

SHARED ACCOMMODATION IN EUROPE: CONSUMER BEHAVIOUR ANALYSIS

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Abstract: Sharing economy is described as an economic model in which individuals and groups share goods and resources for a defined period for a predefined price. To better understand the mechanisms of sharing economy business models, it is important not only to observe the platforms which allow the interactions between individuals offering assets (providers) and individuals in search for goods (users), whereas to explore the behaviour of participants in the sharing economy business model. In our research, we will focus on the behaviour of the users of a particular form of sharing economy, of shared accommodation. Our research explores did and how the behaviour of consumers changed in the last couple of years and there are some differences in the behaviour of consumers based on their income level and residence regarding the usage of shared accommodation.

Keywords: Sharing economy, Shared accommodation, Behavioural change, Consumer behaviour, paired samples tests.

1 INTRODUCTION

Sharing economy is described as an economic model in which goods and resources are shared by individuals and groups for a defined period for a predefined price. This business model would not be possible without modern technologies such as Web 3.0, the Internet, Blockchain, Social networks and ICT platforms. ICT platforms facilitate the transaction between the provider and the customer. Platforms enable a large volume of users to interact at the same time using an understandable user interface with low transaction costs [1]. These platforms allow the sharing of accommodation, mobility, skills, money, and other goods/services.

Peer-to-peer (P2P) accommodation or shared accommodation allows hosts to rent out parts of their property – or the property itself – to other people, for a short time, mainly through ICT platforms [2]. This model of sharing economy is projected to grow at a rate six times greater than its more traditional counterparts [3]. As such, it significantly affects the profitability and structure of tourist accommodation in general. With this in mind, it is important to understand consumer behaviour related to usage of shared accommodation.

From the tourist's perspective, the main motivation behind opting for a shared accommodation is the economic benefit, because shared accommodation is usually lower priced than other available types of accommodation [4]. Next to that, the other main reason

why shared accommodation is attractive to tourists is more intrinsic, and it roots in the tourist's desire to experience a more authentic, deeper and even home-like environment [5] when travelling to a foreign place.

The research gap which emerges is related to a better understanding of behaviour of the users of shared accommodation. This question has been raised by several authors so far [6-7]. Our research explores did and how the behaviour of consumers changed in the last couple of years and are there some differences in the behaviour of consumers based on their income level and residence regarding the use of shared accommodation. The structure of the research is following. After the introduction, we provide an explanation of the data collection procedure and the indicators provided by Eurostat, which we used in the study. The results are outlined in section three. We finish the paper with the discussion and concluding remarks.

2 RESEARCH METHODOLOGY

Collecting data on sharing economy is no easy task for several reasons. The main obstacle is the fact that the transactions are made on platforms, which are not obliged to share their data with official statistical offices. Therefore, most of the available data is related to reports of consulting agencies, platforms, or results of academic research. As the European Commission is aware of the importance of the sharing economy for the overall economy, additional efforts have been made to collected sharing economy related data. Within the Eurostat database and its survey on the use of information and communication technologies (ICT) in households and by individuals (*ICT usage in households and by individuals (isoc_i)*) there are indicators related to the use of sharing economy [8]. The main survey respondents are individuals aged 16 to 74, whereas in some countries there are data for participants who are younger than 16 and older than 74 [9]. The annual ICT survey is conducted in all EU member states, United Kingdom (UK), Iceland, Norway, Switzerland, candidate countries and potential candidate countries. The data collected for this study encompassed 36 European countries. The data provided by the Eurostat is the percentage of individuals that used shared accommodation. Besides, it is possible to generate categorised data as the percentage of individuals that used shared accommodation per gender, educational attainment, income group, other socio-demographic characteristics and their combinations. The most recent available data is for the year 2019.

3 RESEARCH RESULTS

The first research question was how the percentage of users of shared accommodation changed from 2017 to 2019. To answer the raised question, we used the paired samples t-test and conducted pair-wise comparisons. The results are presented in Tab.1. The results indicate that there has been a statistically significant increase in usage of shared accommodation between 2017 when it was 13.7% on average and 2018 when it was 16.67% on average ($t=-3.343$, $p=0.002$). The same pattern was observed between 2018 and 2019, when it was 19.20% on average ($t=-6.669$, $p=0.000$). Therefore, we can observe a steady increase in the usage of shared accommodation in Europe.

Table 1: Pair-wise comparisons of the usage of shared accommodation in Europe, 2017-2019

<i>Pairs</i>	<i>Descriptive statistics</i>		<i>Paired-samples t-test</i>	
	<i>Mean difference</i>	<i>Std of the difference</i>	<i>Statistics</i>	<i>p value</i>
2017-2018	-2.931	4.802	-3.343	0.002
2018-2019	-2.509	2.194	-6.669	0.000

The next research question was to explore whether there are differences in the usage of shared accommodation based on the individuals' income. Eurostat provides a categorisation of respondents regarding income on four quartiles. Therefore, the most recent data was used, for the year 2019, and analysis of variance was used to explore the differences between the four categories. The results indicate that there are statistically significant differences ($F=13.170$, $p<0.001$). To detect between which pairs there are statistically significant differences, Independent samples t-test has been performed. The obtained results are graphically presented in Figure 1. The results indicate that the usage level is the same among those with income in Q1 and Q2 ($t=-1.084$, $p=0.284$), as well as those with Q2 and Q3 ($t=-1.978$, $p=0.053$). There is a statistically significant difference in the usage between those with Q1 and Q3 ($t=-2.939$, $p=0.005$), whereas the individuals with higher income use the shared accommodation more. Interestingly, those with income in Q4 statistically significant use shared accommodation more than individuals with Q1 ($t=-5.783$, $p=0.000$), Q2 ($t=-4.744$, $p=0.000$), and Q3 ($t=-2.486$, $p=0.016$). The results clearly indicate that those with higher income use shared accommodation more.

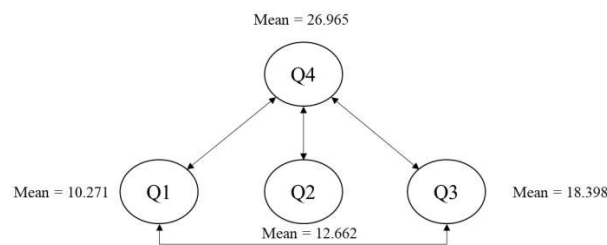


Figure 1: Detected patterns in differences in usage of shared accommodation based on the individual's income.

The final research question was to explore whether there are differences in the usage of shared accommodation based on the individual's residence. Eurostat provides a categorisation of respondents regarding residence on three categories: people living in cities, towns and suburbs, and rural areas. Therefore, the most recent data was used, for the year 2019, and analysis of variance was used to explore the differences between the three categories. The results indicate that there are statistically significant differences ($F=6.218$, $p<0.001$). To detect between which pairs there are statistically significant differences, independent samples t-test has been performed. The results indicate that the level of usage is the same among those from rural areas and towns and suburbs ($t=-1.383$, $p=0.172$). Interestingly, those from cities statistically significant use shared accommodation more than individuals from rural areas ($t=-3.463$, $p=0.001$) and from towns and suburbs ($t=-2.125$, $p=0.038$). The results clearly indicate that those from urban areas use shared accommodation more than those from rural areas.

4 DISCUSSION AND CONCLUSION

The sharing economy market is expected to grow in the upcoming period. Predictions are favourable for both shared accommodation and mobility, as well as gig economy. Therefore, to better understand the market, consumer behaviour studies in the field should be conducted. Herein, we strived to tackle the change in consumer behaviour from 2017 to 2019 in Europe regarding the usage of shared accommodation. We also took into consideration the effect of two socio-demographic factors: income and residence. Both factors proved to have a statistically significant impact on the usage of shared accommodation. Those with higher income and residing in cities use shared accommodation more. Our results suggest that the concept of shared accommodation should be promoted more in rural areas and among those

with lower income. Also, demonstrations and tutorials on using and participating in shared accommodation could be organized to raise awareness and educate individuals. Future research deriving from the study could be towards conducting agent-based simulation to observe how and when will a particular individual start to use or stop using shared accommodation. A similar study was done in the sphere of shared mobility [10]. Also, it would be of interest to conduct conjoint analysis of the individuals' preferences regarding shared accommodation to better understand their true needs. The idea for such a study came from the work of Bojkovic et al. [11] who analysed the preferences for car sharing service attributes among university students. Also, segmentation analysis of users, or even countries, can be done using clustering and biclustering methods [12, 13].

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