

## Results and comparison of a representative population survey in Germany

# The sharing economy

In the so-called sharing economy items are shared, borrowed, exchanged or passed on after use. Scientifically based findings about the users of consumption and business models of this kind are rare. The aim of this article is to add to the available knowledge about the relevance and scope of the sharing economy in Germany.

By Maike Gossen and Gerd Scholl

In the so-called sharing economy, people's ability to use products and services does not depend on individual ownership – instead, items can be borrowed, rented or leased and unwanted items given away, sold or exchanged. Although this kind of consumption is nothing new, in the sharing economy it is practised globally and among strangers. One of the factors that has made this kind of consumption possible and then more widespread is modern networking and communication technology. The Internet and digitalisation have extended the scope of sharing models, reduced transaction costs and made these activities easier to coordinate (e. g. Botsman/Rogers 2011; Belk 2014; Schor/Fitzmaurice 2015). Consequently, the sharing economy has grown considerably and become more complex. New concepts – online and offline, business-to-consumer and peer-to-peer, profit and non-profit – exist alongside proven models such as car sharing and online marketplaces for buying and selling used items. In certain circumstances sharing can contribute to sustainable kinds of consumption that save resources.

In addition, there has been a significant increase in (popular) scientific analysis of the sharing economy. Research projects and publications study and classify these consumption practices, analyse markets and the potential of different models, assess environmental and economic impacts and examine necessary actions and possibilities for intervention by politics and civil society [1]. In contrast, knowledge about the users, their experiences and their motives is still fragmentary. So far, empirical studies of user behaviour in Germany have rarely been conducted. This article evaluates data from the 2014 Environmental Consciousness Study by the German Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety and the Federal Environment Agency (BMUB/UBA 2015). It also includes a comparative analysis of several selected user surveys, with the aim of adding to the available knowledge about the relevance and scope of the sharing economy in Germany.

The presentation of the results below focuses on models that involve intensified use of material goods. It shows how the German population currently uses these models and what their future potential for use is, taking into account age-specific features.

### Methodological approach

The results presented in this article are based on data collected as part of the 2014 Environmental Consciousness Study by the Federal Ministry for the Environment, Nature Conservation, Building and Nuclear Safety and the Federal Environment Agency (BMUB/UBA 2015). The study involves a representative online survey of members of the resident German population aged 14 years and over ( $n = 1,117$ ). The present article uses the data for respondents aged 18 years and over [2]. The Institute for Ecological Economy Research (IÖW), together with Holzhauserei and sociodimensions, conducted the study. The questionnaire was designed on the basis of previous studies on environmental consciousness and environmental behaviour, taking into account topics of current relevance. In order to develop the questions and items that correspond to the results presented here, relevant previous studies and surveys on social innovation and the sharing economy were consulted.

### Presentation of the results

Three-quarters of the people surveyed for the 2014 Environmental Consciousness Study believe that shared-use models are an attractive idea for the future. They expect sharing practices such as exchanging, lending and borrowing, repairing or passing on available products instead of buying them new to make a considerable contribution to quality of life. This general openness does not correspond to respondents' actual experience of using systems that aim to use material goods more intensively (co-using, lending and renting). In such systems the item remains the property of the provider, who grants the user the right to use it temporarily. The transaction can take place between companies and private individuals (B2C) or between private individuals (P2P). The P2P structures, in particular, differ in their degree of formalisation. Some of these practices are informal and do not involve the exchange of money, while for others a fee must be paid. In the latter case, an intermediary is often responsible for connecting providers and users and coordinating the service, usually via an online platform or app (Scholl et al. 2015).

The 2014 Environmental Consciousness Study addressed the following practices:

- When goods are borrowed from others or lent to others, one person allows another person to use an item – usually on a temporary basis and free of charge. The exchange takes place sequentially and there is no transfer of ownership. As a rule, lending and borrowing takes place in an informal, personal context, so there is no involvement by a commercially oriented third party seeking to make a profit, such as a platform that connects lenders and borrowers. In addition, the participants have no economic expectations of the exchange.
  - Traditional renting involves a commercial provider making an item available for temporary use. The transaction takes place in a shop or online and, as a rule, a fee is charged.
  - A concrete example of a model for temporary, fee-based rentals is a bicycle rental scheme. These systems – also known as bike-sharing schemes – are different to traditional bicycle-hire models (e.g. for tourists) since they can be used flexibly, anywhere and at any time. The bicycles can be borrowed from dedicated stations using modern communication technology and then returned after use to any station in the area covered by the scheme.
  - Car sharing is provided as a commercial, B2C service ('traditional', location-dependent car sharing or free-floating car sharing) or organised between private individuals via a platform (so-called 'peer-to-peer' or car sharing). In both cases users are charged a fee to use the vehicles, which is why car sharing is also classified as a rental service in this context.
  - The practice of renting or renting out private accommodation, which is comparatively new in the sharing economy, takes place between private individuals who do not know each other and is therefore classified as a P2P model. The temporary renting or renting out of private accommodation is typically coordinated by a third party. Most of these so-called intermediaries are Internet platforms that apply a service charge.
- Figure 1 shows the extent to which respondents' experiences with these practices differ.

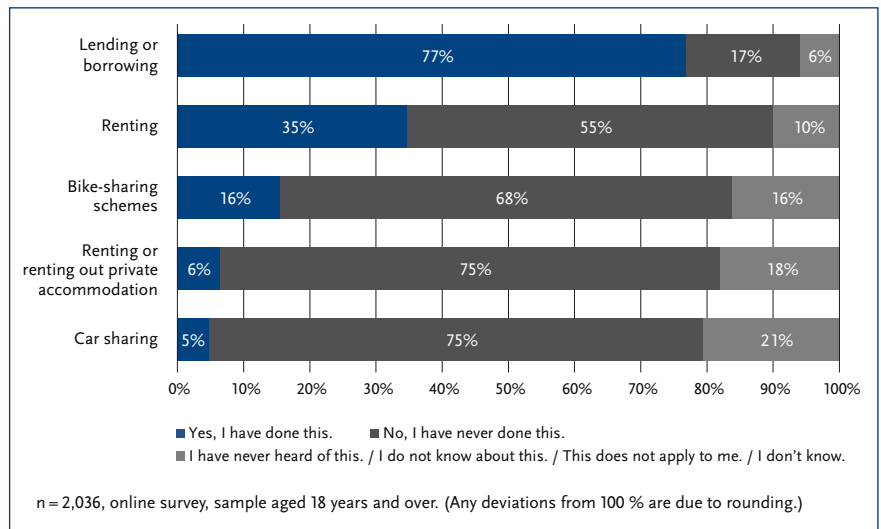


Figure 1: Experience of using intensive-use models

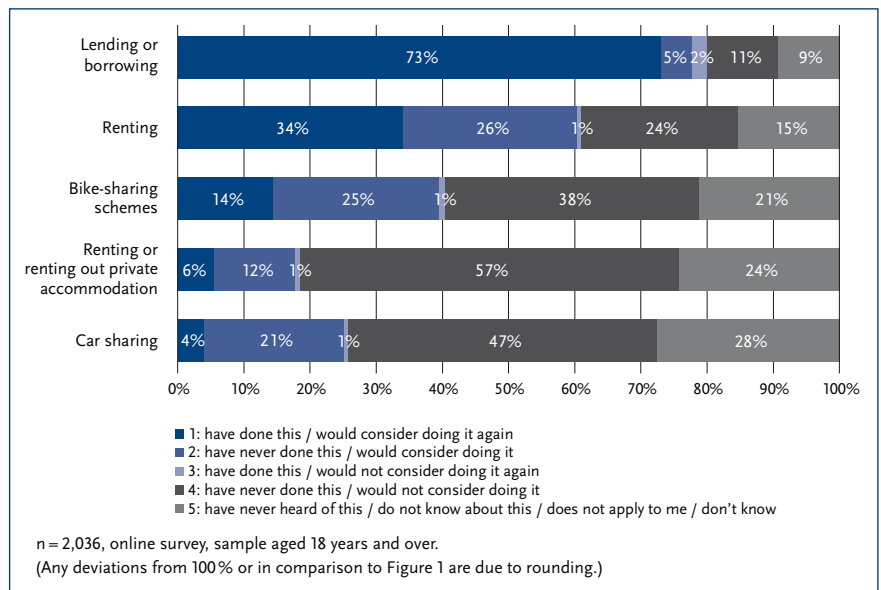


Figure 2: Potential for use of intensive-use models

The most widespread practice is borrowing things from other people and/or lending things to others: over three-quarters of the respondents have experience of this. This includes people from all age groups, with a slight concentration in the older cohorts aged 45 to 59 years and 60 years and older.

Just over a third of respondents have paid a fee to rent something from a shop or over the Internet; in this group people aged between 45 and 59 years account for a higher share.

The third most frequent experience among the respondents – but one that a much lower proportion of people has tried – is using a bike-sharing scheme. 16% of the respondents have done so. This group is also predominantly made up of members of the two older age groups (45 to 59 years and 60 years and older).

*„Individual consumption based on ownership is still the norm for the majority of Germans.“*

Considerably fewer respondents – just six percent – have used an online platform to offer private accommodation to others and/or rent it from others themselves. Among these people, the youngest age cohort – aged 18 to 29 – makes up the largest share with 29 percent. A relatively large number of people – 18 % of all respondents – state that they do not know about such models or select the response ‘I don’t know’ or ‘This does not apply to me’.

The share of respondents that have used car sharing is similar. Just five percent say they have used this mobility option. What is striking here is that there is a comparably high share (46 %) of respondents from the 30 to 44 age group among those who have used car sharing.

This study can be used to draw conclusions about the current use of sharing concepts and about their future potential for use. Figure 2 shows the share of respondents who, based on their own experiences, would consider using these different structures (again) or consider them to be out of the question.

Of the respondents who have lent things to other people or borrowed things from other people, almost all of them would consider doing it again in the future. In addition, there are respondents who have no experience of lending or borrowing but would consider doing it in the future. In total the potential for use is 78 % of all respondents. Among these respondents there is a high share of older people (around 60 % of those interested are aged 45 to 59 years or 60 years and older). In this case the potential for use roughly corresponds to the percentage of respondents who have experience of these practices.

The potential for use of rental services is also comparatively high (60 %). 34 % are ‘experienced’ with these services and would use them again and 26 % are ‘inexperienced’ but state that they would consider renting things from a shop or over the Internet for a fee. Those who would consider making use of such services are generally from the older age cohorts.

Bike-sharing schemes are seen as an attractive mobility option by almost 40 % of all respondents – they come from all age groups, but there is a slightly higher representation among the group aged 45 to 59. Almost all of the ‘experienced’ respondents would consider using bike-sharing schemes again in the future. 25 % of respondents are ‘inexperienced’ but state that they would consider using these systems in the future, while 38 % consider them to be out of the question.

Since a comparatively small group of people has experience of renting or renting out private accommodation, the potential for use is also low. Six percent of respondents are ‘experienced’ and would use these models again; 12 % are ‘inexperienced’ but express interest in using this kind of model in the future. Interestingly, it is not only younger respondents who regard this alternative form of accommodation as attractive. While the younger respondents make up the largest share with 28 %, closely followed by the next two age groups with 25 % each, a comparatively large proportion of respondents aged 60 and over is interested: 22 %. However, among all respondents the share of those who have not used these private accommoda-

tion models and would not consider doing so in future is larger (57 %). Besides, a quarter of those surveyed are unfamiliar with these structures (they selected the responses ‘This does not apply to me’ or ‘I don’t know’).

A quarter of those surveyed would consider using the various car sharing options in the future. Most of them currently have no experience of car sharing. Only four percent state that they have used car sharing and would consider doing so again in the future. Half of all those surveyed, however, do not regard car sharing as an option and around one-third state that they know nothing about it or do not consider it to be applicable to their situation. Among those people who would consider using car sharing, there is no clear concentration within specific age groups; they are distributed relatively equally across the age groups in question. Only the oldest respondents are slightly less interested in car sharing.

## Discussion

In general, the results presented support the findings of other empirical studies that looked at experience of use and potential for use of sharing models among the German population (e. g. Heinrichs/Grunenberg 2012; Frick et al. 2013; VZBV 2015; PwC 2015; ING-DiBa AG 2015). Demand and future interest vary considerably according to the different areas of need and specific sharing-economy models: some practices have entered the mainstream while others can be classified as niche phenomena.

However, it is possible to also determine differences between the results of the studies caused by different survey methods, execution periods, research groups and types of question wording. Two studies were used for comparison: one by Heinrichs and Grunenberg and one by the VZBV (the Federation of German Consumer Organisations). In a representative survey of the resident German population aged 14 years and over, Heinrichs and Grunenberg (2012) carried out telephone interviews with 1,003 people. For the representative survey by the VZBV (2015) 1,009 people aged 18 and over were interviewed by tele-

Sharing models	Experience of use			Potential for use	
	BMUB and UBA 2014*	VZBV 2015**	Heinrichs and Grunenberg 2012***	BMUB and UBA (2014)	VZBV 2015
Renting	35 %	–	25 %		
Car sharing	5 %	10 %	29 %	25 %	62 %
Bicycle hire and/or bike-sharing schemes	16 %	7 %		39 %	66 %
Renting/renting out private accommodation and/or flat sharing	6 %	4 %	28 %	18 %	40 %

\* n = 2,036, representative survey, online, sample aged 18 years and over; \*\* n = 1,009, representative survey, by telephone, sample aged 18 years and over; \*\*\* n = 1,003, representative survey, by telephone, sample aged 14 years and over

Table 1: Experience of use and potential for use of sharing models: a comparison of studies

phone. Table 1 shows a comparison of the studies in terms of experience of use and potential for use of structures in the sharing economy.

One-third (35 %) of respondents surveyed for the 2014 Environmental Consciousness Study has rented an item on a commercial basis. Heinrichs and Grunenberg's 2012 study shows a similar result: 25 % have rented infrequently used items such as special tools or garden equipment. However, Heinrichs and Grunenberg's question asks explicitly about renting from a shop, whereas the question wording in the 2014 Environmental Consciousness Study includes renting items over the Internet as well as from a shop. This means that the higher percentages in the 2014 Environmental Consciousness Study may possibly be due to the different wording in the question.

Five percent of those surveyed for the 2014 Environmental Consciousness Study have used car sharing and 25 % would consider using it in the future. Among those surveyed for the VZBV study, ten percent have used car sharing and 62 % express an interest in using it. Thus there are also considerable differences between the results of the studies in this area, which, at best, can be put down to the fact that self-reported market potential can be very unreliable and the studies do not specify what exactly is meant by 'car sharing'.

16 % of those surveyed for the 2014 Environmental Consciousness Study have used bike-sharing schemes. In contrast, just seven percent of participants in the VZBV 2015 survey have done so. The difference in responses regarding potential for use is even more striking: 39 % of those surveyed for the 2014 Environmental Consciousness Study state that they would consider using a bike-sharing scheme in the future, while 66 % surveyed for the VZBV study express an interest in using such a scheme. The different terms used do not sufficiently explain the significant differences between the two studies. It seems that respondents' statements about what they would consider doing in future are highly unreliable.

The study by Heinrichs and Grunenberg includes the two different mobility options in one question, resulting in a considerably higher share of respondents who have used these structures compared with the aforementioned studies, even if the individual figures for car sharing and bike sharing from the other studies are added together. According to the 2014 Environmental Consciousness Study and the VZBV survey, al-

most the same share of respondents has experience of renting out or using private accommodation (six percent and four percent, respectively). In view of the above, the corresponding findings by Heinrichs and Grunenberg (2012) are notable: in their study 28 % of respondents state that they have rented private accommodation or a garden (e.g. a shared flat or an allotment) to other people or used private accommodation or a garden belonging to other people, which is more than 20 percentage points higher than in the two other studies. A possible explanation for this significant difference is the broad definition of the private accommodation, i.e. the property being shared: Heinrichs and Grunenberg's study includes housing options such as flat-shares in the definition. With regard to respondents' interest in using private accommodation platforms in the future there is another significant difference: while 18 % of those surveyed for the 2014 Environmental Consciousness Study would consider using such a model, the percentage from the VZBV study is more than twice as high, at 40 %.

It can be concluded that comparing the studies does not give a clear or consistent picture. For example, the figures from the 2014 Environmental Consciousness Study are higher or lower – depending on each sharing model – than those from the other surveys. The figures determined by Heinrichs and Grunenberg (2012) for private accommodation platforms are 20 percentage points higher than the figures from the other two studies. The differences regarding potential for use are obvious: in the VZBV study it is sometimes the case that twice as many respondents state that they would consider using a certain model than in the 2014 Environmental Consciousness Study.

The inconsistent results can be due to several factors. In particular, aspects of the methodology and the surveying techniques used (instruments and methods used for collecting data, question wording etc.) must be taken into account when interpreting the data. In addition, it can be assumed that – given the fact that the sharing economy is very dynamic and models and services are currently changing – the people surveyed for all three of the studies were somewhat unsure or unclear about the definitions and classifications of the sharing models. This could have contributed to the high level of unreliability observed, particularly concerning respondents' statements about their willingness to use sharing models in the future.

## Conclusion

The aim of this article was to assess the relevance and the scope of the sharing economy by using current empirical findings concerning the spread of sharing models. For this purpose, selected data from the 2014 Environmental Consciousness Study and other current studies of people's experience of using sharing models and their willingness to use them in the future were analysed.

In general, it can be noted that individual consumption based on ownership is still the norm for the majority of Germans. Few people have used professional, commercial or individually organised shared-use structures so far. The proportion of those who have used such models is between four and 35%, depending on the kind of model and the survey.

The findings concerning potential for use suggest that it is difficult to predict future behaviours. In particular, this applies to the rental models considered in the studies, for which the proportion of potential users is between 18 and 66%, depending on the kind of model and the study. It is likely that several newer models, such as renting or renting out private accommodation, will be of interest to specific user groups only, even in the future.

In addition, the findings from the 2014 Environmental Consciousness Study (taking age-specific analysis as an example) show that the 'experienced' and the 'interested' groups display different socio-demographic characteristics depending on the kind of sharing model. For the new, platform-based models, in particular, younger people make up the largest group in terms of experience and interest. However, the differences between the age groups are not as significant as expected, particularly regarding respondents' statements about their interest in using sharing models. In this respect, further, more in-depth studies are required to draw reliable conclusions about (potential) user groups.

Furthermore, in order to obtain clearer and more reliable results it would be advisable to differentiate between the different versions of sharing models (e. g. the term 'car sharing' covers several different structures in terms of functionalities, payment methods and applications). In addition, a comparison of experiences and motives and/or barriers would be useful. The results would be particularly relevant for providers and the way in which they communicate with their customers.

## Annotations

- [1] In Germany the sharing economy is currently being investigated through projects such as 'PeerSharing' and 'IShare' (financed by the Federal Ministry of Education and Research).
- [2] This takes into account the fact that some of the sharing models investigated require their users to be of age (e. g. car sharing requires a driving licence).

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## AUTHORS + CONTACT

**Maïke Gossen** is scientific assistant in the research field corporate management and consumption at the Institute for Ecological Economy Research (IÖW).



**Dr. Gerd Scholl** is head of the research field at IÖW.



IÖW-Geschäftsstelle, Potsdamer Str. 105,  
10785 Berlin.

Phone: +49 30 884594-20,

Email: [gerd.scholl@ioew.de](mailto:gerd.scholl@ioew.de),  
[maike.gossen@ioew.de](mailto:maike.gossen@ioew.de)