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Understanding the Sharing Economy – Drivers and Impediments for Participation in Peer-to-Peer Rental

by

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Abstract

As peer-to-peer coordinated products and services increasingly constitute competition for traditional businesses in many areas, understanding the underlying user motives of provision and consumption is key—not only for business operators, but also for researchers investigating such markets. In this article, we develop a questionnaire for assessing motives for and against participating in what is casually referred to as the “Sharing Economy.” More specifically, we focus on peer-to-peer rental services and investigate drivers and impediments for user activity in such markets by means of an online survey with over 600 participants.

1. Introduction

Today’s e-commerce landscape experiences the development of new forms of markets. Whereas the last decade was mainly characterized by B2C e-commerce [18], we now encounter the rapid growth¹ of consumer-to-consumer (C2C) market platforms. On such platforms, private persons come together to share goods as well as services in large scale “peer-to-peer” networks that often promise a more social, sustainable, varied, convenient, anti-capitalistic, or inexpensive alternative to usual means of consumption [5, 29, 31], whereas the set of possible motives goes on. The attention of researchers all over the world has shifted to this phenomenon, often blurrily referred to as the “Sharing Economy.”

The spectrum of what is offered on C2C market platforms has outgrown the mere resale of spare goods (e.g. on Ebay) to more advanced forms of short- and long term rental [10], supported by IS as well as legal and insurance frameworks. Platforms like Airbnb or RelayRides support private persons in renting out their idle rooms or vehicles. Other platform providers like

Lyft, ParkingList, Lendico, or GearCommons facilitate the coordination of rides [24] and parking lots, consumer credit, or outdoor equipment, resulting in large-scale “prosumer” networks.

It is, however, still not entirely clear which factors in fact drive and which hinder participation in peer-to-peer services, and which factors inhibit its more widespread adoption [31].

Consequently, there is a great need for empirical research concerning users’ personal motives for or against partaking in information system-mediated (IS-mediated) “Sharing Economy” platforms and also on how strong those motives take effect. In order to address this need, we propose and validate a questionnaire for assessing user motives for and against participating in peer-to-peer rental services. Based on an exploratory survey (Survey 1) and existing literature on sharing and peer-to-peer markets, we identify 24 potential drivers and impediments. We develop questionnaire-based measurement scales for these motives and validate them by means of exploratory factor analysis on data from a second online survey (Survey 2) with 605 participants.

Our study makes two core contributions: First, we work out and define motives for partaking in peer-to-peer rental services, assessing a broader spectrum than any preceding work in this context (see Table 1). In particular, this includes the differentiation of provision and use [31], users and non-users, and different domains of “sharing.” Second we develop and validate a measurement model for those motives. Even though peer-to-peer rental services represent a well-delimited subset of “Sharing Economy” activities, they still allow for a wide range of possible motives, since i) the shared resource can vary much in type, and ii) there exist at least two roles in such systems, providers and consumers, whereas often users take both roles. In the process of this article, we will further assess the crucial difference between the “Sharing Economy” and peer-to-peer rental services.

In sum, we do not claim to provide a comprehensive theoretical building of sharing behavior. By assessing the multiplicity of potential

¹ exceeding 25% p.a., <http://goo.gl/MGcegM>

drivers and inhibitors, we rather intend to set the stage for further research in that direction.

The remainder of this article is organized as follows. In Section 2 we briefly illustrate our view on terms within the scope of the “Sharing Economy”, as we believe the plethora of existing (and often conflicting) notions and perspectives would unnecessarily harden a good understanding of this article. In Section 3, we outline our methodological approach and how we relate our research to well-established theoretical concepts of IS research. We then identify motives for and against sharing behavior by means of a literature analysis (Section 4) and an exploratory pre-study (Section 5). Section 6 presents the conceptualization of the identified constructs, whereas we illustrate the design of the construct validation study in Section 7 and its results in Section 8. Eventually, Section 9 concludes.

2. “Sharing Economy,” a cursed buzzword

Rachel Botsman put it quite correctly: “The Sharing Economy lacks a shared definition.”² Much of the recent press coverage, e.g., by the Economist, Forbes, Wired, Fortune and the Harvard Business Review³ revolves around “Sharing Economy” related topics. Withal the fundamental question of what exactly characterizes the “Sharing Economy” remains often inchoately or inconsistently answered. We hence may approach the matter by looking at some of the most prominent descriptions on the market. Botsman and Rogers [10] divided the “Sharing Economy” into three main areas: *product service systems* (e.g., car2go), *redistribution markets* (e.g., thredUp) and *collaborative lifestyles* (e.g., Taskrabbit). According to them, all these systems share underlying principles essential to make them work: *critical mass*, *idling capacity*, *belief in the communes*, and *trust between strangers*.

Stephany [40, p. 9] denotes the “Sharing Economy” with “*the value in underutilized assets and making them accessible online to a community, leading to a reduced need for ownership of those assets.*”

In recent IS related research [11, 38], the “Sharing Economy” is mainly viewed as an umbrella term covering related phenomena such as “product-service systems” [35], “the mesh” [17], “collaborative consumption” [10], “access-based consumption” [4], and “commercial sharing systems” [27]. The “Sharing Economy” is not a new phenomenon. In its present form, it is the result of a tremendous transformation of

long existing concepts (flea markets, ride-sharing agencies, neighborly help, etc.) by IS, leveraging scope and reducing transaction costs [45, 25].

Under the guise of the notion of sharing, many new markets are accessed and formed, enabled, and facilitated by IS. Platforms like Airbnb or Uber are valued at more than USD 10 billion to date⁴. It happens to be just those two examples, provoking the loudest criticisms: some deem the “Sharing Economy” as evil outright and as “neoliberalism on steroids.”⁵ Bellotti et al. [6]—more differentiated as we mean—notes that many activities put into the “Sharing Economy” are just not about “sharing” in the proper sense of the word at all, but rather about economic aspects such as selling, buying, and renting—in short: making or saving money by “pseudo-sharing.” Whether or not some activity should be considered “sharing” will thus not only depend on provider and user but on its purpose and specific circumstances. In order to state the scope of our research more precisely, we thus focus on a more clearly demarcated aspect in the scope of the “Sharing Economy”, videlicet peer-to-peer rental. Without precluding short term peer-to-peer business relationships, we think of “sharing” as the provision of resources used by providers to be *also* used by others, or, following Belk [5, p. 127] “the act and process of distributing what is ours to others for their use and/or the act and process of receiving or taking something from others for our use.”

Resources shared on peer-to-peer rental platforms may be goods, such as apartments, tools, cars, entertainment equipment, or clothing, etc. However, they may also have service character, as for instance a spare car seat on the way from Amsterdam to Zagreb, or the use of the living-room couch for an overnight stay. The transition between product and service characteristics in this context is often smooth. Which motives encourage people to or prevent them from engaging in peer-to-peer rental activities will be examined in the course of this article. In the next Section we present the methodology applied for this purpose, starting off from established IS concepts.

3. Methodology

Technology acceptance is considered a main determinant of the technology use in IS research [13]. As Matzner et al. [31, p. 3] pointed out, the use of sharing service systems may be approached in a similar manner, where “the acceptance of IT-enabled services can be regarded as an antecedent of [sharing] service participation.” Theories of technology acceptance are

² <http://goo.gl/Vt5r7g>

³ <http://goo.gl/i5iD0>, <http://goo.gl/4Bosx>, <http://goo.gl/h0RLJu>, <http://goo.gl/0luzJX>, <http://goo.gl/Mof3YP>

⁴ <http://goo.gl/tqwek5>

⁵ <http://goo.gl/UwOR1S>

partly based on the assumption of dealing with a clear cut, single, and new technology [43, 44]. This assumption may not fully hold for platforms like Airbnb, Ebay, and so forth, as the usage of web services and mobile applications has become ubiquitous and omnipresent. As “TAM has diverted researchers’ attention away from other important research issues and has created an illusion of progress in knowledge accumulation” [8, p. 211], research on user behavior and acceptance in e-commerce should also consider models and theories from social psychology.

Current research [31] thus follows this call, building on Theory of Planned Behavior (TPB) [1]. TPB posits behavior to result from its antecedents intention, attitude, subjective norm, and perception of control. We agree that this is an important step towards better understanding sharing behavior. TPB, however, constitutes a meta-model itself.

In our view, it is crucial for further theory development to link the actual underlying psychological and sociological determiners to online sharing behavior. We thus conceptualize motives for taking part in “Sharing Economy” activities and present survey-based measurement scales for these motives. For this, we follow widely accepted methodological guidelines and frameworks [12, 14, 23, 30]. Specifically, we conduct five steps:

1. A review of related work leads to the identification of motives that potentially constitute drivers or impediments for participation in peer-to-peer rental.
2. An exploratory online survey with open-ended questions (Survey 1) supports the motives from step 1 and additionally suggests further potential motives.
3. Based on steps 1 and 2, we develop a conceptual definition of 24 potential motives.
4. We develop an initial measurement model based on closed-ended items that represent the motives and assessed their content validity and we collect data in an online survey (Survey 2).
5. We refine the conceptualization and purify the measurement model by means of exploratory factor analysis.

With these five steps, we covered scale development phases Conceptualization, Development of Measures, Model Specification, as well as Scale Evaluation and Refinement suggested by MacKenzie et al. [30].

4. Related work: Identification of motives

Motives for partaking in or evading “Sharing Economy” activities can be manifold and most

scientific contributions focus on specific subsets, depending on the application under investigation. The existing empirical evidence on motives for providing and accessing goods in peer-to-peer rental services, however, is scarce. In the following, we present a selection of empirical contributions from related fields. A summary is provided in Table 1.

In one of the first empirical approaches to understand motivation for “sharing,” Ozanne and Ballantine [36] performed a survey-based exploration of the anti-consumption motivation of toy library members in New Zealand. Their findings indicate that within the toy library context there are four groups of consumers—socialites, market avoiders, quiet anti-consumers, and passive members. Each group puts different emphasis on the factors friendship, sense of belonging, sense of duty, anti-consumption, parental mediation, frugality, materialism, toy library efficacy and sharing.

Applying qualitative research methods such as observations and interviews, Albinsson and Perera [2] inter alia investigated drivers for participation in alternative consumption (i.e. collaborative consumption, sharing, and “unconsumption”). The authors identified a sense of community as both, a driver and an outcome of participation. Furthermore, a variety of ideological and practical reasons were identified.

Bardhi and Eckhardt [4] conducted interviews with Zipcar users in order to identify the nature of car sharing along six dimensions (temporality, anonymity, market mediation, consumer involvement, type of accessed object, and political consumerism) in the context of access-based consumption. The authors inter alia found that self-interest and utilitarianism (i.e. reducing expenses and increasing convenience) are frequent motives for access-based car sharing and that those motives are weighted even stronger than considerations about collective utility.

Lamberton and Rose [27] developed a survey-based augmented utility model for commercial (i.e. marketer managed) sharing to identify drivers of sharing propensity. The main drivers, according to the authors, are the specific cost and utility factors, the perceived risk of product scarcity, and familiarity with sharing. Trust and user similarity did not or only indirectly explain propensity to share in their studies.

In the work of Shaheen et al. [39], the user adoption of vehicle sharing platforms was approached from an IS providers point of view by conducting expert interviews with personal vehicle sharing and traditional car sharing operators. The authors identified insurances and fear of sharing as major barriers to adoption and expansion of personal vehicle sharing.

A recent working paper by Balck and Cracau [3] focuses on the importance of motives to participate in the shareconomy as a consumer. Applying constant sum technique in two surveys, the authors identified Cost, Rarity, Environment, Access, and No Ownership as the five main motives (with Cost as the dominating motive across the four analyzed sectors *accommodation, car sharing, commodities, and clothing*).

Bellotti et al. [7] interviewed both users and providers of Peer-to-Peer Economy Systems in order to investigate the motivation for participation in the peer-to-peer economy. They found that while providers tend to stress idealistic motivations, users are strongly driven by value and convenience.

Hamari et al. [19] investigated the influence of intrinsic and extrinsic motivations on attitudes and behavioral intentions towards collaborative consumption on the online peer-to-peer trading service “Sharetribe.” The authors were able to show that attitude towards collaborative consumption is positively correlated with perceived sustainability and enjoyment, while behavioral intention to participate in collaborative consumption is positively correlated with enjoyment, economic benefits, and attitude towards collaborative consumption.

In a work in progress paper on the antecedents of participation in it-enabled sharing services, Matzner et al. [31] presented a conceptual model based on the Theory of Planned Behavior [1]. They argue that technology acceptance models are primarily suitable to analyze single technologies—not necessarily participation behavior in the context of complex IT-enabled services. Based on literature the authors derive three types of beliefs (and corresponding dimensions) for participation behavior: 1) *Behavioral Beliefs* (trust, perceived usefulness, environmental concern, compatibility, image), 2) *Normative Beliefs* (“people who are important”), and 3) *Control Beliefs* (self-efficacy, perceived ease of use, perceived privacy protection, technology facilitating conditions).

Based on two surveys—one with users of the B2C car sharing platform car2go and another with users of the C2C accommodation sharing platform Airbnb—Möhlmann [34] tested a previously developed literature based model for determinants of choosing a sharing option. In the case of Airbnb, *Cost Savings, Familiarity, Trust* and *Utility* were positive correlated to a higher *Satisfaction with a Sharing Option*, while *Familiarity, Utility, and Satisfaction with a Sharing Option* were positively correlated with the *Likelihood of Choosing a Sharing Option Again*.

With a focus on peer-to-peer accommodation rentals (such as Airbnb), Tussyadiah [42] explored both drivers and deterrents for collaborative

consumption based on an online survey. As main drivers of collaborative consumption, *Sustainability, Community* and *Economic Benefits* motives were identified, whereas (*Lack of Trust, (Lack of) Efficacy* and (*Lack of) Economic Benefits* were identified as main deterrents.

	Survey, Interview, Conceptual	IS-mediated	peer-to-peer	commercial	providers	consumers	users	non-users
[36]	S					×	×	
[2]	I		×		×	×	×	
[4]	I	×	×	×		×	×	
[27]	S	(×)		×		×	×	×
[39]	I	×	×	×	×	×	(×)	
[3]	(S)	×	×	×		×	×	×
[7]	I	×	×	×	×	×	×	
[19]	S	×	×	×	×	×	×	
[31]	C	×	×	×	×	×		
[34]	S	×	×	×		×	×	
[42]	S	×	×	×		×	×	×

Table 1. Related literature.

Overview of methods (survey, interview, conceptual), platform characteristics (IS-mediated, peer-to-peer, commercial), target (provider motives, consumer motives), and target group (users, non-users) in the related literature.

Within the scope of this article we develop a questionnaire for assessing motives for and against participating in peer-to-peer rental services from both a provider’s and a consumer’s point of view. By collecting data from a general student subject pool, we both address users and non-users of such services.

Partaking in “Sharing Economy” related peer-to-peer rental services differs from technology acceptance [13] in different ways [31]. We thus argue that established models like TAM and UTAUT should not be directly applied upon peer-to-peer rental services, but rather considered selectively on a construct level in a broader approach that covers both, aspects of technology acceptance and “sharing” related literature, as presented above.

5. Survey 1: Further exploration of motives

We conducted an exploratory online survey in order to complement the literature review and reveal possible motives that may have not been considered in the literature so far. The participants of this exploratory survey were 61 graduate and Ph.D. students at the Universities of Augsburg and Karlsruhe. At the start of the survey, an introductory text established an

understanding of “Sharing Economy” activities. Then, participants were asked whether they take part in such activities or not: 35 answered this question with “yes,” 26 with “no.” Next, and depending on their initial answer, we asked participants to describe reasons for their participation or non-participation and also to describe which personality traits and motives they consider relevant or causal for their behavior in this regard. The latter intended to force participants to a higher level of self-reflection, as in other contexts it was shown that self-reflection tends to increase the ability of enduring preference articulation [21]. Furthermore we expected to better understand mundane answers such as “for fun,” which, for instance, may be caused by technology affinity, a socializing mentality, or both.

Two researchers independently coded the participants’ answers with respect to whether certain motives were stated or not in a qualitative content analysis [33]. Next, the results were consolidated in a joint discussion.

As could be expected from previous literature, we identified motives like resource efficiency, thriftiness, materialism, risk aversion, social experience, and prestige within the participants’ statements. In addition to that we found motives such as the uniqueness of products and services on sharing platforms, aversion to process risk, lack of trust in other users, and further motives that were not explicitly or only partially considered by empirical literature so far.

6. Conceptualization

Combining both literature and the exploratory survey, the first preliminary list of motives contained the following potential 24 motives (in alphabetical order):

Anti-Capitalism: The idea that sharing is a statement against capitalism; adapted from [27].

Burden of Ownership: The idea that ownership is associated with responsibility and effort.

Effort Expectancy: The idea that sharing is associated with a lot of effort; adapted from [44].

Enjoyment in Sharing: The idea that it has a value to help other; adapted from [26].

Hedonic Motivation: The idea that sharing is fun; adapted from [44].

Income: The idea that sharing may generate an (additional) income; adapted from [9].

Independence through Ownership: The idea that sharing reduces independence from others through organizational overhead.

Knowledge: The idea that one is familiar with sharing; adapted from [27].

Lack of Trust: The idea that other sharing users should not be trusted; adapted from [32].

Modern Lifestyle: The idea that sharing expresses a modern life style.

Prestige of Ownership: The idea that ownership is associated with social prestige; adapted from [43]

Privacy: The idea that sharing entails a loss of privacy.

Process Risk: The idea that sharing involves procedural risks.

Product Variety: The idea that sharing offers a wide range of different products and services.

Quality: The idea that sharing offers a high product quality; adapted from [43].

Resource Scarcity: The idea that resources may not be available when trying to access them through sharing; adapted from [27].

Sense of Belonging: The idea that one feels as part of a sharing community; adapted from [37].

Social Experience: The idea that sharing enables social experience.

Social Influence: The idea that one’s social environment appreciates sharing; adapted from [44].

Substitutability: The idea that sharing can substitute ownership; adapted from [27].

Sustainability: The idea that sharing is environmentally friendly; adapted from [19].

Thriftiness: The idea that sharing may save money; adapted from [28].

Ubiquitous Availability: The idea that sharing allows to access products and services in many places.

Uniqueness: The idea that sharing allows to access products/ services which are not available elsewhere.

7. Measurement model and Survey 2

The measurement model is based on survey items using 7-point Likert scales. Whenever possible, we used or adapted existing scales. Items for Effort Expectancy and Hedonic Motivation, for example, were adapted from [44]. If no adequate template was available, specific items were generated, where we used five items for each of the new formulated constructs. Examples include Product Variety and Ubiquitous Availability. In total, this resulted in a list of 104 items for all motives. Wording of items followed standard guidelines [20, 41]. We performed a content validity assessment with three judges who are

otherwise not involved in the research and revised items where necessary.

In the questionnaire for Survey 2, the 104 items are presented in 13 blocks of 8 questions each. The sequence of blocks and the sequence of items within each block varies randomly. At the beginning, a short introduction explained the scope of the survey and the case of peer-to-peer rental services.

The questionnaire additionally includes questions to assess usage behavior by 3×2 items, specified for 3 domains (apartments, ride sharing, peer-to-peer car rental), and 2 roles (provider, consumer). We furthermore queried the following control variables: gender, age, risk propensity [15], education, income, household size, cognitive reflection [16], spoken languages, car ownership, as well as the usage of several peer-to-peer rental platforms. Additionally, we added checks to ensure participants in fact read and understood the questions and answered honestly (e.g., “if you read this, please check the second box from the right”).

Participants were recruited from the student pool at the Karlsruhe Institute of Technology. Participation was incentivized by a prize draw of $3 \times 50\text{€}$ and $20 \times 15\text{€}$ among all participants completing the survey. To take part in this lottery, participants could enter their email address at the end of the survey on a voluntary basis.

We invited a total of 2,272 participants to the survey via email and sent a reminder to non-responders after three days. The survey was accessible for one week. Altogether, 883 participants started the survey and 657 completed it. With regard to the substantial length of the survey, we consider the completion rate of 74.4% as high. To ensure data quality, we excluded subjects who did not pass understanding questions or stated that they did not answer honestly. Moreover, we excluded subjects that took less than 5 or more than 45 minutes for completion of the entire survey, or less than 10 seconds for any of the single 8-items blocks. This resulted in a set of 605 observations with an average completion time of 17 minutes. 191 of the 605 participants are female (31.57%), 414 are male. Age ranges from 18 to 61 with mean 23 and median 23 years.

8. Exploratory factor analysis

Starting with 104 items and 605 observations (item to response ratio of 1:5.8, i.e. exceed the conventional guideline of at least 1:5), we performed an exploratory factor analysis with oblique rotation (*oblimin*). The decision on how many factors to retain is based on a combination of the Minimum-Average-Partial-Test

(MAP test), parallel analysis, and judgment of content validity [22]. This resulted in the decision to extract 17 factors. Items were dropped when they had a major loading <0.4 , communality <0.4 , a cross-loading ≥ 0.4 , or when they lacked content fit with the factors.

The resulting 17 factors align straightforwardly with motives conceptualized before. These are presented in the Appendix (Table A1) along with their respective items. Cronbach’s alpha, a measure of internal consistency reliability, is well above the conventional limit of 0.7 for almost all constructs. Only for Process Risk and Privacy, it falls short of the limit with values of 0.686 and 0.684, respectively. This can be explained by the low number of only three and two items for these constructs.

However, as compared to the initial conceptualization of 24 motives the following seven motives were not retained: *Substitutability*, *Burden of Ownership*, *Hedonic Motivation*, *Sustainability*, *Lack of Trust*, *Uniqueness*, and *Quality*. Each of the scales by itself possesses adequate internal consistency as measured by Cronbach’s alpha. However, some of them are not selective in the interplay with the other motives: *Hedonic Motivation* mixes with *Social Experience*. *Sustainability* mixes with *Modern Lifestyle* and *Thriftiness*. *Lack of Trust* mixes with *Process Risk*. *Uniqueness* mixes with *Social Experience* and *Product Variety*. *Quality* mixes with various other constructs. Finally, *Substitutability*, *Burden of Ownership*, and *Quality* are clearly distinct from the other constructs but contribute too little variance for being extracted in the exploratory factor analysis.

We further build the formative constructs *consumer* and *provider* indicating the use of peer-to-peer rental services. For this, we sum up the items asking for the usage intensity of sharing in three domains (apartments, ride sharing, peer-to-peer car rental) for both roles. We then correlate them with the 17 motives to investigate how far they may contribute to explaining peer-to-peer sharing behavior. Table 2 provides the Pearson correlation coefficients along with *p*-values. All motives aside from *Income*, *Prestige of Ownership*, and *Resource Scarcity* correlate significantly with usage at the 5% level from a consumer’s point of view. From the provider’s perspective all motives, except for *Anti-Capitalism* and *Ubiquitous Availability* are significant at the 5% level.

Motive	Consumer	Provider
Anti-Capitalism	.117**	.072
Effort Expectancy	-.355***	-.245***
Enjoyment in Sharing	.327***	.354***
Income	.064	.175***

Independence through Ownership	-.253 ^{***}	-.171 ^{***}
Knowledge	.414 ^{***}	.271 ^{***}
Modern Lifestyle	.252 ^{***}	.116 ^{**}
Prestige of Ownership	-.060	-.083 [*]
Privacy	-.257 ^{***}	-.166 ^{***}
Process Risk	-.211 ^{***}	-.131 ^{***}
Product Variety	.248 ^{***}	.115 ^{**}
Resource Scarcity	-.067	-.089 [*]
Sense of Belonging	.305 ^{***}	.219 ^{***}
Social Experience	.345 ^{***}	.237 ^{***}
Social Influence	.275 ^{***}	.201 ^{***}
Thriftiness	.330 ^{***}	.192 ^{***}
Ubiquitous Availability	.214 ^{***}	.071

⁺p < .1; ^{*}p < .05; ^{**}p < .01; ^{***}p < .001

Table 2. Motive correlation with Use.

Pearson coefficients and significance codes for correlation of Use (consumer, provider) and motives.

9. Conclusion

With this article, we contribute to the research on drivers and impediments of peer-to-peer sharing services i) by conceptualizing a set of motives based on both literature and an explorative survey (Study 1) and ii) by developing a measurement model for these motives based on a second survey (Study 2). A first analysis of correlation between identified motives and usage behavior (both for the perspectives of consumers and providers) indicates the relevance of the identified motives. A detailed assessment of their actual role in driving or impeding participation in peer-to-peer rental will require further investigation premised on an independent data set. In this sense, our article forms a basis for future survey-based research on user behavior in the “Sharing Economy.”

10. References

- [1] I. Ajzen, “From Intentions to Actions: A Theory of Planned Behaviour”, In: Action Control. Ed. by J. Kuhl and J. Beckmann. Heidelberg: Springer. Chap. 2, pp. 11–39.
- [2] P. A. Albinsson and B. Y. Perera, “Alternative marketplaces in the 21st century: Building community through sharing events”, *Journal of Consumer Behaviour* 11(4), 2012, pp. 303–315.
- [3] B. Balck and D. Cracau, “Empirical analysis of customer motives in the shareconomy: a cross-sectoral comparison” Working Paper, 2015.
- [4] F. Bardhi and G. M. Eckhardt, “Access-based consumption: the case of car sharing”, *Journal of Consumer Research* 39(4), 2012, pp. 881–898.
- [5] R. Belk, “Why not share rather than own?”, *The Annals of the American Academy of Political and Social Science* 611(1), 2007, pp. 126–140.
- [6] R. Belk, “You are what you can access: Sharing and collaborative consumption online”, *Journal of Business Research* 67(8), 2014, pp. 1595–1600.
- [7] V. Bellotti, A. Ambard, D. Turner, C. Gossmann, K. Demkova and J. M. Carroll, “A Muddle of Models of Motivation for Using Peer-to-Peer Economy Systems”, In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems*, 2015, pp. 1085–1094.
- [8] I. Benbasat and H. Barki, “Quo vadis TAM?”, *Journal of the Association for Information Systems* 8(4), 2007, Art. 7.
- [9] G. W. Bock, R. W. Zmud, Y. G. Kim, and J. N. Lee, “Behavioral intention formation in knowledge sharing: Examining the roles of extrinsic motivators, social-psychological forces, and organizational climate”, *MIS Quarterly* 29(1), 2005, pp. 87–111.
- [10] R. Botsman and R. Rogers, “What’s Mine Is Yours: The Rise of Collaborative Consumption”, HarperCollins, New York, 2010.
- [11] F. Chasin and H. Scholta, “Taking Peer-To-Peer Sharing and Collaborative Consumption onto the Next Level – New Opportunities and Challenges for E-Government”, *ECIS ‘15*.
- [12] G. Churchill, “A Paradigm for Developing Better Measures of Marketing Constructs”, *Journal of Marketing Research* 16(1), 1979, pp. 64–73.
- [13] F. D. Davis, “Perceived usefulness, perceived ease of use, and user acceptance of information technology”, *MIS Quarterly* 13(3), 1989, pp. 319–340.
- [14] R. F. De Vellis, “Scale Development”, Thousand Oaks, California: Sage, 2003.
- [15] T. Dohmen, A. Falk, D. Huffman, U. Sunde, J. Schupp, and G. G. Wagner, “Individual risk attitudes: Measurement, determinants, and behavioral consequences”, *Journal of the European Economic Association* 9(3), 2011, pp. 522–550.
- [16] S. Frederick, “Cognitive reflection and decision making”, *Journal of Economic Perspectives* 19(4), 2005, pp. 25–42.
- [17] L. Gansky, “The mesh: Why the future of business is sharing”, Penguin, 2010.
- [18] D. Gefen and D. W. Straub, “Consumer trust in B2C e-commerce and the importance of social presence:

- experiments in e-products and e-services”, *Omega* 32(6), 2004, pp. 407–424.
- [19] J. Hamari, M. Sjöklint, and A. Ukkonen, “The sharing economy: Why people participate in collaborative consumption”, *Journal of the Association for Information Science and Technology* (in press), 2015.
- [20] D. A. Harrison, M. E. McLaughlin, “Cognitive process in self-report responses: Tests of item context effects in work attitude measures”, *Journal of Applied Psychology* 78(1), 1993, pp. 129–140.
- [21] J. R. Hauser, S. Dong and M. Ding, “Self-Reflection and Articulated Consumer Preferences.” *Journal of Product Innovation Management* 31(1), 2014, pp. 17–32.
- [22] J. C. Hayton, D. G. Allen, and V. Scarpello, “Factor Retention Decisions in Exploratory Factor Analysis: A Tutorial on Parallel Analysis”, *Organizational Research Methods* 7(2), 2004, pp. 191–205.
- [23] T. R. Hinkin, “A Brief Tutorial on the Development of Measures for Use in Survey Questionnaires”, *Organizational Research Methods* 1(1), 1998, pp. 104–121.
- [24] X. Hu, J. Zhao, B. C. Seet, V. C. M. Leung, T. H. S. Chu, and H. C. B. Chan, “S-Aframe: Agent-based Multi-layer Framework with Context-aware Semantic Service for Vehicular Social Networks”, *IEEE Transactions on Emerging Topics in Computing* 3(1), 2015, pp. 44–63.
- [25] N. A. John, “Sharing, collaborative consumption and Web 2.0”, *MEDIA@LSE Working Paper*, 2013.
- [26] A. Kankanhalli, B. C. Tan, and K. K. Wei, “Contributing knowledge to electronic knowledge repositories: an empirical investigation”, *MIS Quarterly* 29(1), 2005, pp. 113–143.
- [27] C. P. Lamberton and R. L. Rose “When is ours better than mine? A framework for understanding and altering participation in commercial sharing systems”, *Journal of Marketing* 76(4), 2012, pp. 109–125.
- [28] J. L. Lastovicka, L. A. Bettencourt, R. S. Hughner, and R. J. Kuntze, “Lifestyle of the tight and frugal”, *Journal of Consumer Research* 26(1), 1999, pp. 85–98.
- [29] K. Leismann, M. Schmitt, H. Rohn, and C. Baedeker, “Collaborative consumption: towards a resource-saving consumption culture”, *Resources* 2(3), 2013, pp. 184–203.
- [30] S. B. MacKenzie, P. M. Podsakoff, and N. P. Podsakoff, “Construct Measurement and Validation Procedures in MIS and Behavioral Research: Integrating New and Existing Techniques”, *MIS Quarterly* 35(2), 2011, pp. 293–334.
- [31] M. Matzner, F. Chasin and L. Todenhöfer, “To Share or Not to Share: Towards Understanding the Antecedents of Participation in It-Enabled Sharing Services”, *ECIS 2015*.
- [32] R. C. Mayer, J. H. Davis, “The effect of the performance appraisal system on trust for management: A field quasi-experiment”, *Journal of Applied Psychology* 84(1), 1999, pp. 123–136.
- [33] P. Mayring, “Qualitative content analysis.” *A Companion to Qualitative Research*, 2004, pp. 266–269.
- [34] M. Möhlmann, “Collaborative consumption: determinants of satisfaction and the likelihood of using a sharing economy option again”, *Journal of Consumer Behaviour* 14(3), 2015, pp. 193–207.
- [35] O. K. Mont, “Clarifying the concept of product–service system”, *J. of Cleaner Production* 10(3), 2002, pp. 237–245.
- [36] L. K. Ozanne and P. W. Ballantine, “Sharing as a form of anti-consumption? An examination of toy library users”, *Journal of Consumer Behaviour* 9(6), 2010, pp. 485–498.
- [37] N. A. Peterson, P. W. Speer, and D. W. McMillan, “Validation of a brief sense of community scale: Confirmation of the principal theory of sense of community”, *Journal of Community Psychology* 36(1), 2008, pp. 61–73.
- [38] A. Sach, “IT-User-Aligned Business Model Innovation (ITUA) in the Sharing Economy: A Dynamic Capabilities Perspective”, *ECIS 2015*.
- [39] S. A. Shaheen, M. A. Mallery, and K. J. Kingsley, “Personal vehicle sharing services in North America”, *Research in Transportation Business & Management* 3, 2012, pp. 71–81.
- [40] A. Stephany, “The Business of Sharing: Making it in the New Sharing Economy”, *Palgrave Macmillan*, 2015.
- [41] R. Tourangeau, L. J. Rips, and K. Rasinski, “The psychology of survey response”, *Cambridge, England: Cambridge University Press*.
- [42] I. P. Tussyadiah, “An exploratory study on drivers and deterrents of collaborative consumption in travel”, *In Information and Communication Technologies in Tourism*, 2015 pp. 817–830.
- [43] V. Venkatesh and H. Bala, “Technology acceptance model 3 and a research agenda on interventions”, *Decision Sciences* 39(2), 2008, pp. 273–315.
- [44] V. Venkatesh, J. Thong, and X. Xu, “Consumer acceptance and use of information Technology: Extending the unified theory of acceptance and use of technology”, *MIS Quarterly* 36(1), 2012, pp. 157–178.
- [45] G. Zervas, D. Proserpio and J. Byers, “The rise of the sharing economy: Estimating the impact of Airbnb on the hotel industry”, *Working Paper*, 2014.

Appendix

Table A1: Overview on 17 motives and corresponding items in the final measurement model. Loadings and Cronbach's alpha refer to Survey 2; cross-loadings are not reported as the largest cross-loading was only 0.214; last column indicates original sources for the items.

Motive	Item	Major factor loading	Cronbach's Alpha	
Anti-Capitalism	Sharing offers me an alternative to the capitalist system.	0.818	0.858	[27]
	Sharing allows me to avoid capitalism.	0.816		
	Sharing allows me to not unnecessarily support large corporations.	0.725		
	By sharing, I can refuse to play the industry's marketing game.	0.625		
Effort Expectancy	It takes a long time to get acquainted to sharing.	0.659	0.814	[44]
	I would have to familiarize with sharing a lot first.	0.655		
	Sharing appears to be too circumstantial to me.	0.530		
	It is cumbersome to participate in sharing activities.	0.471		
Enjoyment in Sharing	I enjoy helping others by sharing my resources.	0.770	0.860	[26]
	Sharing my resources with others gives me pleasure.	0.736		
	It feels good to help someone else by sharing my resources.	0.639		
	I enjoy sharing my resources with others.	0.540		
Income	Sharing offers me an addition source of income.	0.870	0.907	[9]
	Sharing allows me to generate an additional income.	0.822		
	Sharing allows me to earn money.	0.805		
	Sharing allows me incidental earnings.	0.799		
	Sharing allows me to make money from my stuff.	0.702		
Independence through Ownership	Owning things myself rather than renting or borrowing makes me ind. from other people.	0.727	0.825	own
	Ownership increases my independence from others.	0.676		
	I appreciate the independence from other people I gain through ownership.	0.659		
	I like to own things myself and not have to organize access from others in case I need them.	0.598		
	I appreciate not having to rent or borrow a resource from others in case I need it.	0.510		
Knowledge	I am familiar with sharing.	0.798	0.757	[27]
	I know a lot about how sharing actually works.	0.687		
Modern Lifestyle	Sharing meets the zeitgeist.	0.858	0.929	own
	Sharing is in tune with the times.	0.821		
	To me, sharing represents an up-to-date life style.	0.820		
	To me, sharing is an expression of a modern life style.	0.807		
	People who share are up-to-date.	0.770		
Prestige of Ownership	People with many possessions have a high profile.	0.918	0.894	[43]
	People with many possessions have more prestige than those with less.	0.845		
	Having many possessions is a status symbol.	0.787		
Privacy	It feels uncomfortable to be seen by others on sharing platforms.	0.647	0.684	own
	It feels unpleasant to disclose personal data when sharing.	0.597		
Process Risk	Engaging in sharing constitutes a legal risk to me.	0.643	0.686	own
	Engaging in sharing constitutes an economic risk to me.	0.560		
	You take a risk when sharing.	0.427		

Product Variety	Sharing allows me to access a diverse range of offers.	0.807	0.911	own
	Sharing enables me to use a broad variety of products and services.	0.760		
	Sharing offers a large spectrum of products and services.	0.749		
	Sharing offers me a great diversity of products and services.	0.699		
	Sharing allows me to use a varied range of offers.	0.673		
Resource Scarcity	There's a risk that I will not be able to get the res. that I want at the time I want to use it.	0.800	0.813	[27]
	There is a high chance that the resource I want will not be available when I want it.	0.745		
	It's possible that when I need a resource, it won't be available.	0.682		
	Resources are often unavailable when I want to use them.	0.626		
Sense of Belonging	Other sharing users and I somehow belong together.	0.781	0.881	[37]
	I feel connected with others when sharing.	0.715		
	I have a good bond with others in the sharing community.	0.659		
	I feel like a member of a community when sharing.	0.650		
Social Experience	Through sharing I can make nice acquaintances.	0.817	0.876	own
	I meet interesting people through sharing.	0.800		
	I get to know new people through sharing.	0.760		
	I value the social exchange with other sharing users.	0.658		
	I take interest in the personal stories of other sharing users.	0.548		
Social Influence	People who are important to me think that I should share.	0.922	0.936	[44]
	People who influence my behavior think that I should share.	0.906		
	People whose opinions I value prefer that I share.	0.884		
Thriftiness	Sharing allows me to save money.	0.688	0.838	[28]
	Sharing allows me to lower my expenses.	0.620		
	Sharing allows me to live thriftily.	0.577		
	Sharing allows me to access p. and s. at lower costs than through other channels.	0.493		
Ubiquitous Availability	Sharing allows me to access products and services wherever I am.	0.859	0.899	own
	Sharing allows me to access products and services regardless of my location.	0.722		
	Sharing allows me to access products and services everywhere I go.	0.667		
	Sharing allows me to access products and services at various places.	0.597		
	Sharing allows me to access products and services in many cities.	0.484		