continuance intention. Greater use will allow  
55 individuals to accrue the benefits of using SE services and recognize their value, which in turn will increase  
56 individuals' engagement on sharing activities and consequently continuance intention.  
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59 Finally, the mediating effects of use between enjoyment, social influence, sustainability, economic  
60 benefits, utility, and mobile device capability and SE continuance intention are confirmed. Individuals are

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3 more likely to increase their use of SE services if they experience a memorable use of SE services and are  
4 supported by important people of reference, allowing them to foresee the impact of their contribution,  
5 and providing the chance to improve their financial situation (either by saving money or earning extra  
6 money and avoiding the burdens of ownership). The recurrent use of SE services will allow individuals to  
7 accrue the benefits of SE services, which will increase the likelihood to continuing to use SE services.  
8 Therefore, enjoyment, social influence, sustainability awareness, economic benefits, utility, and  
9 availability of mobile devices are fundamental in explaining use and SE continuance intention. On one  
10 hand, each type of motivation directly affects individuals' use of SE services. On the other hand, the effect  
11 of use between enjoyment, economic benefits, utility, mobile device capability and SE continuance  
12 intention is complementary, indicating that use is a mediator, consistent with our theoretical framework  
13 (Zhao *et al.*, 2010). Furthermore, the presence of a significant direct effect can indicate an omitted  
14 mediator (Zhao *et al.*, 2010). This possibility might be further investigated in future work.  
15 Notwithstanding, complementary mediation of use between enjoyment, economic benefits, utility,  
16 mobile device capability, and SE continuance intention is confirmed. Use effects between social influence  
17 and sustainability on SE continuance intention are indirect only, meaning that the effects of these two  
18 types of motivation on SE continuance are contingent on use. In the case of sustainability, greater  
19 sustainability concerns will lead to less use, and greater use will lead to less intention to continue to use.  
20 The effect of sense of community on SE continuance is direct only. Neither direct nor indirect effects of  
21 trust, monetization, and internet capability on SE continuance were significant, suggesting the need for  
22 further examination.  
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### 28 *7.1. Theoretical implications*

29  
30 Implications for theory are twofold. First, our study contributes to the academic literature on continuance  
31 intention in the context of the sharing economy, showing that along with satisfaction and confirmation,  
32 use plays a crucial role in explaining continuance intention. The relationship between use and continuance  
33 intention is already explored in IT continuance, but to our knowledge it is a novel contribution at the  
34 individual level, in the context of the sharing economy. Most studies on the sharing economy focus on  
35 adoption, namely on motivations and drivers to participate in the sharing economy (i.e. Festila & Müller,  
36 2017; Moeller & Wittkowski, 2010; Tussyadiah, 2015a), the role of trust, trustworthiness of peers, and  
37 reputation (i.e. Abramova *et al.*, 2015; Hawlitschek, Teubner, & Weinhardt, 2016; Teubner, Hawlitschek,  
38 & Dann, 2017), and on the platforms (i.e., Sutherland & Jarrahi, 2018; Teubner & Flath, 2015; Trang, Busse,  
39 Schmidt, Falk, & Marrone, 2015). Although earlier research has provided useful and important insights for  
40 understanding adoption, the current study extends the understanding of SE by exploring motivations for  
41 post-adoption behaviour. Previous studies on post-adoption behaviour have not explored the relationship  
42 between use and continuance intention in the context of the sharing economy, having usually focused on  
43 antecedents of confirmation and satisfaction, or combining social and technical factors to explain  
44 continuance intention. Furthermore, the examination of use as a mediator strengthens the role of  
45 continued use as a major driver for individuals' engagement with SE (Bhattacharjee, 2001). Therefore, our  
46 findings enrich the understanding of individuals' SE continuance intention. Second, using SDT as a  
47 theoretical lens provides a deeper understanding of individuals' real needs and tackles the real reasons  
48 behind use and intention to continue to use SE services. The validated model combines a comprehensive  
49 set of motives supported by research and derived from social, environmental, economic, and functional  
50 contextual characteristics of SE, demonstrating the benefits of using an all-inclusive approach to assess  
51 use and SE continuance intention.  
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### 57 *7.2. Practical implications*

58 Our findings suggest that use of SE services and continuance intention are intrinsic and extrinsic motivated  
59 behaviours. Our model will allow brand managers and companies providing services through digital  
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3 platforms to address individuals' needs in order to stimulate voluntary engagement in persistent SE  
4 practices. They must keep in mind that extrinsic factors are prominent predictors of use and continuance  
5 intention for individuals acting both as service providers and consumers; namely economic benefits,  
6 utility, and mobile device capability. Accordingly, economic reward and cost-effective services should  
7 continue to be reinforced as benefits associated with the use of sharing economy options, as they are  
8 amongst the three main expected outcomes of individuals acting both as consumers and service  
9 providers. Brand managers should advertise and promote utility of SE services, stressing its advantages in  
10 relation to the traditional market: greater flexibility and convenience, and quicker and independent access  
11 to products and services otherwise not accessible. Additionally, our study confirms individuals' reliance  
12 on mobile devices, especially regarding continued used. Mobile devices are decisive to empower  
13 individuals to participate at need and self-organize their time, as they help to blur time and space  
14 limitations.  
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17  
18 Findings also confirm the relevance of mechanisms fostering intrinsic motivated behaviour, addressing  
19 individuals' needs for social influence, enjoyment, sense of community and sustainability. Social influence  
20 is the strongest intrinsic factor explaining use, followed by enjoyment. This means that the use of SE  
21 services shows acceptance and compliance with orientation and norms of important persons of reference  
22 (i.e., friends, family, and workplace colleagues) of individuals' social groups. Moreover, individuals expect  
23 more than a normal shopping task, they expect a fun and exciting use experience. Brand managers and  
24 companies providing SE services should advertise the use of their SE services as a practise that renders  
25 the values of its users, e.g., modernity or innovativeness. Brand managers can put in place a  
26 communication strategy that emphasizes the values that set their customers apart and implement it in  
27 their system design, keeping it up to date with features that provide a memorable use experience.  
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30  
31 The unexpected findings related to the effect of sustainability on use may indicate that consumers with  
32 high sustainability concerns may not choose sharing economy services based on negative effects such as  
33 housing shortages and tax evasion, which are often associated with this alternative way of consumption.  
34 Digital platforms should carefully brand their services associating technology with positive environmental  
35 impacts and greener behaviours, communicating use of SE services as an ecological and energy efficient  
36 option that preserves natural resources and avoids loss of value to counter the idea of increased  
37 consumption and other negative impacts.  
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41 Use is the most important antecedent of SE continuance intention. Brand managers should focus on  
42 offering a use experience that makes individuals feel good about their choices, by addressing the needs  
43 previously mentioned, namely utility, social influence, economic benefits, enjoyment, mobile device  
44 capability, and sustainability concerns. Addressing individuals' real needs allows brand managers to  
45 provide their customers with benefits they recognize as valuable and start to capitalize on them.  
46 Consequently, individuals will be more willing to engage in voluntary and persistent SE practices.  
47 Moreover, mediating analysis revealed that use mediation effects are indirect only regarding  
48 sustainability and social influence. This means that the effect of these two drivers on SE continuance  
49 intention is contingent on use. In order to address sustainability concerns, brand managers should clearly  
50 communicate impact on the environment of using their SE services during individuals' experience, and  
51 likewise for the status values inherent to the brand.  
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54  
55 The mediation effect of use between enjoyment, economic benefits, utility, and mobile device capability  
56 and SE continuance intention is complementary. According to Zhao *et al.* (2010), this indicates that a  
57 mediator might be missing from our theoretical framework. However, the mediator role of use is  
58 confirmed. For the abovementioned reasons, this study offers a framework that will allow practitioners  
59 to maintain existing customers and build up a decentralized network of customers, focusing on individuals  
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3 acting both as consumers and service providers. Practitioners may find it beneficial to increase use of  
4 services provided, which will make their business viable and successful in the long term.  
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7 Finally, this study informs the consumer so that the sharing economy can develop its potential alongside  
8 an economy based on the ownership of private property (Heinrichs and Grunenberg, 2013).  
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### 10 *7.3. Limitations and future research*

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12 There is still a great deal to do in order to better understand the opportunities and limitations of the  
13 sharing economy. This study was carried out in Portugal. Future research should assess these issues in  
14 other countries, replicating our investigation and comparing the results. Different services and products  
15 might be added, or the study can be confined to a specific context. This study addresses two of the three  
16 types of motivation proposed in the SDT framework (Ryan and Deci, 2000b): intrinsic and extrinsic. Future  
17 research should consider the role of amotivation in post-adoption behaviours.  
18  
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20  
21 Our sample includes individuals acting as consumers and service providers (prosumers) and a small  
22 percentage of one-sided users (3% acting as service providers and 6% acting as consumers). We  
23 acknowledge this fact as a limitation of our work. Future work should explore the role of prosumers, using  
24 adequate means for targeting and differentiating this role, but also seek differences in motivations among  
25 the three groups of users: service providers, consumers, and prosumers.  
26  
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28  
29 The number of hypotheses not supported suggests that the investigation of complex constructs such as  
30 social influence, trust, sense of community, sustainability, monetization, and Internet capability might  
31 benefit from some refinement in conceptualization and the use of qualitative data for a more detailed  
32 analysis. The analysis of use should be complemented with other measures of use, such as duration and  
33 intensity, and with data provided by qualitative methods of research. Other control variables should also  
34 be considered, such as experience of using SE services or familiarity with SE platforms. Further research  
35 should also consider the role of other mediators.  
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## 37 **8. Conclusions**

38  
39 The sharing economy is becoming popular all over the world. However, due to its novelty it has received  
40 limited attention in the literature so far. Most studies on sharing economy focus on adoption. There is  
41 little empirical support for use and continuance intention in the novel context of the sharing economy.  
42 Furthermore, the mediating effects of use between individuals' motivations and their SE continuance  
43 intentions has hardly been explored. To address these gaps, a context tailored research model is  
44 developed and grounded on Self-determination theory (SDT). The model is empirically tested based on a  
45 sample of 256 respondents. Both intrinsic and extrinsic motivations are found to be major predictors of  
46 use of SE services and SE continuance intention, while intrinsic motivation play a lesser role.  
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50 Enjoyment, social Influence, sustainability, economic benefits, utility, and mobile device capability are  
51 found to be statistically significant in explaining use behaviour. However, trust, sense of community,  
52 monetization, and internet capability are not believed important in explaining actual use of sharing  
53 economy services. The findings of our study might suggest that individuals with high environmental  
54 concerns may restrain their use of SE services. Results also indicate that enjoyment, sense of community,  
55 economic benefits, utility, mobile device capability, and use behaviour have a direct effect on SE  
56 continuance. Trust, social influence, sustainability, monetization, and internet capability are not believed  
57 important in explaining continuance intention. This study shows that continuance intention is influenced  
58 by current use of SE services, which, to our knowledge, is a novel contribution in the context of the Sharing  
59 Economy. Moreover, the study emphasizes the mediation effect of use between intrinsic and extrinsic  
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factors and SE continuance intention. This study provides further evidence that the assessment of SE continuance intention benefits from an approach grounded on SDT including social, environmental, economic, and functional factors derived from SE context, and provides researchers and practitioners with richer insights.

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## Appendix B - Measurement items

Constructs	Items	Source
Enjoyment (Enj)	I think sharing economy is enjoyable.	Enj1
	I think sharing economy is exciting.	Enj2
	I think sharing economy is fun.	Enj3
	I think sharing economy is interesting.	Enj4
Trust (Tru)	I think sharing economy offers trust.	Tru1
	I think the other users of sharing economy are truthful.	Tru2
	I think sharing economy providers give trust on the service they provide.	Tru3
Sense of community (Com)	The use of sharing economy allows me to belong to a group of people with similar interests.	Com1
	The use of sharing economy makes me feel like I'm more involved in the community.	Com2
	The use of sharing economy allows me to gain recognition from community.	Com3
	The use of sharing economy allows me to know people with similar interests.	Com4
Social influence (SI)	People who influence my behaviour think that I should use sharing economy.	SI1
	People who are important to me think that I should use sharing economy.	SI2
	Sharing economy is a status symbol in my environment (Image).	SI3
Sustainability (Sus)	Sharing economy helps save natural resources.	Sus1
	Sharing economy is a sustainable mode of consumption.	Sus2
	Sharing economy is efficient in terms of using energy.	Sus3
	Sharing economy is environmentally friendly.	Sus4
Economic benefits (EB)	My participation in sharing economy benefits me financially.	EB1
	My participation in sharing economy can improve my economic situation.	EB2
	My participation in sharing economy saves me money.	EB3
Monetization (Mon)	Sharing economy allows idle resources to be shared and often monetized.	Mon1
	Sharing economy allows me to utilize something of value as a source of profit.	Mon2
	Sharing economy allows me to monetize products that I usually don't use.	Mon3
Utility (Uti)	I believe that sharing economy substitutes quiet well an own product.	Uti1
	I think sharing products is as good as owning products.	Uti2
	I prefer sharing economy over the traditional economy.	Uti3
Internet capability (IC)	The Internet is useful to access sharing economy.	IC1
	The Internet enables me a convenient use of sharing economy.	IC2
	Using the Internet increases the productive use of sharing economy.	IC3
Mobile device capability (MDC)	My mobile device is useful for consuming sharing economy.	MDC1
	My mobile device enables me a convenient use of sharing economy.	MDC2
	Using my mobile device increases the productive use of sharing economy.	MDC3
Use behaviour (UB)	I use the sharing economy to access services instead of buying.	UB1
	I use the sharing economy to access products instead of buying.	UB2
	I use the sharing economy to rent products I own.	UB3
	I use the sharing economy to sell products I own.	UB4
Continuance intention (INT)	I intend to continue using sharing economy, rather than discontinue its use.	INT1
	I plan to continue using sharing economy.	INT2
	I will continue using sharing economy.	INT3
	I predict I will continue using sharing economy in the future.	INT4