

PSYCHOSOCIAL ASPECTS OF THE USE AND PROVISION OF CARSHARING SERVICES IN THE CZECH REPUBLIC

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ABSTRACT. The concept of shared mobility involves a type of transportation based on advanced digital technologies which make it possible to approach mobility as a service. This concept seeks to reduce the need for individual ownership of means of transport and enhance the effectiveness of their use. The aim of this paper is – to identify the reasons for the use of carsharing services among Czech users and to reveal the perceived barriers and benefits from the perspective of both providers and users of carsharing services. In line with the objectives of the paper, qualitative research was chosen. The study is expected to describe the psychosocial aspects of the use of carsharing, and report experience with the provision of such services in the Czech Republic. Based on an interpretative phenomenological analysis, we found several reasons, benefits and barriers to the use and provision of B2C carsharing among 11 users and 4 providers. The contributions of this paper include the fact that it focuses on the experiences of both parties – carsharing providers and carsharing users, and it is the first study of this type that has been conducted in the Czech Republic. This deliverable was co-financed by the grant projects IGA_FF_2021_001 and IGA_FF_2021_018 (UPOL).

KEYWORDS: Carsharing, Czech Republic, users, providers, benefits, barriers.

1. INTRODUCTION

The concept of shared mobility is one of the sectors of the sharing economy. Against the backdrop of global environmental, quality of life or social issues, the sharing economy has significant potential to contribute to more sustainable consumption, taking into account all social, economic or environmental impacts [1]. Shared mobility can be seen as modes of transport that are based on advanced digital technologies that allow to approach mobility as a service. It focuses on increasing the efficiency of transport use and reducing the need for individual ownership. Shared mobility can positively influence the development of the urban transport system, which faces many challenges due to the significant increase in the number of privately owned vehicles or the rate of motorization [2].

One component of shared mobility is carsharing, which provides citizens with a new travel option that influences their travel behaviour. It is also a factor influencing transport and consequently the environment in cities [3]. Carsharing thus represents a system that allows people to use locally available cars at any time and for any duration [4]. Carsharing is still a relatively new and pioneering concept for Czech citizens. Although the use of this service has increased rapidly in recent years, it is still not used in suffi-

cient quantities, yet there is great potential for its expansion. The Czech Carsharing Association (2021)¹ reports that there were only 30 carsharing cars on Czech streets in 2014, in 2018 the number of carsharing cars was around 490 and today in 2021 carsharing services boast a total of 1250 carsharing cars.

Although there are many foreign studies (see below) dealing with carsharing, the truth is that there are not many for the Czech Republic. In the domestic context, for example, Foltýnová and Vejchodská [5] have tried to map the typology of carsharing users, Matowicki and colleagues [3] have looked at understanding the purposes of carsharing from the users' perspective, and Kimbrell [6] has looked at shared electric cars. We do not know much about the motivations to use carsharing and the experience of providers with carsharing users in the Czech environment. Therefore, we set out to describe the experiences of both parties – providers and users of carsharing – in more detail. This is the first study of this type that has been conducted in the Czech Republic. The next part of the paper is devoted to empirical data obtained from semi-structured interviews with providers and users of B2C (*business-to-consumer*) carsharing. In this form of carsharing, individual providers (companies, coopera-

¹<https://ceskyarsharing.cz>

tives or non-profit organisations) own a fleet of cars that customers can use. The cars are mostly located in cities. Users can pick up the cars in a self-service mode and pay for the distance travelled or the time of use. Insurance, maintenance and repairs are usually paid by the providers [7].

2. RESEARCH DESIGN AND METHODS

The research problem of the present study lies in the lack of empirical data that would help to understand the psychosocial aspects of the use and provision of the relatively newly emerging carsharing services in the Czech Republic. Therefore, we set out to (1) identify the reasons for the use of carsharing services among Czech users and (2) uncover perceived barriers and benefits from the perspective of both providers and users of carsharing services. The starting point will be a description and evaluation of carsharing users' personal experiences with the service itself and providers' personal experiences with their clients. For both objectives, we set several research questions:

RQ1: How do providers respond to feedback from B2C carsharing users?

RQ2: How do B2C carsharing providers rate the perceived benefits and barriers associated with implementing the service?

RQ3: How do B2C carsharing users rate the perceived advantages and disadvantages of using these services?

RQ4: For what reasons do B2C carsharing users use these services?

In line with the focus of our research, we chose a qualitative design, similar to Svennevik [8, 9] or Svennevik, Julsrud, and Farstad [10], because it allows us to explore the phenomenon in depth in several cases. Qualitative research was chosen mainly because there are no such focused studies conducted in the Czech Republic and we need to get to the core of the phenomenon under investigation. The method of data collection was a semi-structured interview. Interpretative Phenomenological Analysis (IPA) was chosen to process the collected data as in the study by Quyen [11]. We chose non-probabilistic methods of participant selection – simple purposive sampling, self-selection and snowball sampling [12]. For the purpose of this paper, respondents are divided into two categories, according to whether they use or provide carsharing services (B2C type).

As part of the preparatory phase of the interview, detailed research was conducted to develop the questions. The interview was divided into six main parts depending on whether the interviewee was a carsharing provider or user. The length of the interviews averaged around 50 minutes. The video interviews were conducted online from March to August 2022 via the ZOOM and Skype platforms or by telephone.

Advertising was conducted through two main communication channels – the social network “Facebook” and email correspondence.

2.1. DESCRIPTION OF PARTICIPANTS

15 respondents answered the advertisement and met the criteria, including 4 providers (Autonapůl, Car4Way, Karkulka, GreenGo) and 11 B2C carsharing users. All respondents agreed to record an audio version of the interviews. The reader can find individual providers under codes P1-P2 and individual users under codes U1-U11. In the case of the B2C carsharing providers, we conducted semi-structured interviews with people in relevant positions (P1 and P4 are directors, P2 is a manager and P3 is the head of the carsharing section) so as to have as much insight as possible into the phenomena under study. The length of experience of the providers in their subject ranged from 1 and a half years (P4) to 13 years (P1), with an average of 6 years (P2 and P3 were around that time). Providers P2 and P4 have their main location in Prague, P1 in Brno and P3 in Plzeň.

Next, we come to B2C carsharing users. The average age of users was around 39 years (range 31-50 years). Except for the respondent (U11), all of them consistently stated that they use B2C carsharing in and around their city of residence. User U11 lives in Susice, but there are no carsharing parking zones, so she has to commute to Plzeň or České Budějovice. The highest level of education was higher education, with only one case of secondary education with a high school diploma. The following Table 1 describes the basic data about the research participants (users).

The above description corresponds with the profile of a typical client (user) that we obtained from the mentioned providers. They agreed that the most frequent users of their service are individuals of working age, university educated and from a larger city in the Czech Republic. The predominance of men in the use of carsharing, as reported by the users, is also in line with our surveyed set of users. All users also emphasized that they had no need to own a private car. Which in turn is consistent with the providers' description of typical clients. In addition to the description of the typical user, it should not be forgotten that they most frequently reported that they use carsharing primarily for private purposes and rather occasionally. Similarly, this purpose was consistently reported by all providers.

2.2. ETHICAL CONSIDERATIONS

Prior to the interview, an electronic informed consent was sent to all participants, where they were instructed on all ethical aspects of their participation in the research (all in accordance with the provisions of Act No. 110/2019 Coll. [13], GDPR). Subsequently, when they agreed to participate in this research, they were asked to scan and forward the signed informed consent electronically. Both providers and users agreed

	Gender	Educational attainment	Residence	Length of service (in years)	Used carsharing companies/associations in the Czech Republic
U1	Man	UNI*)	Brno	6	Autonapůl
U2	Man	UNI	Brno	2	Autonapůl, AJO
U3	Man	UNI	Praha	6	Anytime, Car4way, GreenGo
U4	Man	UNI	Praha	7	Autonapůl, Car4way
U5	Man	UNI	Praha	8	Autonapůl, Car4way
U6	Man	UNI	Liberec	7	Autonapůl
U7	Man	High school	Brno	2	Autonapůl
U8	Man	UNI	Praha	4	Car4way
U9	Man	UNI	Praha	5	Autonapůl
U10	Man	UNI	Praha	7	Autonapůl
U11	Man	UNI	Sušice	5	Autonapůl

*) UNI = *University*

TABLE 1. Basic characteristics of B2C carsharing users.

in advance to the audio recording of the interviews and were assured that the data collected would be anonymised. To preserve ethical considerations, we do not provide their real names or the names of the carsharing entities.

3. ANALYSIS OF THE DATA

In analyzing the data we followed the IPA (Interpretative Phenomenological Analysis) methodology. It is a great method if we want to study a person holistically, we do not know much about the phenomenon and we do not want to reduce it to numbers or disembodied patterns, as is the case in quantitative research [14]. In the previous section we commented on researcher self-reflection. The following process consisted of six stages: (0) self-reflection of the researcher, (1) reading the interview transcripts, (2) initial notes, (3) developing themes, (4) finding connections across themes, and (5) cases [10, 11]. Common themes, interrelationships between themes, and schemas were processed in word processing and spreadsheet software (Microsoft Word and Excel). As the number of participants is quite high, we do not have space here to delve too much into describing the individual experiences of the participants (we will only mention selected specific themes), so we will directly focus on finding common themes and their interrelationships [15] on the side of both users and carsharing providers.

3.1. COMMON THEMES

In the following paragraph we will focus on the resulting synthesis of the themes. The analysis of user and provider responses identified 16 main themes and 8 sub-themes that are common to most participants and offer insights into the issues. Each theme is illustrated with specific examples of participants' accounts. The division of the text adheres to the following logic:

a) we list the main areas according to the research questions,

b) we list the common themes and sub-themes for each area, and

c) in some cases we also list selected specific themes.

3.1.1. EXPERIENCE WITH CLIENTS – FEEDBACK AND ITS SOLUTION

First, we look at how providers evaluate and respond to feedback from their clients. In particular, we will note common themes that providers agree on, while illustrating them with common themes from users who feel similarly. All providers agreed that they have **primarily positive experiences** with clients. **Reckless handling of the car** may occur, but these issues are rare. Some example issues are outlined by provider P4: “...users who frequently leave the car dirty inside – whether from mud, pet dogs making a mess on the seats, hair removal, etc.”. Provider P2 states, similar to P4, that “What annoys us the most is that some people treat it badly because it’s a rental.”. Provider P4 adds that “Dirty car, that happens only with a few of the users”. Thus, we can see that there may be a **disregard for shared property** on the part of users. These little things, if not noticed and acknowledged by providers, can then lead to clients picking up a car after someone who is not very tidy and noticing it understandably so. This may show up negatively in their feedback of the providers. It is these little things that are also mentioned by users U2, U4, U5, U6, U8. As an example, user U4 mentions that “... you don’t know who you are renting the car from, like I said, the car might be dirty, it might be damaged etc.”.

As the **client** is the **main priority** for all providers, their feedback is very important for them to be able to adjust their service offer according to their needs and the current market, ideally to the satisfaction of both parties, thus increasing the flow of new users and the retention of existing ones. **Feedback from** users is generally **positive and constructive**, as stated by e.g. provider P1: “The vast majority of our client

reviews are positive or constructive.” or provider P4: “... mostly good. So we have 98-99% positive feedback”. In the feedback, providers consistently reported that they encounter negative feedback from users when **there is insufficient coverage of** their carsharing services both in and around cities and outside cities. Providers are aware of this and are doing their best to expand in the country. Insufficient coverage was also a common theme for all users. They would like to see services more widespread both in the city but also around the train stations. So that for the car they find in their area, it would be within walking distance. User U1 suggests that it would be “*ideal to keep those parking zones as small as possible and make them a commuter area where a lot of people live and work*”.

How do users respond to feedback from their clients? By making **acceptance of the client’s needs** a central concern, providers try to **listen to** and **accommodate** their clients. This is represented by phrases such as “*we try to accommodate those people*” (P2) or, “*We really listen to our clients and register their insights, ...*” (P4). Related to this is the fact that providers try to **address concerns proactively and quickly**, most often through **compensation**, i.e. by compensating or minimising client harm. For example, provider P1 states that they try to “... *do everything possible for the user so that everything goes as it should. And if there are any inconveniences, to feel them as little as possible or to be spared the inconvenience.*” and compensation typically takes place by providing the user with “... *a replacement car, probably a car in a higher category than he had booked, and by the fact that he is not at fault, he will get the car at a better price than the cheaper car.*”. Similarly, clients also perceive quick problem solving by providers, i.e. an effort to accommodate users. This is also one of the reasons why they like to use the service.

3.1.2. BARRIERS TO THE PROVISION AND DISADVANTAGES OF CARSHARING

How do providers rate the barriers to provision and users rate the disadvantages in using car valeting services? We look at this in the following paragraphs. One of the main barriers mentioned by all providers relates to the **mindset of society**. For example, provider P4 communicated that, “*It’s about the overall mindset of society...*”. This theme took different forms, whether it was emphasising the habit of owning a car and the associated conformity even though the owner does not use the car and the car unnecessarily occupies public space. The reluctance of the habit of owning cars (but also the overall need to own) to step back when it is not necessary. Unwillingness to learn new things or not understanding the principles of carsharing services. A second common theme among providers in the area of barriers was the **financial literacy** of the citizenry, as illustrated

by the P1 provider’s statement that, “... *not being able to calculate well that all the costs of running a car are still insurance, that’s 5-20k per year*”. This brings up another common theme that carries the potential to change this situation – through educating society about shared mobility. To illustrate, the P2 provider stated that, “... *there’s still a lot of room in educating society on how it works, where it can help them, where it can work.*”. Or P3: “*I guess the only thing I see is education. I think that’s what’s missing here.*”. As we can see, the barriers were assessed by the providers more with regard to the whole society and the citizens of the Czech Republic. Users, in the context of evaluating the disadvantages of carsharing, naturally described their individual point of view.

As we have noted above, there are some aspects (themes) of disadvantages of using carsharing services on which users agree with providers, or providers are all aware of, such as: lack of coverage and minor breakdowns or messiness in exceptional cases. Users also agreed that **planning ahead (logistics)** sometimes seems to be a disadvantage. In order to rent a car, it is indeed important to decide in advance and book a vehicle as it might not be available from minute to minute. As user U9 states, “... *there’s that barrier that you have to think about it like really a little bit in advance, book it at least, like, I don’t know, two days in advance, you can’t do it like instantly.*”, or user U6: “... *a person has booked a certain time, and if someone after them has booked it, they can’t change it if they don’t leave enough time in reserve...*”. Under this theme can be included the statement of user U11, who is uncomfortable with the fact that a smartphone is needed to operate as she does not own one: “... *they rely heavily on having smartphones nowadays, I just don’t have one and sometimes I come across it...*”.

Lastly, we consider the financial costs associated with carsharing. In this case, users rate carsharing as financially advantageous (see benefits) and add that it depends on the frequency and duration of use or kilometres travelled. Thus, for long journeys or for daily use, carsharing is not advantageous. This could be summarized as a **higher cost of operation for frequent and long trips** and nicely summarized by user U3: “... *for example if I want to go for a whole day and drive a lot of miles I would say it’s a bit more expensive, but again in the relationship that I would buy a car, it’s probably not that expensive.*”.

3.1.3. BENEFITS AND REASONS FOR USING CARSHARING FROM THE PERSPECTIVE OF USERS AND PROVIDERS

In the following section we include the evaluation of the benefits of carsharing. Here, too, is a thematic overlap between the two sides, which is understandable, because, as we have seen, feedback and response to it works effectively. Thus, providers adjust their offer according to the needs of their clients. Moreover,

these are declared benefits that come from the very idea of shared mobility, so it is important that they are perceived by both parties. It should be noted that what the provider perceives as a benefit of their service, then the user also evaluates these perceived benefits as the very reason why they use these services. It is therefore not possible to separate the evaluation of the benefits from the actual reasons for using B2C carsharing. Among other things, the providers themselves use their services, so they can empathise with the users and speak from their own experience.

In terms of benefits and reasons, on what topics do users and providers clash? One of the most frequent themes was **saving resources**. Here we can include **financial savings** (compared to owning a car) and **time savings** (compared to other modes of transport such as public transport). From the providers' perspective, these such as, "...it can save them a lot of money." (P2) or "Further saving their own capacity..." or "economically sustainable" (P1). Users added what these savings hinge on, e.g., "The first (reason is) financial, simply owning a big family car costs a lot of money." (U2), "... the ability to instantly use that car without owning it and really only paying for the time I really need that car." (U3) or "... it's for the reason that it's a time saver, so that I can be somewhere quickly, sort things out and be back quickly. Because it's quicker than public transport..." (U4).

Eco-friendliness, this was another topic that was mentioned in various ways, both by users and providers of carsharing services. Environmental friendliness was not a conviction for everyone, but at least they considered this reason as a nice added value. Reduced fuel consumption, lower emissions and occupying less of the public space are associated with this theme. This theme is supported by provider statements such as, "...environmentally, eco-friendly." (P1), "We have new vehicles every year so they meet the most stringent emission standards." (P2), or "But once the car leaves the factory, it's already running emission-free and it's environmentally friendly." (P4). Similarly, users reported that, "...the main motivation is probably the environmental aspect, probably quite simply put, that is to have fewer cars on the streets." (U7), "...the reasons stem from environmental beliefs..." (U11), or "It makes sense to me environmentally..." (U5).

A theme that did not appear for all users, but is close to the previous one, is that users find carsharing **more convenient than using public transport**. That is, they use carsharing even in places, where it is **difficult to get around by public and intercity transport** (U1, U2, U3, U6, U8, U9, U11), such as public transport, buses, trains, etc. There were also concerns about the use of public transport, buses or trains in the context of the COVID-19 pandemic and therefore a **greater sense of security when using carsharing** (U3, U4, U8, U9) as our users do not want to own a car. This is illustrated by

users' statements such as, "... when we want to get somewhere that would be too complicated by public transport." (U2) or "Now because of the coronavirus I would say maybe more safety..." (U4). At the end of this section, as an interesting reason for using carsharing, user U10 stated that carsharing: "... used to use now in that pandemic instead of going on dates, like, instead of a café." As we can see, everyone finds some reason for using carsharing and it can be used for socializing.

4. DISCUSSION

The aim of this paper was to identify the reasons for the use of carsharing services among Czech users and to reveal the barriers and benefits from the perspective of both providers and users of carsharing services. Several research questions are related to this aim. Based on an interpretative phenomenological analysis, we found several reasons, benefits and barriers to the use and provision of B2C carsharing among 11 users and 4 providers in the Czech Republic. The following will be devoted to answering the set research questions and the results will be compared with previous studies.

The first research question serves to provide context and refers to how providers respond to feedback from B2C carsharing users. Feedback from users is predominantly positive and constructive, which is also related to the fact that providers have primarily positive experiences with their clients. Although providers report that there are occasional instances of reckless handling of cars by users, which can be explained by the fact that some people do not know how to value other people's (shared) property, in most cases everything is fine. The risk of damage to shared property can be seen, for example, in the study by Weber [16] or Puschmann and Alt [17], who suggest that concerns about shared property on the part of providers could be reduced by special insurance for shared cars. Although these are mainly minor obstacles, this could promote greater mutual trust.

One of the reasons why mutual satisfaction works may be that the client is seen as the top priority, their needs are accepted and providers try to accommodate their clients. For providers, feedback from their clients is very important so that they can adjust their service offering according to the needs of their users and the current market offer. When constructive criticism arises, providers try to address comments proactively and quickly, most often through compensation and loss minimization. This approach to users is typical for the strategies of the so-called smart services that use shared mobility services. Smarter services are generally more user-oriented. They allow users not only to use the relevant service offerings, but also to configure the service according to their individual needs and preferences [18]. This approach has been positively evaluated by users and, as providers have indicated, the number of users is increasing. This can also be seen on the individual websites of B2C

carsharing providers (mentioned in the theoretical section) or in commercial articles [19, 20].

The second and third research questions focused on assessing the perceived benefits and barriers to provision and the perceived advantages and disadvantages of using B2C carsharing. We summarise these two research questions in this paragraph as the analysis has shown that they are interrelated. From the providers' perspective, the biggest barrier to providing their services is the mindset of the society. According to them, the citizens of the Czech Republic still consider owning (not only) cars as a common phenomenon, even though they do not use this car for their everyday needs. Often it can be a comfortable habit that is not easy for people to change. Society's mental attitude towards the excessive use of private cars compared to other modes of transport is rooted in the history and culture of our society (traditions, customs, upbringing and media). The perception of ownership of things, specifically cars, varies considerably across countries or cultures. As Kuhnimhof and colleagues [21], for example, report that the generation born after 1980 (the so-called millennials) in Western Europe have a lower interest in owning and driving a car compared to their parents. They appear to be much more inclined towards alternative modes of transport. On the other hand, in Central and Eastern Europe, after the fall of socialism in the late 1980s and early 1990s, there was an increase in the use and ownership of private cars [22].

Car ownership was supposed to symbolize higher socio-economic status and freedom. This is gradually changing. But it is also the reason why carsharing came to the Czech Republic later and is spreading slowly in society. Not only in the Czech Republic, but also in other countries, the development towards sustainable mobility is slow. Several recent international studies show that even today, for many young people, owning a car is associated with a sense of achievement or pride. Such a positive attitude towards car ownership often leads to car ownership and increased car use. Conversely, individuals who have positive attitudes towards other modes of transport, such as walking, using public transport or cycling, then use active modes of transport more frequently and seem to be discouraged by car ownership [23–25].

Providers see the low financial literacy of some citizens as another barrier. Not everyone can calculate that it is more profitable for them to use a shared car than to own a private one when they do not use a car for everyday needs. They see educating society about the benefits of carsharing as a way out of this situation. Indeed, countries where carsharing is more widespread have higher financial literacy scores than the Czech Republic [26]. These countries are Germany and China in particular [27]. In Europe, Germany is the biggest leader of carsharing services. As an example, in 2021 carsharing is available and operating in 855 locations in Germany, with around

2,874,400 registered users. This shows an increase in users of 25.5% compared to the previous year [28]. If we look at the current state of carsharing in Asian countries, the number of users in Shanghai was over 1.2 million in 2017 [29]. In 2017, the estimated number of carsharing vehicles in metropolitan cities in China exceeded 26,000 and the carsharing fleet in China is expected to grow by 45% per year until 2025 [30].

Another disadvantage of carsharing from the perspective of users is the lack of coverage of shared vehicles, especially in and around cities. The providers themselves are aware of this and are trying to expand the supply of vehicles in cities. This is in line with the findings of the Czech Carsharing Association, who note a significant increase in carsharing in the Czech Republic (as mentioned in the theoretical section) and one of the visions is further expansion. Users also see the need to plan their trips in advance (logistics) as a disadvantage, as the car might not be available at the required time, so it is better to book in advance. This disadvantage was also noted by Strnadová [31] in the Czech context. From the user's perspective, scheduling trips may seem like a disadvantage and discourage him/her from using carsharing. However, from an ecological perspective, this attribute can be seen as advantageous, as it reduces the need to drive and use, for example, more active and sustainable modes of transport, or to combine modes of transport.

In the case of the last research question, which focuses on the reasons for using B2C carsharing, there was a link to the benefits of carsharing from the perspective of both providers and users. The benefits underlying the carsharing service offering are the main reason for using the service. These reasons are also perceived by users as benefits. Thus, from the perspective of both users and providers, this includes saving resources, where financial savings (compared to owning a car) and time savings (compared to other modes of transport) fall. In particular, the financial savings compared to owning a private car are visible if the carsharing user drives up to approximately 10,000 km·year⁻¹ [32, 33]. Thus, a noticeable advantage of carsharing is access to a vehicle without having to pay acquisition costs or high fixed costs associated with car ownership [34]. Similarly, there is also a time saving if one travels to places that are not easily accessible by other modes of transport such as public transport or active modes of transport and one has to count in the time lost to get to, for example, a train station, bus stop, etc. [35]. It is therefore ideal if as many Czech citizens as possible are aware of these benefits.

From the users' perspective, it was also important that they found it convenient to use the carsharing service as they did not have to worry about servicing and other costs associated with owning a car. They can conveniently transfer things or people (family etc.). This benefit is closely related to the previous one. By using carsharing, users are relieved of the

hassle of acquiring a car, paying for breakdown and compulsory insurance, maintenance or repairs. All of these responsibilities are transferred to the professional carsharing service provider. Convenience as an advantage or reason for using carsharing can be found in many studies [36–39]. When one becomes aware of the hassles associated with acquiring a car, one may find it more convenient to use a carsharing service that does not need to devote this care, thus saving one's energy, time and money.

Users and providers alike cited eco-friendliness as another reason and advantage of carsharing. However, in terms of the environmental impact of carsharing, there are two main streams of opinion. Earlier studies primarily evaluated carsharing as an environmentally friendly mode of transport [40] and emphasized the positive impact of carsharing on reducing the number of kilometres travelled [41]. Later opinions become slightly more critical, as studies point out that carsharing can also be environmentally unfriendly. This is particularly because people will prefer to use carsharing instead of more sustainable modes of travel such as public transport, walking, cycling or scooter [42]. As we have seen, our respondents mainly use carsharing for private purposes and only occasionally, such as for transporting heavy materials or family (e.g. on a trip). Only one respondent gave a not very sustainable reason for using carsharing – for socialising (a date), but this was rarely done.

The eco-friendliness was linked to a reduction in consumption, as a shared car is used much more often, by different users, than a private car, which is parked most of the time. The implication for respondents is that shared cars take up less of the public space. Precisely, an undeniable advantage of carsharing is that it allows for better use of each car [43]. Shared vehicles are much more frequently used on roads than private users' vehicles, i.e. they spend less time parked and occupying public space. Moreover, interviews revealed that our providers offer new cars to meet the most stringent emission standards.

According to users' opinions, reasons for preferring carsharing to using public transport include the fact that some places are difficult to reach by public transport and intercity public transport, and carsharing (in the context of the COVID-19 pandemic) seemed safer. Restrictions associated with the COVID-19 pandemic, as well as fears associated with the outbreak, slightly altered modes of transport during this period. For example, the transport yearbooks for the capital city of Prague suggest that, compared to previous years, residents' overall confidence in using public transport has declined [44, 45], which may have contributed to the use of shared mobility after the crisis measures (lockdown). This is also in line with studies from other European countries [46, 47]. It appears that after the mitigation measures, the interest in carsharing in the Czech Republic continues to grow. For example, the Autonapůl cooperative reported that the number of

users is growing 73% faster this year compared to 2019 [19]. However, an analysis of the state of carsharing services during the COVID-19 pandemic is beyond the scope of this study.

4.1. BENEFITS AND LIMITS OF RESEARCH

As mentioned earlier, one of the benefits of this research is that it offers a complementary view of the benefits, barriers and reasons for the use and provision of B2C carsharing in the Czech Republic. Not only has such a study not been conducted in this country, but similar research has not been traced abroad. If we want to support the development of sustainable mobility, we need to understand the needs of both sides – users and providers. It is also important that these needs, benefits or obstacles are reflected in the planning of the public administration, the municipality or the city council. As in other studies, we find several limitations in ours. One of them is the use of a non-probabilistic method of participant selection, since only one woman was included in this study. Although carsharing is used to a greater extent by men, it would still be preferable to recruit more women next time. In addition, the survey mainly recruited users of the Autonapůl cooperative. This may be because Autonapůl has a long tradition in the Czech Republic and their users are used to being included in various research. This is also related to the smaller representativeness of the research sample, although we managed to get people from the crowd of typical clients. Representativeness is also more associated with quantitative research design. In this context, it should be emphasized that the results of our study cannot be generalized since we used qualitative research and the number of participants is 15 people. However, the advantage of the study is that in the future we can create a questionnaire that could be administered to a much larger number of users. In the future, we plan to include carsharing P2P and potential users in the research.

5. RESULTS AND CONCLUSION

In the Czech Republic, we do not have sufficient empirical data on the benefits and barriers to the provision and use of B2C carsharing and the reasons for using this particular shared mobility service from the perspective of both users and providers. Therefore, we set out to (1) identify the reasons for the use of the carsharing service by Czech users and (2) uncover the barriers and benefits from the perspective of both providers and users of the carsharing service. In line with the objectives of the paper, qualitative research was chosen. The main method of data collection was semi-structured interviews with users and providers of carsharing services. The data collection and analysis took place from March to August 2021. Four providers (namely Autonapůl, Car4Way, Karkulka, GreenGo) and 11 users participated in this research, of which only one was female, the average age was

around 39 years and the predominant educational level was university education. Although this is not many participants, the research nevertheless included people who also represent, as the providers state, a typical B2C carsharing client.

A non-probabilistic method of participant selection was chosen. Interpretative phenomenological analysis was chosen to process the data. Based on the data analysis, several common themes were identified in the context of barriers associated with the provision of B2C carsharing, such as: the mindset of Czech society or the lack of financial literacy of Czech citizens. From the users' perspective, the following themes emerged as dominant in the context of disadvantages of carsharing (B2C type): lack of carsharing coverage in cities and surrounding areas, planning travelling well in advance (logistics) or higher cost of operation for frequent and long-term trips. In the case of the benefits of using and providing this service, an overlap was identified with the reasons for using B2C carsharing services. Thus, the advantages and reasons for using carsharing services according to users and providers include: saving resources, namely financial savings (compared to owning a car) and time savings (compared to other modes of transport, such as public transport, etc.) or environmental friendliness, comfort (users do not have to worry about the service and operation of a shared car). Whether it is communication, feedback, feedback handling and access to clients, both users and providers reported mutual satisfaction. The contribution of this paper is that it focuses on the experience of both parties – providers and users of carsharing and is the first study of this type to be conducted in the Czech Republic.

In the future, the market value of companies operating in the sharing economy can generally be expected to grow. As stated by Ganapati and Reddick [48], the sharing economy has been growing exponentially, which can be observed in the last decade. This growth applies to many areas of the sharing economy and can also be observed within the car sharing sector.

Among other things, we can also expect the Ukraine-Russia war to impact the development of carsharing in the Czech Republic. An increase in the number of Ukrainian migrants in cities could lead to an increased demand for these services, as not everyone owns a car. Further research could look at how carsharing services can best accommodate this group of drivers.

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