



## Do we need rules for “what’s mine is yours”? Governance in collaborative consumption communities☆



Barbara Hartl <sup>\*</sup>, Eva Hofmann <sup>1</sup>, Erich Kirchler <sup>2</sup>

Department of Applied Psychology: Work, Education, Economy; Faculty of Psychology, University of Vienna, Universitaetsstrasse 7, 1010 Vienna, Austria

### ARTICLE INFO

#### Article history:

Received 13 April 2015

Received in revised form 10 November 2015

Accepted 15 November 2015

Available online 27 November 2015

#### Keywords:

Collaborative consumption

Sharing economy

Governance

Trust

Community

### ABSTRACT

With collaborative consumption, people are provided with access to a good rather than owning it. The current study addresses the problem of regulation in collaborative consumption communities, investigating whether governance increases cooperation, if and why consumers support a governance system and whether supporters and non-supporters differ in their distrust in others. To address these questions, an experiment (within-subject design) was conducted. After reading vignettes, participants indicated how likely they would cooperate and whether they support governance or not—giving reasons for their evaluation. The majority of participants support governance and governance increases cooperation. Supporters argue that humans are egoistic, whereas non-supporters are concerned about negative consequences, asking for alternative incentives. Supporters of governance also differ from non-supporters according to their trust in others. The current study allows valuable recommendation, as more and more sharing networks are created, facing the problem of whether to regulate access or not.

© 2015 The Authors. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

### 1. Introduction

Collaborative consumption is a new consumption paradigm, which is gaining popularity due to the economic crisis and increased concern for protecting the environment (Tussyadiah, 2015). With collaborative consumption, ownership of a good is replaced by the access to the good (Belk, 2014; Botsman & Rogers, 2010). Instead of buying goods and owning them, consumers gain temporary access to goods they need (Bardhi & Eckhardt, 2012). Collaborative consumption is therefore a form of consumption where people coordinate the acquisition of a resource for a (monetary or non-monetary) compensation (Belk, 2014). People are provided with access to a good, mostly without the higher costs and responsibilities usually accompanied by ownership. Collaborative consumption covers a range of transactions in almost all business areas, including entertainment (e.g., file sharing), food (e.g., communal gardens), and traffic (e.g., car sharing). For instance, the term “communal garden” covers several models of garden organization, like neighborhood gardens, in which people informally or formally farm on land in their neighborhood (Alaimo, Packnett, Miles, & Kruger, 2008). Similarly, consumers can share goods in public book boxes or open

workshops, where people access tools for work around their house. See Table A

Various terms are used in the literature referring to collaborative consumption or similar concepts, such as “sharing economy” (Heinrichs, 2013) which is often used synonymously for “collaborative consumption,” “sharing,” “access-based consumption,” or “anti-consumption.” Engaging in collaborative consumption actions is, contrary to sharing, not necessarily altruistic, but is rather underlined by economic exchange (Bardhi & Eckhardt, 2012). The concept of collaborative consumption is also related to “access-based consumption” (Bardhi & Eckhardt, 2012), which contains elements of both collaborative consumption and sharing (Belk, 2014), and anti-consumption (Albinsson & Perera, 2012), as the sharing of resources, for instance, in toy lending libraries (Ozanne & Ballantine, 2010; Ozanne & Ozanne, 2011), reduces the consumption of new goods (c.f. “reduced levels of consumption,” Shaw & Newholm, 2002).

Engaging in collaborative consumption is increasing in popularity (Belk, 2014), stimulating new business models. One million car sharing members in North America in the beginning of 2013 (Birdsall, 2014) and many millions of room nights sold by Airbnb (Guttentag, 2013) show that collaborative consumption is on the rise. Although collaborative consumption is a competitive business model and thereby challenging conventional providers (Möhlmann, 2015), little is known about possible demands providers of collaborative consumption face.

New business models based on the concept of collaborative consumption comprise new challenges for the market place. In contrast to conventional businesses, collaborative consumption businesses are

☆ This research was financed by grant number P24863-G16 from the Austrian Science Fund (FWF).

\* Corresponding author. Tel.: +43 1 4277 47369; fax: +43 1 4277 47339.

E-mail addresses: [barbara.hartl@univie.ac.at](mailto:barbara.hartl@univie.ac.at) (B. Hartl), [eva.hofmann@univie.ac.at](mailto:eva.hofmann@univie.ac.at) (E. Hofmann), [erich.kirchler@univie.ac.at](mailto:erich.kirchler@univie.ac.at) (E. Kirchler).

<sup>1</sup> Tel.: +43 1 4277 47,336.

<sup>2</sup> Tel.: +43 1 4277 47,332.

**Table A**  
Absolute and relative frequencies of the categories used in the correspondence analysis.

		Cooperative members		Non-cooperative members	
		Supporters	Non-supporters	Supporters	Non-supporters
Increased return rate	<i>n</i>	27	1	12	0
	<i>f</i>	20.0	2.3	11.8	0
People need regulation	<i>n</i>	15	0	30	1
	<i>f</i>	11.1	0	29.4	1.6
Distrust	<i>n</i>	2	5	3	4
	<i>f</i>	1.5	11.4	2.9	6.6
Alternative incentives	<i>n</i>	4	8	4	3
	<i>f</i>	3.0	18.2	3.9	4.9
Self-determination	<i>n</i>	7	5	1	9
	<i>f</i>	5.2	11.4	1.0	14.8
Freedom	<i>n</i>	3	1	0	5
	<i>f</i>	2.2	2.3	0	8.2
People are egoistic	<i>n</i>	41	0	30	2
	<i>f</i>	30.4	0	29.4	3.3
Flexibility	<i>n</i>	5	3	0	0
	<i>f</i>	3.7	6.8	0	0
Negative consequences	<i>n</i>	4	7	6	9
	<i>f</i>	3.0	15.9	5.9	14.8
Contradicts the concept	<i>n</i>	0	1	0	5
	<i>f</i>	0	2.3	0	8.2
No behavioral change	<i>n</i>	0	3	0	6
	<i>f</i>	0	6.8	0	9.8
Enough control mechanisms	<i>n</i>	0	5	0	2
	<i>f</i>	0	6.8	0	3.3
Morality	<i>n</i>	2	1	8	5
	<i>f</i>	1.5	2.3	7.8	8.2
Concentration of power	<i>n</i>	2	1	0	3
	<i>f</i>	1.5	2.3	0	4.9
Breaks community	<i>n</i>	0	2	1	3
	<i>f</i>	0	4.5	1.0	4.9
Offense	<i>n</i>	19	2	6	0
	<i>f</i>	14.1	4.5	5.9	0
Other	<i>n</i>	4	1	1	4
	<i>f</i>	3.0	2.3	1.0	6.6

accused of not offering a standardized level of service and price (Cusumano, 2015) and of lacking safeguards for customers (Rauch & Schleicher, 2015). Regulation has become a highly charged policy topic, leading to the question whether it protects consumers or restrains companies from entering collaborative consumption (Koopman, Mitchell, & Thierer, 2014; Rauch & Schleicher, 2015). In order to answer whether and how collaborative consumption should be regulated, it needs to be considered that the concept of collaborative consumption comprises various business models, differing in several features.

Collaborative consumption can be organized by companies (business-to-consumer; Shaheen & Cohen, 2007), other consumers (Ballus-Armet, Shaheen, Clonts, & Weinzimmer, 2014), or communities (Jenny, Fuentes, & Mosler, 2007). Most of the research has been devoted to business-to-consumer models. For instance, Bardhi and Eckhardt (2012) conducted interviews with customers from a car sharing company, showing additionally that regulation and governance are evaluated positively by consumers, maybe due to a lack of trust in the other users. As car sharing users themselves act opportunistically (e.g., not giving a GPS receiver left in the car to the lost and found), they expect others to do the same (Bardhi & Eckhardt, 2012). When it comes to a business-to-consumer model, the company can take the responsibility of managing distrust between community members via a governance system.

However, the term “collaborative consumption” covers also consumption from self-regulating communities, like communal gardens (Birky & Strom, 2013) or toy libraries (Ozanne & Ballantine, 2010). Research on communal gardens (e.g., Armstrong, 2000; Ferris, Norman, & Sempik, 2001; Glover, 2004; Saldivar-Tanaka & Krasny, 2004) has focused on vegetable production (Algert, Baameur, & Renvall, 2014), food diversity (Guitart, Pickering, & Byrne, 2014), or potential conflicts between different actors in a communal garden (Schmelzkopf, 2002). People share resources by cultivating a garden, which may be public or

owned by a community, and harvest the fruits. Bardhi and Eckhardt (2012) suggest that it may be a more social type of collaborative consumption as consumers seem to feel responsible for the community and its members. As a result, trust between the community members plays a significant role. If people lack trust in other users in such a situation, they may call for governance and regulation, like customers of a car sharing company (Bardhi & Eckhardt, 2012). Especially the heterogeneity of member's interests and goals can result in management problems (e.g., in the context of online communities of consumption, see Sibai, de Valck, Farrell, & Rudd, 2015). Hamari, Sjöklint, and Ukkonen (2015) mention, that in a worst-case scenario, some consumers might altruistically share their goods whereas others may free ride and be mostly enjoying benefits from the sharing. Due to possible problems emerging from collaborative consumption businesses, a political debate started of whether to adapt existing regulations in order to cover collaborative consumption businesses (e.g., for New York, see Bellafante, 2015, July 24; for Brazil, see The Guardian, 2015, September 3; for Austria, see Der Standard, 2015, August 13). As more and more networks are created to share resources, the question arises of whether to regulate and control access or not and whether consumers would support its regimentation.

In order to prevent negative consequences of governance systems, it is necessary to gain knowledge of consumers' attitudes toward control and sanctions in collaborative consumption. Nevertheless, there is a lack of research on the problem of cooperation in collaborative consumption and studies on mechanisms solving this problem are urgently needed (Hamari et al., 2015). The current study addresses this research gap by exploring the challenge of governance in a collaborative consumption community based on the findings of Bardhi and Eckhardt (2012) on car sharing companies. It is investigated how consumers react toward governance and control in a situation where a community

organizes collaborative consumption. The current study extends existing research in several ways: First, it is examined within a collaborative consumption community whether governance increases cooperation. Second, it is investigated if and why consumers support a governance system in the context of collaborative consumption community or oppose it. Third, it is examined whether supporters and non-supporters of this governance system differ in their distrust in other group members. To address these questions, an experiment, using a within-subject design, was conducted.

## 2. Theoretical background

The situation in an open workshop, and in any other collaborative consumption situation, represents a social dilemma (Dawes, 1980). Social dilemmas are situations in which the personal interest of an individual is opposed to the interest of the community (Dawes, 1980). Members of a community face the choice of either to cooperate, which would be costly for them, or to defect for self-interest. If most people try to maximize their own utility and act selfishly, the outcome can become a disaster for the whole community (“tragedy of the commons,” Hardin, 1968).

The theory of social dilemma has been adapted to consumer research, for instance, in order to investigate consumers' proenvironmental behavior (Khachatryan, Joireman, & Casavant, 2013; Pieters, Bijmolt, van Raaij, & de Kruijk, 1998), e.g., their decisions to buy (gain for the community) or not to buy (self-interest) green, and thereby very often more expensive products (Gupta & Ogden, 2009). Further, the decision of consumers whether to pay a higher price and thus rewarding a company for their corporate social responsibility or to maximize their individual gain by not paying a price premium (Gupta, 2015) has been framed as a social dilemma, as well as energy use (Samuelson, 1990) or consumer boycotts (Sen, Gurhan-Canli, & Morwitz, 2001). In case of collaborative consumption, whereby people use resources obtained by a community, for instance tools, books, or fruits grown in the garden, a social dilemma occurs as consumers are individually better off when they make use of shared resources without contributing in return. They can benefit by acting selfishly and in this vein, “each farmer does best by taking as much irrigation water as possible, and each fisher benefits from catching as many fish as possible” (Kollock, 1998, p. 184). A way to encourage cooperation is to monitor and sanction defection (Kollock, 1998). Governance systems sanctioning non-cooperation are usually implemented by authorities, as for instance national governments, when it comes to hinder music piracy (Coyle, Gould, Gupta, & Gupta, 2009; Yang, Wang, & Mourali, 2015), or companies, when it comes to consumption (Bardhi & Eckhardt, 2012).

Interviews show that customers of a car sharing company welcome monitoring control mechanism because they think of it as an opportunity to induce equitable usage among the users (Bardhi & Eckhardt, 2012). However, when a group of people regulates collaborative consumption, no clear monitoring authority exists. There are often less explicit rules or legal regulations than in a business-to-consumer model. It is therefore of interest whether consumers support a governance system when collaborative consumption is organized by a community and whether the introduction of a governance system increases cooperation of supporters as well as non-supporters. Based on the literature on social dilemmas, we assume that the introduction of a governance system positively affects cooperation.

**RQ1.** : *Do consumers support the introduction of a governance system in collaborative consumption communities?*

**H1.** : *The introduction of a governance system increases cooperation.*

Although sanctions are discussed as a possible solution to ensure cooperation, research on social dilemmas has also shown the disadvantages of sanctions as they can undermine cooperation when trust in

other group members was initially high (Mulder, van Dijk, De Cremer, & Wilke, 2006). In this vein, people are willing to contribute to a sanction system if they share the goal of cooperation but do not trust other group members to voluntarily cooperate (Yamagishi, 1986). The introduction of a sanction system can make people further aware that other group members act in their own self-interest and exploit the resources of the community (Mulder et al., 2006) and as a result undermines trust (Fu, Lin, & Sun, 2013). Social dilemma research therefore suggests that trust in other community members is particularly important for understanding attitudes toward sanctions and governance in a community.

Trust plays an important role in consumer behavior, as economic transactions involve risk and trust in another party is making oneself vulnerable toward the actions of the other party (Mayer, Davis, & Schoorman, 1995). Several studies in marketing have examined the role of trust in the buyer–seller relationship (e.g., Ganesan & Hess, 1997), in peer-to-peer electronic communities (Li & Ling, 2004), system trust in business-to-consumer transactions (Pennington, Wilcox, & Grover, 2003), or contracts as a way to harm or foster trust in business relationships (Praxmarer-Carus, 2014). First results in collaborative consumption show that in both business-to-consumer and consumer-to-consumer models, trust is essential for consumers' satisfaction (Möhlmann, 2015). In a business-to-consumer model, consumers have to rely on the promises given by companies, but risk for both parties can be reduced by contracts and legal regulation. In the context of collaborative consumption organized by a community, trust in others' willingness to cooperate may be even more important (Belk, 2014), as a lack of legal requirements results in more uncertainty for the consumer. If people lack trust in other users in such a situation, they may call for governance and regulation in order to handle risk in an economic exchange. Thus, we assume that in the setting of collaborative consumption, people, who trust others to cooperate, do not support the introduction of a governance system, whereas people who distrust others favor control mechanisms. Therefore, we hypothesize the following:

**H2.** *Supporters of a governance system have more distrust in other people than non-supporters.*

In order for companies to address the needs of consumers in collaborative consumption business models, it is relevant to know why consumers support or oppose a governance system and whether cooperative or non-cooperative members differ concerning their considerations. A regulation system may be perceived as necessary, as community members might otherwise take advantage of others. People, who already act honestly, may claim the implementation of a governance system as a safeguard against non-cooperators (cf. research on tax compliance, Gangl, Hofmann, & Kirchler, 2015). Further, consumers might think that the system will break down without enforcement mechanisms and therefore see governance as necessary device (Bardhi & Eckhardt, 2012). Additionally, the existence of control mechanisms may remind consumers of the well-being of the larger group rather than just their own interest. However, control mechanisms can be perceived as a limitation of choice autonomy and freedom (Falk & Kosfeld, 2006). The implementation of a government system can therefore have several negative outcomes, such as negative emotions (Joffily, Masclet, Noussair, & Villeval, 2014), and reactance (Kirchler, 2007). Besides investigating the consequences of governance, the current article also addresses considerations why people do or do not support the implementation of a governance system and whether the reasons of cooperative community members differ from non-cooperative members. As the literature provides different explanations why people support or oppose sanctions and governance, research question 2 is stated as follows:

**RQ2.** *Why do consumers support or oppose the introduction of a governance system in collaborative consumption communities? Do the reasons differ for cooperative and non-cooperative consumers?*

### 3. Method

#### 3.1. Participants

A convenience sample was drawn from Austria and Germany, countries in which collaborative consumption is gaining in popularity (e.g., the number of accommodations offered on Airbnb rose in Austria within 1 year by 140%, Putschloegl & Zoidl, 2015, March 28) and in which consumers receive information on collaborative consumption from public authorities (e.g., the Austrian chamber of labor, Arbeiterkammer Oberösterreich, 2014) or via the media (e.g., Hamann, 2014, September 17; Hank & von Petersdorff, 2013, April 13). The link to an online questionnaire was sent out by university members to their acquaintances. In the end, the questionnaire was completed by 355 consumers (35.8% men,  $M_{age} = 26.61$  years,  $SD_{age} = 8.41$ ,  $Range_{age} = 18–60$ ). Whereby the majority of participants (63.7%) reported earnings less than 1000 euro per month, and about a third of the participants had a university degree (28.5%); 59.4% had a high school degree, 4.5% a degree from a vocational school, 5.1% a vocational training certificate, 0.6% a degree from compulsory school, and 2.0% had other degrees.

#### 3.2. Materials and procedure

Using a within-subject design, participants were first introduced to a collaborative consumption situation (open workshop) without audits and sanctions (“no governance”) in the online questionnaire. Participants imagined living in a city in which a workshop with a tool library at free disposal exists for all citizens. This open workshop should enable citizens to lend tools for work around their house or flat at no costs. All tools should be returned after 3 days. The access to the open workshop and the use of the tools is not subject to any controls. In a second vignette (“governance”), participants were informed that due to a reorganization of the open workshop, a governance system had been established to better monitor the access to the workshop. Further, the community now punishes inappropriate use or delayed return of the tools. After each of the two vignettes, participants had to indicate how likely they would cooperate and return the tools within 3 days (“How likely would you keep the tools longer than three days?”; 7-point Likert scale; item was recoded).

After the second vignette, participants had to indicate whether they support the implementation of a governance system or not (“The implementation of a governance system is a good idea/is a bad idea”). Based on the question concerning their support, participants were assigned to two groups: supporters versus non-supporters. Further, participants had to state reasons for their evaluation (“The implementation of a governance system is a good idea/a bad idea, because...”; open question). Next, levels of distrust in other people’s cooperation are assessed using five items adapted from van Lange, van Vugt, Meertens, and Ruiters (1998). For each item (e.g., *If a community shares resources, you have to be careful, otherwise people will exploit you*), participants indicated the level of agreement, 1 (*totally disagree*) to 7 (*totally agree*). Cronbach alpha for the distrust scale was .76.

### 4. Results

For answering research question 1, whether governance is supported in collaborative consumption, the analysis revealed that the majority of the participants, 81.7%, supported the introduction of a governance system (290 supporters; 65 non-supporters). To test whether the implementation of a governance system increases cooperation and whether the effect differs for supporters and non-supporters (*Hypothesis 1*), a repeated-measure ANOVA was conducted including support of the sanction system (supporters versus non-supporters) as independent variable. The analysis revealed a significant main effect of condition (no governance system vs. governance system),  $F(1, 351) = 137.75$ ,

$p < .001$ ,  $\eta^2_p = .28$ . As expected, cooperation increased when control mechanism and sanctions were possible ( $M_{no\ governance} = 3.69$ ,  $SD = 2.06$ ;  $M_{governance} = 5.65$ ,  $SD = 1.64$ ; Fig. 1). Further, analysis revealed no significant main effect of support of the sanction system on cooperation,  $F(1, 351) = 0.41$ ,  $p = .84$ , but a tendency for an interaction effect between the condition and support,  $F(1, 351) = 3.51$ ,  $p = .06$ ,  $\eta^2_p = .01$ . Supporters and non-supporters do not generally differ in their level of cooperation, but the tendency for the interaction effect indicates that non-supporters act more cooperative than supporters if no governance system exists and less cooperative if governance was introduced (Fig. 1).

Whether people support or oppose the introduction of a governance system may be related to their (dis-)trust in other people (*Hypothesis 2*). To test *Hypothesis 2*, an ANOVA was conducted. As expected, the analysis revealed that supporters’ ( $M = 4.67$ ,  $SD = 1.12$ ) distrust in other people is stronger than non-supporters’ ( $M = 3.53$ ,  $SD = 1.21$ ;  $F(1, 353) = 53.27$ ,  $p < .001$ ,  $\eta^2_p = .13$ ). This suggests that people are in need for governance in case of collaborative consumption, when they do not trust the other community members.

#### 4.1. Reasons for governance systems

To examine why people support or oppose the introduction of a governance system, answers to the open question (“The implementation of a governance system is a good idea/a bad idea, because...”) were analyzed. Participants indicated 616 reasons for their (non-)support. Participants who supported the governance system stated on average 1.98 reasons; non-supporters stated on average 1.67 reasons. For further analyses, two independent raters (1 female, 1 male) were instructed to assign all reasons to 38 categories of a predefined categorization scheme (see Appendix). An interrater reliability analysis using the Kappa statistic was performed to determine consistency among raters (Kappa = 0.81;  $p < .001$ ), which indicated a strong agreement (Landis & Koch, 1977). In case of disagreement, the raters afterwards discussed each statement until an agreement was reached.

Results show that supporters of a government system most frequently reported that humans are egoistic (15%), humans need regulation (9.4%), and that a governance system leads to an increased return rate (8%). On the other hand, non-supporters most frequently stated concerns about negative consequences of governance (13.2%) and concerns about losing self-determination (10.9%) and stress the need of alternative incentives (8.5%).

To answer research question 2, whether the reasons of cooperative community members for supporting the sanction system differ from uncooperative members, a correspondence analysis was applied,

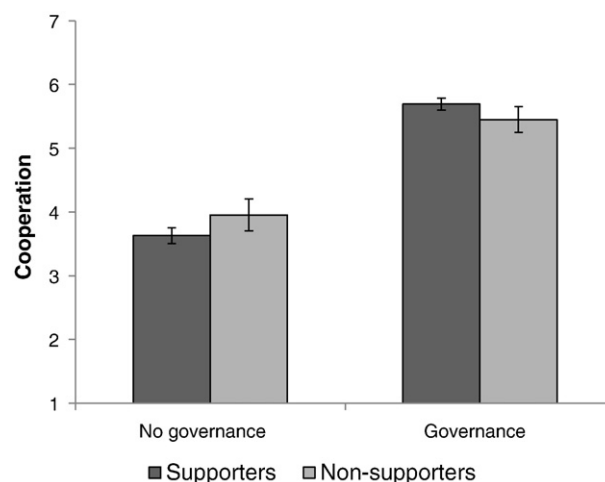


Fig. 1. Means and standard errors of cooperation for supporters and non-supporters for the first (“no governance”) and for the second (“governance”) vignette.

differentiating between support of the governance system (support vs. non-support) and whether participants had indicated to bring back the tool in time in the first vignette when sanctions were not a possibility in the tool library (cooperative vs. uncooperative behavior, median split). The correspondence analysis is a method that yields a graphical representation of the associations between columns and rows of a contingency table. A correspondence analysis depicts the similarity of assignment profiles; therefore, concepts that are related to one another are closely related in the figure. The frequencies of all categories (see Table A), separated by support of the governance system (support vs. non-support) and cooperative behavior (cooperative vs. uncooperative) were analyzed by means of a correspondence analysis (Blasius, 2001). Applying the correspondence analysis to all 38 categories resulted in a two-dimensional configuration. A cross table of the standardized residuals shows that the amount of the standardized residuals of 17 categories was greater than 1.96. Those 17 categories were included in the final correspondence analysis (see Appendix for table of frequencies), which resulted in a two-dimensional configuration explaining 88% of the variance (Fig. 2).

The first dimension (explaining 71% of the variance) pointed at different views of motivation for cooperative behavior. Configured along the negative hemisphere of the first dimension were categories such as “humans are egoistic,” “humans need regulation,” as well as “increased return rate,” indicating that people need extrinsic incentives to be cooperative. In contrast, the categories “enough control mechanisms” and “contradicts the concept” were found on the positive hemisphere of the first dimension.

Categories such as “morality” and “flexibility” are describing the different poles of the second dimension (explaining 17% of the variance), indicating that the second dimension differentiates between fixed moral rules and flexible arrangements. Cooperative supporters are located in the positive hemisphere of the second dimension, characterized by security concerns, such as “increase return rate” and “humans are egoistic.” Uncooperative supporters, in the negative hemisphere of the second dimension, are located near the category “humans need regulation,” which indicates that people need to be motivated by audits and sanctions in order to be cooperative. On the one hand, people who do not support the government system and already react cooperative without governance are located near the categories “alternative incentives” and “enough control mechanism.” On the other hand, uncooperative people who do not support the governance system are closely related

to the concepts “breaks community,” “no behavioral change,” and “negative consequences.”

## 5. Discussion

Due to the growing popularity of collaborative consumption, it is relevant to understand what kind of challenges collaborative consumption provides for the market. Extant literature suggests that collaborative consumption lacks regulation in contrast to conventional businesses (Koopman et al., 2014; Rauch & Schleicher, 2015). The aim of the current study is to contribute to research on collaborative consumption as well as to the political debate about collaborative consumption businesses by examining the role of governance in a community of consumers. Thereby, we extend previous research on car sharing customers (Bardhi & Eckhardt, 2012) by showing that consumers do not only welcome governance when a company takes the responsibility of regulation but also when a community of consumers governs itself.

In the current study, a great majority of consumers support the introduction of a governance system in an open workshop. Analyzing the reasons for or against governance systems, the current study shows that consumers support governance because they think of humans as egoistic and in need of regulation. Supporters of a governance system underline that governance is in their opinion needed in order to increase the return rate of commonly used goods in collaborative consumption. This finding indicates that a majority of people would engage in collaborative consumption, if the access and use of the goods are controlled. Nevertheless, non-supporters of a governance system are most concerned about negative consequences of governance systems. Consumers fear a loss of self-determination and a break in the relationship of the community members, resulting in less cooperation.

In the current study, governance positively impacts cooperation, which is in line with earlier research that stresses the effectiveness of control and sanctions in a social dilemma (Milinski & Rockenbach, 2012; Tenbrunsel & Messick, 1999). The current analysis shows a tendency for an interaction effect, indicating that the implementation of a governance system may decrease cooperation when people do not support it. Though the effect size of the interaction effect is rather small, it is relevant for further research to take negative consequences of sanctions on collaborative consumption in consideration and examine possible double-edged effects. As the implementation of a sanction system prompts people to think of a decision in business terms rather than in ethical terms, it may have negative consequences on cooperation (Tenbrunsel & Messick, 1999). Benefits of a governance system may therefore only emerge when cooperation would be highly unlikely without sanctions (Jiang, Perc, & Szolnoki, 2013).

The current study also contributes to social dilemma research by investigating a social dilemma situations where no authority exists. Communities worldwide face the question of how to ensure that local resources, such as water, food, and land, are used sustainably (van Vugt, 2002). In order to guarantee that the member acts according to the interest of the community, regulation is an important topic. The present results suggest that in a social dilemma situation without an authority, community members welcome governance mechanisms and that the implementation of a governance system successfully increases cooperation. This is in line with laboratory experiments showing that participants often voluntarily implement sanctioning institutions (Kosfeld, Okada, & Riedl, 2009).

Although the current study sheds light on regulation as a challenge for the market in collaborative consumption, there are some limitations, which have to be considered in further research. In the study, the decisions to cooperate or not were solely based on the description of the open workshop. This is in contrast to a real-world situation of collaborative consumption which is often characterized as a social and less anonymous situation (Bardhi & Eckhardt, 2012). It is highly likely that people

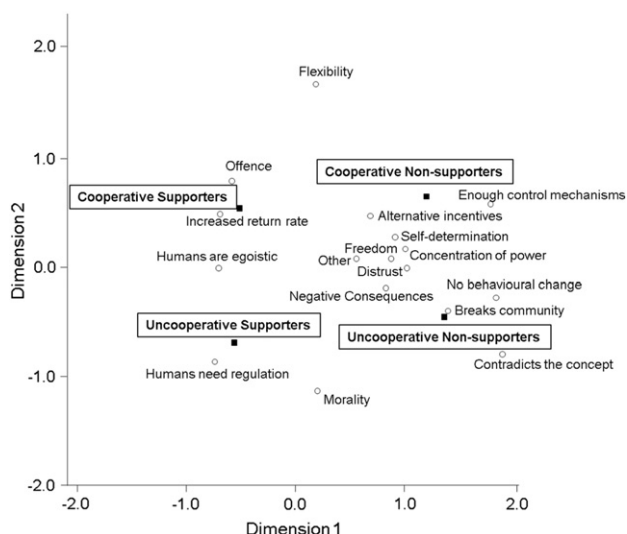


Fig. 2. Graphical portrayal of correspondence analysis results.

engaging in collaborative consumption already know other members of the group, as for example in a communal garden in the neighborhood. If community members know each other well and share partnering experiences, which is more likely in small groups, greater mutual trust enhances cooperation (Sánchez de Pablo González del Campo, Peña García Pardo, & Hernández Perlines, 2014; Yamagishi & Sato, 1986), making control mechanisms less necessary. The need of regulation is meant to be a problem for large groups, where it is nearly impossible to affect others' outcomes. Nevertheless, due to its increasing popularity and digitalization, collaborative consumption is not a small group phenomenon of close acquaintance anymore. As group sizes increase, communication and coordination of action gets harder. Such large-scale dilemmas can be solved by rewarding cooperators or punishing defectors (Kollock, 1998).

The current study is one of the first to investigate collaborative consumption regulated by a community, demonstrating that consumers' request for governance is a relevant outcome for the market. Although a great majority of people supports the implementation of sanctions in the current study, the need of both groups, supporters as well as non-supporters of a governance system, has to be considered in designing successful collaborative consumption business models. Negative consequences of governance may be prevented by addressing the need of consumers via a differentiated approach whereby the community recognizes those group members worthy of prosecution and those deserving of encouragement and support (Braithwaite, 2001). In order to satisfy both groups, supporters as well as non-supporters of a governance system, the way of how audits and sanctions are exercised may be a key determinant of whether a sanction system will be accepted by the community. If a sanction system is perceived as fair, cooperation increases (Verboon & van Dijke, 2011), whereas sanctions can destroy altruistic cooperation almost completely when they are not applied in a fair way (Fehr & Rockenbach, 2003). It is therefore relevant that monitoring and sanctions are based on acceptance of the community members. Besides the execution of sanctions, future research should investigate alternative forms of governance, such as social control to assure members' continued engagement (Sibai et al., 2015).

The findings are particularly important as in the context of collaborative consumption more and more networks are created via the Internet to share resources. Such big networks face the question of whether to regulate and control access or not, especially when community members differ according to their motives for engaging in collaborative consumption. If the motives of the consumers do not comply with the conditions of a collaborative consumption setting, consumers may decide to opt out and buy goods rather than temporarily own them. Current results indicate that a majority of people would engage in collaborative consumption, if the access and use of the goods are controlled. This may be particularly the case if consumers choose collaborative consumption for economic reasons. If people's decision to engage in collaborative consumption is based on social considerations, the implementation of a governance system may lead to reactance and less cooperative behavior or consumers will opt out. Further research should therefore concentrate on the motives for engaging in collaborative consumption as some consumers may consider it as a form of boycott (Neilson, 2010) or try to reject consumption in order to live a sustainable life (Black & Cherrier, 2010; McDonald, Oates, Young, & Hwang, 2006) rather than because of economic considerations (Belk, 2014).

**Appendix A. Descriptive categories in the English and German languages.**

English	German original	Example
1 Motivation to cooperate	Motivation zur Kooperation	"fostering people's discipline"

(continued)

English	German original	Example
2 Increased return rate	Rückgabequote erhöhen	"ensuring the returning of the tool within the deadline"
3 Pressure	Druck	"some people do not feel pressure without control mechanisms"
4 Peacefully living together	Friedliches Zusammenleben	"people can hardly live peacefully together without sanctions"
5 People need regulation	Menschen brauchen Regeln	"I think that people need certain rules, etc. in order to be functional"
6 Incentive for non-cooperation	Anreiz zur Nichtkooperation	"the incentive for deviating behavior is otherwise too high"
7 Distrust	Misstrauen	"communicates mistrust"
8 Alternative incentives	Alternative Anreize	"rather rewarding positive behavior than punishing negative behavior"
9 Self-determination	Selbstbestimmung	"I think that self-monitoring works"
10 Based on acceptance	Basierend auf Akzeptanz	"consequences should [...] be based on consensus"
11 Freedom	Freiheit	"restriction of freedom"
12 People are honest	Menschen sind ehrlich	"most people are honest"
13 Preservation of system	Erhalt des Systems	"otherwise the system fails"
14 People are egoistic	Menschen sind egoistisch	"otherwise people are only concerned about their own benefits"
15 Conditionally	Situationsabhängigkeit	"furthermore individual situations are not taken into consideration"
16 Flexibility	Flexibilität	"the period of renting needs to be more flexible"
17 Negative consequences	Negative Konsequenzen	"it dulls people"
18 Fairness	Gerechtigkeit	"fair distribution of resources; ensure justice"
19 Large group issue	Problem großer Gruppen	"without it, it cannot work with an unlimited number of users"
20 Contradicts the concept	Widerspricht der Idee	"the idea of an open workshop is lost"
21 Security	Sicherheit	"conveys safety"
22 Generates commitment	Schafft Verbindlichkeit	"they help to make rules more binding"
23 Acceptance of controls	Zustimmung zu Kontrollen	"in principle, nothing can be said against audits"
24 Final consequence	Als letzte Konsequenz	"in the worst case, sanctions are needed"
25 No behavioral change	Keine Verhaltensänderung	"people who want to break the rules either do not expect to get caught anyway or find ways and means to obscure their activities"
26 Enough control mechanisms	Kontrollen ausreichend	"there are enough penalties"
27 Morality	Moral/Werte	"some people have no decency"
28 Orientation	Lernen/Orientierung	"people learn from sanctions/rewards (wrong/right)"
29 Anarchy	Chaos/Anarchie	"maintain order; otherwise it gets out of hands and becomes anarchy"
30 Concentration of power	Machtkonzentration	"totalitarianism"
31 Law	Rechte/Gesetze	"rules and laws are important"
32 Self-inflicted	Selbst verschuldet	"because they did not return the tool, the sanctions are the citizens' own fault"
33 Rules are known	Regeln Sind bekannt	"everyone knows when a particular tool has to be returned"
34 Rules require control	Regeln benötigen Kontrolle	"because rules only make sense, if there are control mechanisms"
35 Breaks community	Zerstört Gemeinschaft	"it destroys the faith in the

(continued on next page)

## Appendix A (continued)

	English	German original	Example
36	For the good of all	Zum Wohle der Gemeinschaft	community "enhancing public welfare"
37	Offense	Straftaten	"preventing theft"
38	Other	Restkategorie	"you never know"

## A.1. Vignettes used in the study

## Vignette 1: "No governance system"

Imagine living in a city, where an open workshop exists with tools for free use for all citizens. This open workshop should enable all citizens to borrow tools for repairs around the house or flat for free. After appropriate use, all tools should be returned after three days. The access to the open workshop and the use of the tools is not subject to any controls.

You borrowed some of the tools for repairing something at your house, but you weren't able to finish the work within 3 days and would need the tools two days longer.

## Vignette 2: "Governance system"

Due to a reorganization of the open workshop, the community agrees to introduce regular checks, in order to govern the access to the open workshop and to govern the use of the tools. Further, the community now has the opportunity to punish inappropriate use and delayed return severely.

## References

- Alaimo, K., Packnett, E., Miles, R. A., & Kruger, D. J. (2008). Fruit and vegetable intake among urban community gardeners. *Journal of Nutrition Education and Behavior*, 40(2), 94–101. <http://dx.doi.org/10.1016/j.jneb.2006.12.003>.
- Albinsson, P. A., & Perera, B. Y. (2012). Alternative marketplaces in the 21st century: Building community through sharing events. *Journal of Consumer Behaviour*, 11(4), 303–315. <http://dx.doi.org/10.1002/cb.1389>.
- Algert, S. J., Baameur, A., & Renvall, M. J. (2014). Vegetable output and cost savings of community gardens in San Jose, California. *Journal of the Academy of Nutrition and Dietetics*, 114(7), 1072–1076.
- Armstrong, D. (2000). A survey of community gardens in upstate New York: Implications for health promotion and community development. *Health & Place*, 6(4), 319–327. [http://dx.doi.org/10.1016/S1353-8292\(00\)00013-7](http://dx.doi.org/10.1016/S1353-8292(00)00013-7).
- Ballus-Armet, I., Shaheen, S. A., Clonts, K., & Weinzimmer, D. (2014). Peer-to-peer car sharing exploring public perception and market characteristics in the San Francisco Bay Area, California. *Transportation Research Record*, 2416, 27–36. <http://dx.doi.org/10.3141/2416-04>.
- Bardhi, F., & Eckhardt, G. M. (2012). Access-based consumption: The case of car sharing. *Journal of Consumer Research*, 39(4), 881–898. <http://dx.doi.org/10.1086/666376>.
- Belk, R. (2014). You are what you can access: Sharing and collaborative consumption online. *Journal of Business Research*, 67(8), 1595–1600. <http://dx.doi.org/10.1016/j.jbusres.2013.10.001>.
- Bellafante, G. (2015, July 26). *Uber makes its pain new yorkery' problem*. The New York Times Retrieved from: [http://www.nytimes.com/2015/07/26/nyregion/uber-makes-its-pain-new-yorkers-problem.html?\\_r=0](http://www.nytimes.com/2015/07/26/nyregion/uber-makes-its-pain-new-yorkers-problem.html?_r=0).
- Birdsall, M. (2014). Carsharing in a sharing economy. *IIE Journal-Institute of Transportation Engineers*, 84(4), 37–40.
- Birky, J., & Strom, E. (2013). Urban perennials: How diversification has created a sustainable community garden movement in the United States. *Urban Geography*, 34(8), 1193–1216. <http://dx.doi.org/10.1080/02723638.2013.784086>.
- Black, I. R., & Cherrier, H. (2010). Anti-consumption as part of living a sustainable lifestyle: Daily practices, contextual motivations and subjective values. *Journal of Consumer Behaviour*, 9(6), 437–453. <http://dx.doi.org/10.1002/cb.337>.
- Blasius, J. (2001). *Korrespondenzanalyse*. München: Oldenbourg Verlag.
- Botsman, R., & Rogers, R. (2010). Beyond Zipcar: Collaborative consumption. *Harvard Business Review*, 88(10), 30–30.
- Braithwaite, J. (2001). *Restorative justice & responsive regulation*. Oxford, USA: Oxford University Press.
- Coyle, J. R., Gould, S. J., Gupta, P., & Gupta, R. (2009). "To buy or to pirate": The matrix of music consumers' acquisition-mode decision-making. *Journal of Business Research*, 62(10), 1031–1037. <http://dx.doi.org/10.1016/j.jbusres.2008.05.002>.
- Cusumano, M. A. (2015). How traditional firms must compete in the sharing economy. *Communications of the ACM*, 58(1), 32–34. <http://dx.doi.org/10.1145/2688487>.
- Dawes, R. M. (1980). Social dilemmas. *Annual Review of Psychology*, 31, 169–193.
- Der Standard (2015, August 13). *Österreichische Finanz will Daten von Plattform Airbnb*. Der Standard. Retrieved from: <http://derstandard.at/2000015690780/Stadt-Wien-ruestet-sich-gegen-Uber-Airbnb-und-Co>
- Falk, A., & Kosfeld, M. (2006). The hidden costs of control. *The American Economic Review*, 96(5), 1611–1630. <http://dx.doi.org/10.2307/30034987>.
- Fehr, E., & Rockenbach, B. (2003). Detrimental effects of sanctions on human altruism. *Nature*, 422(6928), 137–140.
- Ferris, J., Norman, C., & Sempik, J. (2001). People, land and sustainability: Community gardens and the social dimension of sustainable development. *Social Policy & Administration*, 35(5), 559–568. <http://dx.doi.org/10.1111/1467-9515.t01-1-00253>.
- Fu, S., Lin, J., & Sun, L. (2013). An empirical examination of the stability of the alliance of "a company plus farmers" from the perspective of farmers. *Chinese Management Studies*, 7(3), 382–402. <http://dx.doi.org/10.1108/cms-09-2012-0134>.
- Ganesan, S., & Hess, R. (1997). Dimensions and levels of trust: Implications for commitment to a relationship. *Marketing Letters*, 8(4), 439–448. <http://dx.doi.org/10.1023/a:1007955514781>.
- Gangl, K., Hofmann, E., & Kirchler, E. (2015). Tax authorities' interaction with taxpayers: A conception of compliance in social dilemmas by power and trust. *New Ideas in Psychology*, 37(0), 13–23. <http://dx.doi.org/10.1016/j.newideapsych.2014.12.001>.
- Glover, T. D. (2004). Social capital in the lived experiences of community gardeners. *Leisure Sciences*, 26(2), 143–162. <http://dx.doi.org/10.1080/01490400490432064>.
- Guitart, D. A., Pickering, C. M., & Byrne, J. A. (2014). Color me healthy: Food diversity in school community gardens in two rapidly urbanising Australian cities. *Health & Place*, 26, 110–117. <http://dx.doi.org/10.1016/j.healthplace.2013.12.014>.
- Gupta, S. (2015). To pay or not to pay a premium price for corporate social responsibility: A social dilemma and reference group theory perspective. *Academy of Marketing Studies Journal*, 19(1), 24–45.
- Gupta, S., & Ogden, D. T. (2009). To buy or not to buy? A social dilemma perspective on green buying. *Journal of Consumer Marketing*, 26(6), 376–391. <http://dx.doi.org/10.1108/07363760910988201>.
- Guttenberg, D. (2013). Airbnb: Disruptive innovation and the rise of an informal tourism accommodation sector. *Current Issues in Tourism* (pp. 1–26). <http://dx.doi.org/10.1080/13683500.2013.827159>.
- Hamann, S. (2014, September 17). *Achtung, Mogelpackung! Wo „Teilen“draufsteht, ist Arbeit drin*. Die Presse Retrieved from <http://diepresse.com/home/meinung/quergeschrieben/sibyllehamann/3870732/Achtung-Mogelpackung-Wo-Teilen-draufsteht-ist-Arbeit-drin>.
- Hamari, J., Sjöklint, M., & Ukkonen, A. (2015). The sharing economy: Why people participate in collaborative consumption. *Journal of the Association for Information Science and Technology*. <http://dx.doi.org/10.1002/asi.23552>.
- Hank, R., & von Petersdorff, W. (2013, April 13). *Sharing Economy "Haben ist seliger als Teilen!"* Frankfurter Allgemeine Zeitung. Retrieved from <http://www.faz.net/aktuell/finanzen/meine-finanzen/geld-ausgeben/sharing-economy-haben-ist-seliger-als-teilen-12139540.html>
- Hardin, G. (1968). The tragedy of the commons. *Science*, 162, 1243–1248.
- Heinrichs, H. (2013). Sharing economy: A potential new pathway to sustainability. *Gaia-Ecological Perspectives for Science and Society*, 22(4), 228–231.
- Jenny, A., Fuentes, F. H., & Mosler, H. J. (2007). Psychological factors determining individual compliance with rules for common pool resource management: The case of a Cuban community sharing a solar energy system. *Human Ecology*, 35(2), 239–250. <http://dx.doi.org/10.1007/s10745-006-9053-x>.
- Jiang, L.-L., Perc, M., & Szolnoki, A. (2013). If cooperation is likely punish mildly: Insights from economic experiments based on the Snowdrift Game. *PloS One*, 8(5). <http://dx.doi.org/10.1371/journal.pone.0064677>.
- Joffily, M., Masclat, D., Noussair, C. N., & Villeval, M. C. (2014). Emotions, sanctions, and cooperation. *Southern Economic Journal*, 80(4), 1002–1027. <http://dx.doi.org/10.4284/0038-4038-2012.067>.
- Khachatryan, H., Joireman, J., & Casavant, K. (2013). Relating values and consideration of future and immediate consequences to consumer preference for biofuels: A three-dimensional social dilemma analysis. *Journal of Environmental Psychology*, 34, 97–108. <http://dx.doi.org/10.1016/j.jenvp.2013.01.001>.
- Kirchler, E. (2007). *The economic psychology of tax behaviour*. Cambridge: Cambridge University Press.
- Kollock, P. (1998). Social dilemmas: The anatomy of cooperation. *Annual Review of Sociology*, 24, 183–214. <http://dx.doi.org/10.1146/annurev.soc.24.1.183>.
- Koopman, C., Mitchell, M. D., & Thierer, A. D. (2014). *The sharing economy and consumer protection regulation: The case for policy change from SSRN* [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2535345](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2535345)
- Kosfeld, M., Okada, A., & Riedl, A. (2009). Institution formation in public goods games. *The American Economic Review*, 99(4), 1335–1355. <http://dx.doi.org/10.2307/25592511>.
- Landis, J. R., & Koch, G. G. (1977). The measurement of observer agreement for categorical data. *Biometrics*, 33(1), 159–174. <http://dx.doi.org/10.2307/2529310>.
- Li, X., & Ling, L. (2004). PeerTrust: Supporting reputation-based trust for peer-to-peer electronic communities. *Knowledge and Data Engineering, IEEE Transactions on*, 16(7), 843–857. <http://dx.doi.org/10.1109/tkde.2004.1318566>.
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *The Academy of Management Review*, 20(3), 709–734. <http://dx.doi.org/10.2307/258792>.
- McDonald, S., Oates, C. J., Young, C. W., & Hwang, K. (2006). Toward sustainable consumption: Researching voluntary simplifiers. *Psychology and Marketing*, 23(6), 515–534. <http://dx.doi.org/10.1002/mar.20132>.
- Milinski, M., & Rockenbach, B. (2012). On the interaction of the stick and the carrot in social dilemmas. *Journal of Theoretical Biology*, 299, 139–143. <http://dx.doi.org/10.1016/j.jtbi.2011.03.014>.
- Möhlmann, M. (2015). Collaborative consumption: determinants of satisfaction and the likelihood of using a sharing economy option again. *Journal of Consumer Behaviour*, 14(3), 193–207. <http://dx.doi.org/10.1002/cb.1512>.
- Mulder, L. B., van Dijk, E., De Cremer, D., & Wilke, H. A. M. (2006). Undermining trust and cooperation: The paradox of sanctioning systems in social dilemmas. *Journal of*

- Experimental Social Psychology*, 42(2), 147–162. <http://dx.doi.org/10.1016/j.jesp.2005.03.002>.
- Neilson, L. A. (2010). Boycott or buycott? Understanding political consumerism. *Journal of Consumer Behaviour*, 9(3), 214–227. <http://dx.doi.org/10.1002/cb.313>.
- Oberösterreich, A. (2014). *Sharing - teilen und tauschen statt kaufen*. Retrieved from [http://ooe.arbeiterkammer.at/beratung/konsumentenschutz/fairkonsumieren/Sharing\\_-\\_Geldboerse\\_und\\_Umwelt\\_schonen.html](http://ooe.arbeiterkammer.at/beratung/konsumentenschutz/fairkonsumieren/Sharing_-_Geldboerse_und_Umwelt_schonen.html).
- Ozanne, L. K., & Ballantine, P. W. (2010). Sharing as a form of anti-consumption? An examination of toy library users. *Journal of Consumer Behaviour*, 9(6), 485–498. <http://dx.doi.org/10.1002/cb.334>.
- Ozanne, L. K., & Ozanne, J. L. (2011). A child's right to play: The social construction of civic virtues in toy libraries. *Journal of Public Policy & Marketing*, 30(2), 264–278.
- Pennington, R., Wilcox, H. D., & Grover, V. (2003). The role of system trust in business-to-consumer transactions. *Journal of Management Information Systems*, 20(3), 197–226.
- Pieters, R., Bijmolt, T., van Raaij, F., & de Kruijk, M. (1998). Consumers' attributions of proenvironmental behavior, motivation, and ability to self and others. *Journal of Public Policy & Marketing*, 17(2), 215–225.
- Praxmarer-Carus, S. (2014). Why the proposal of a complex contract may harm or foster a partner's trust. *Journal of Business Research*, 67(7), 1421–1429. <http://dx.doi.org/10.1016/j.jbusres.2013.07.025>.
- Putzschloegl, M., & Zoidl, F. (2015, March 28). *Airbnb: Vermieten in der Grauzone. Der Standard*. Retrieved from <http://derstandard.at/2000013565755/Airbnb-Vermieten-inder-Grauzone>.
- Rauch, D. E., & Schleicher, D. (2015). Like Uber, but for local governmenta, policy: The future of local regulation of the 'Sharing Economy'. from SSRN <http://ssrn.com/abstract=2549919> or 10.2139/ssrn.2549919
- Saldívar-Tanaka, L., & Krasny, M. E. (2004). Culturing community development, neighborhood open space, and civic agriculture: The case of Latino community gardens in New York City. *Agriculture and Human Values*, 21(4), 399–412. <http://dx.doi.org/10.1023/B:AHUM.0000047207.57128.a5>.
- Samuelson, C. D. (1990). Energy conservation: A social dilemma approach. *Social Behaviour*, 5(4), 207–230.
- Sanchez de Pablo Gonzalez del Campo, J. D., Pena Garcia Pardo, I., & Hernandez Perlines, F. (2014). Influence factors of trust building in cooperation agreements. *Journal of Business Research*, 67(5), 710–714. <http://dx.doi.org/10.1016/j.jbusres.2013.11.032>.
- Schmelzkopf, K. (2002). Incommensurability, land use, and the right to space: Community gardens in New York City. *Urban Geography*, 23(4), 323–343. <http://dx.doi.org/10.2747/0272-3638.23.4.323>.
- Sen, S., Gurhan-Canli, Z., & Morwitz, V. (2001). Withholding consumption: A social dilemma perspective on consumer boycotts. *Journal of Consumer Research*, 28(3), 399–417. <http://dx.doi.org/10.1086/323729>.
- Shaheen, S. A., & Cohen, A. P. (2007). Growth in worldwide carsharing – An international comparison. *Transportation Research Record*, 1992, 81–89. <http://dx.doi.org/10.3141/1992-10>.
- Shaw, D., & Newholm, T. (2002). Voluntary simplicity and the ethics of consumption. *Psychology and Marketing*, 19(2), 167–185. <http://dx.doi.org/10.1002/mar.10008>.
- Sibai, O., de Valck, K., Farrell, A. M., & Rudd, J. M. (2015). Social control in online communities of consumption: A framework for community management. *Psychology & Marketing*, 32(3), 250–264. <http://dx.doi.org/10.1002/mar.20778>.
- Tenbrunsel, A. E., & Messick, D. M. (1999). Sanctioning systems, decision frames, and cooperation. *Administrative Science Quarterly*, 44(4), 684–707. <http://dx.doi.org/10.2307/2667052>.
- The Guardian (2015, September 3). *Uber increases unemployment and needs regulation, says Brazil's president*. The Guardian Retrieved from: <http://www.theguardian.com/technology/2015/sep/03/uber-increases-unemployment-and-needs-regulation-says-brazils-president>.
- Tussyadiah, I. (2015). An exploratory on drivers and deterrents of collaborative consumption in travel. In I. Tussyadiah, & A. Inversini (Eds.), *Information & Communication Technologies in Tourism 2015*. Switzerland: Springer International Publishing.
- Van Lange, P. A. M., van Vugt, M., Meertens, R. M., & Ruiters, R. A. C. (1998). A social dilemma analysis of commuting preferences: The roles of social value orientation and trust. *Journal of Applied Social Psychology*, 28(9), 796–820. <http://dx.doi.org/10.1111/j.1559-1816.1998.tb01732.x>.
- Van Vugt, M. (2002). Central, individual, or collective control? Social dilemma strategies for natural resource management. *American Behavioral Scientist*, 45(5), 783–800.
- Verboon, P., & van Dijke, M. (2011). When do severe sanctions enhance compliance? The role of procedural fairness. *Journal of Economic Psychology*, 32(1), 120–130. <http://dx.doi.org/10.1016/j.joep.2010.09.007>.
- Yamagishi, T. (1986). The provision of a sanctioning system as a public good. *Journal of Personality and Social Psychology*, 51(1), 110–116. <http://dx.doi.org/10.1037//0022-3514.51.1.110>.
- Yamagishi, T., & Sato, K. (1986). Motivational bases of the public-goods problem. *Journal of Personality and Social Psychology*, 50(1), 67–73. <http://dx.doi.org/10.1037/0022-3514.50.1.67>.
- Yang, Z., Wang, J., & Mourali, M. (2015). Effect of peer influence on unauthorized music downloading and sharing: The moderating role of self-construal. *Journal of Business Research*, 68(3), 516–525. <http://dx.doi.org/10.1016/j.jbusres.2014.09.011>.