The carsharing market in Russia: Factors of formation and development trends

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Abstract. The paper identifies the factors that have influenced the development of the carsharing market in Russia, analyses current trends and identifies the problems hindering the development of the service. As the research shows, the carsharing market developed at a fast pace in 2015-2021, not counting the pause in the first half of 2020 caused by the coronavirus epidemic. This was facilitated by the benefits that carsharing offers to users, as well as government support for carsharing services. It is revealed that users' interest in this service grew from 2015 to 2019, then the trend changed to a negative one. Analysis of internet users' search queries reveals that their awareness about carsharing has increased by 2022 as compared to 2019. In 2022, the market for carsharing services saw dramatic changes due to the departure of a number of foreign car manufacturers and difficulties with the supply of spare parts. It is concluded that the carsharing market has a high degree of monopolisation. The most significant factors limiting the development of carsharing include the rapid growth of tariffs, difficulties in renting a car within walking distance, user concerns about possible damage to the car, technical failures, leakage of personal data, and a lower sense of privacy, security and comfort compared to a private car. The elimination of the identified negative factors (curbing fare increases, state support of carsharing companies in the regions, improved accessibility of carsharing, etc.) will contribute to a more rapid development of this service.

1 Introduction

Many developed economies are now making a seamless transition from a consumption model to a sharing model, the main difference being the sharing of goods or services instead of individual use.

One of the most striking manifestations of this model is carsharing. In Russia, the concept of carsharing is enshrined in law - "Carsharing is a type of short-term rental of a vehicle from specialized companies" (carsharing). [1].

The first city to develop carsharing in the Russian Federation was Moscow. And there are objective reasons for this. Moscow is the largest city in Russia. The population of Moscow is increasing, and by 2022, it will exceed 12.6 million people [2]. Due to the constant increase in population and dense development, Moscow is facing problems of traffic congestion, a shortage of parking spaces, increased levels of harmful emissions into the atmosphere. One
of the ways to solve these problems is the development of carsharing.

By reducing the number of private cars [3, 4, 5] carsharing frees up city transport infrastructure, reduces the demand for parking spaces [6] and the amount of harmful emissions [7].

Therefore, in some countries stimulating measures are taken for the development of carsharing: subsidies, tax incentives, preferential price for parking spaces [8, 9]. In Moscow, the development of carsharing has also been largely influenced by the support of the city authorities [10].

For users, carsharing has quite a few advantages over owning a private car. There are no purchase and maintenance costs at all (maintenance, insurance, petrol, tyre changes, etc.), free parking in the city, and 24-hour technical support. A big advantage is that users can drive different makes, sizes and comfort classes of cars. This allows one to choose a car more suitable for the purpose of travel, as well as to use premium-class cars, the purchase of which not everyone can afford. Carsharing also has advantages over traditional taxis - in particular, lower costs, privacy and sense of security.

The paper examines the factors that have influenced the development of the carsharing market in Russia and analyses the current trends and challenges in this market.

2 Research methods

The research was based on the data from Google Trends, the Russian Association of Electronic Communications, analytical centre TIAR-Centre, analytical project Tinkoff Data, portal TAdviser, analytical agency Avtostat and carsharing companies. The research was conducted using scientific research methods: induction, comparison, generalisation, system and factor analysis.

3 Results

Carsharing in Russia appeared relatively recently, in 2013. And from 2015 to 2019, the carsharing market grew very dynamically. The volume of transactions by carsharing companies and the number of rides grew rapidly. According to the Russian Electronic Communications Association (RAEC) and the TIAR Center [11], transaction volume in the carsharing sector in Russia grew from RUB 13 billion in 2018 to RUB 20.5 billion in 2019, and the number of trips from 37 million to 78.24 million. In 2017, transaction volume was only RUB 5.1 billion and the number of trips 12 million.

In the first half of 2020, there was a drop in demand for carsharing and services were suspended due to the coronavirus epidemic.

In 2021, the market continued to develop. Carsharing operators resumed regional expansion, and their revenues increased to 41 billion rubles, exceeding the 2020 figure by 82%. [12].

The total fleet of cars of the four leading companies in 2021 already numbered more than 46 thousand cars [13]. In 2019, 24 carsharing companies had only 27 thousand cars [14].

The largest market share across Russia in terms of total number of trips is still held by Yandex. Drive - 43% in 2021 (versus 54% in 2020). Delimobile is in second place in terms of popularity with a share of 34% (in 2020, its share was 27%), while Citidrive is in third place with a share of 12% (it has increased from 8% in 2020).

Despite the rapid growth of the fleet of carsharing services, it remains small compared to the number of private cars. In 2021, 47.7 million passenger cars are owned by citizens [2], which is many times more than the number of cars in the carsharing services.

In 2022, the market for carsharing services has undergone significant changes.
Many large foreign car manufacturers have suspended operations in Russia, in particular, Renault and Hyundai, one of the main suppliers of cars from the mass carsharing segment.

As a result, per-minute rental services have been forced to look for alternatives. One option was to import cars from China. The 2022 purchases of Chinese cars were carried out by the carshare services Drive, Delimobile, BelkaCar and CityDrive. Purchases are expected to continue in 2023, and the share of Chinese cars in the fleet structure will continue to grow.

Russian brands, such as Lada, as experiments have shown, are not suitable for carsharing.

Restrictions on supplies from the European Union and the US affect the maintenance and repair capabilities of cars already in the carsharing fleet. Carsharing operators have acknowledged some difficulties with the supply of spare parts, but have assured that this does not affect the technical condition of the cars. Many services expect that spare parts from countries that have joined the sanctions can be procured through parallel imports.

Lease payments for carsharing have also risen against the backdrop of the Central Bank's key rate hike, making it difficult to renew the car fleet amid a surge in prices. New foreign brands of passenger cars increased in price by 40% in 2022. [2] There is also a significant increase in the cost of spare parts.

A number of measures have been taken to support carsharing services. In particular, in Moscow, where the lion's share of the car fleet is concentrated, additional subsidies for the purchase of new cars on credit or lease were provided, car requirements were relaxed and the term of validity of parking permits was extended, allowing carsharing cars to be parked in paid street car parks on preferential terms.

Demand for carsharing services has maintained a growing trend. The number of registered users also continues to grow. However, the rate of growth has slowed.

Sharp increases in car prices and higher service costs have forced some carsharing services to raise fares. At the end of 2023, the cost of travel is expected to rise further, which may lead to a reduction in demand for carsharing.

Let us consider how the interest of Russian Internet users in carsharing has been changing based on the statistics on the popularity of relevant search queries over a decade provided by Google Trends (https://trends.google.ru).

Google Trends is a public web application that shows the degree of popularity of keywords among Internet users of Google search engine on different topics, in different languages and in different regions of the world.

Popularity reflects the level of interest in carsharing in relation to the highest score for the period under review. A score of 100 represents the highest level of popularity for a query, while 50 represents the level of popularity for a query that is half as high as the first case.

As can be seen from Figure 1, interest in carsharing among internet users from 2013 to 2014 was insignificant, despite the fact that carsharing services were already operating in
several cities.

Interest in carsharing grew continuously from 2015 until mid-2019. Since September 2019, the volume of search queries with the word "carsharing" has reversed its trend. In April-May 2020, the number of searches fell to its lowest level in two years, probably due to the temporary suspension of carsharing services due to the coronavirus epidemic. Since June 2020, there has been a surge in internet users' interest in the topic, presumably related to the reopening of carsharing services. In July-August, the number of requests was close to its highest level in the whole period under consideration. The trend then turned negative again.

In the last four years, carsharing has been developing rapidly in other regions of the Russian Federation as well. The coverage area of carsharing continues to expand, which makes it possible to attract new users.

Let us look at the distribution of interest in carsharing amongst internet users by region. Table 2 shows the regions where Internet users most frequently searched for the query "carsharing". Queries are assigned scores from 0 to 100, where 100 scores indicate a location with the highest share of popularity for the query, and 50 scores indicate a location where the level of popularity for the query is half as high as for the first location. The higher the score, the higher the proportion of relevant queries of all queries, rather than the absolute number of queries. Therefore, a small region where queries containing the word "carsharing" account for 80% of all queries will be awarded twice as many points as a large region where only 40% of all queries contain the word.

Table 1. Popularity of carsharing by region.

<table>
<thead>
<tr>
<th>Region</th>
<th>Popularity of the request &quot;carsharing&quot;</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>March 2017 - February 2020</td>
</tr>
<tr>
<td>Moscow</td>
<td>100</td>
</tr>
<tr>
<td>Saint Petersburg</td>
<td>48</td>
</tr>
<tr>
<td>Moscow region</td>
<td>62</td>
</tr>
<tr>
<td>Leningrad region</td>
<td>36</td>
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<tr>
<td>Kaliningrad region</td>
<td>25</td>
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<tr>
<td>Krasnodar region</td>
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<tr>
<td>Tver region</td>
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<tr>
<td>Tyumen region</td>
<td>16</td>
</tr>
<tr>
<td>Republic of Tatarstan</td>
<td>33</td>
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<td>12</td>
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<tr>
<td>Astrakhan Region</td>
<td>11</td>
</tr>
<tr>
<td>Irkutsk region</td>
<td>10</td>
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</tbody>
</table>

As shown in Table 1, the greatest interest of users in carsharing is consistently observed in Moscow and the Moscow Region, St. Petersburg and the Leningrad Region, and the Krasnodar Territory. These are the regions where the largest Russian carshare operators are present and which pioneered the introduction of this service. In other regions, the interest has increased noticeably only in the last three years, which is due to the later launch of carsharing services in these regions.

According to Tinkoff Data [13], in 2021, the most active carsharing users were residents of Moscow, St. Petersburg and Kazan. Moscow and St. Petersburg occupied more than half of the entire carsharing market in Russia. This is explained, firstly, by the large population of these cities. Secondly, in Moscow, carsharing services are supported by the city authorities. In particular, carshare cars can be parked free of charge in municipal car parks,
and carshare services have received subsidies from the Moscow government to renew the car fleet.

The list of the most popular similar queries searched by users with the word "carsharing" in 2022 includes "carsharing moscow", "carsharing spb", "carsharing yandex", "delimobile", "carsharing delimobile", "carsharing sochi". And only in seventh place is the query "carsharing this". In 2019, the query ranking was as follows: "moscow carsharing", "carsharing yandex", "carsharing spb" and in fourth place "carsharing is". According to the author, this indicates that Russian users have become more aware of the service by 2022.

A small number of carsharing companies operate in the Russian market, despite the large size of the country. In 2019, there were twenty-four carsharing companies operating in Russia [14]. In 2021, their number decreased to eighteen [13].

The four largest companies in terms of both the number of cars in the fleet and the number of trips are: "Yandex.Drive, Delimobile, CityDrive (formerly YouDrive) and BelkaCar (Fig. 2). A small number of carsharing companies operate in the Russian market, despite the large size of the country. In 2019, there were twenty-four carsharing companies operating in Russia [14]. In 2021, their number decreased to eighteen [13].

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Fig. 2. Shares of car sharing operators by number of trips and size car park. Compiled by the author according to the data [12].

According to Tinkoff Data, these four companies account for 99% of the entire carsharing market [13]. Thus, the carsharing market has a high degree of monopolisation.

Factors constraining the development of carsharing are also a lesser sense of privacy, safety and comfort compared to a private car. Users fear possible technical problems with the mobile app, damage to the car for which they would have to be held responsible, and leakage of personal data. Things forgotten in the car can disturb the feeling of "belonging" and even disgust users, such as dirty disposable cups left behind, etc. [15].

On each journey, the user has to adapt to the new machine, getting used to the new dashboard, dimensions and road behaviour.

Some of the most significant factors constraining the development of carsharing include the difficulty of renting a car within walking distance, user concerns about possible damage to the car, technical failures, personal data leakage, and a lesser sense of privacy, security...
4 Conclusion

As the study shows, the carsharing market grew rapidly between 2015 and 2021, not counting the pause in the first half of 2020 caused by the coronavirus epidemic. This was facilitated, firstly, by the significant benefits that carsharing offers users: no car purchase and maintenance costs, free parking in the city, and the ability to choose the car that best suits the purpose of the trip. Secondly, state support of carsharing services, in particular, subsidisation of leasing and loan payments.

User interest in this service grew from 2015 to 2019.

Carsharing is most developed in Moscow and the Moscow region. This is due to the earlier launch of carsharing in these regions and support from the authorities. Nevertheless, carsharing coverage continues to expand to new regions, thus attracting new users.

In 2022, the carsharing market underwent dramatic changes. Due to the departure of many large foreign car manufacturers, carshare operators switched to importing cars from China. Due to import restrictions from the European Union and the USA, carsharing operators were forced to take measures to ensure the supply of spare parts, and the parts themselves rose significantly in price.

The sharp increase in car prices and the higher cost of maintenance has led to higher rates. By the end of 2023, the cost of travel is expected to rise further, which could lead to a reduction in demand for carsharing.

Based on a study of the most popular similar queries with the word "carsharing", it can be concluded that Russian users' awareness of carsharing has increased by 2022 compared to 2019.

The carsharing market has a high degree of monopolisation. Moreover, it has been increasing since 2019.

The highest level of user interest in carsharing is steadily observed in regions where this service is most developed: Moscow and the Moscow region, St Petersburg and the Leningrad region.

The most significant factors hindering the development of carsharing include the difficulty of renting a car within walking distance, user concerns about possible damage to the car, technical failures, personal data leakage, and a lower sense of privacy, safety and comfort compared to a private car. The rapid increase in fares also has a negative impact on demand for carsharing.

Addressing the identified negative factors (curbing fare increases, state support for carsharing companies in the regions, improving accessibility of carsharing, etc.) will contribute to a more rapid development of this service.

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