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Theoretical Aspects and Global Trends of The Digital Platforms Development for the Sharing Economy (Experience of the EU, China, Russia)

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Abstract: This paper discusses the theoretical features of the use of information technologies and digital platforms in the aspect of the sharing economy, considers the institutional problems of regulating the sharing economy, the advantages and disadvantages of sharing, presents the methodology for ranking countries according to the Sharing Economy Index 2021; the modern dynamics of the development of the sharing economy in the EU countries, China, Russia is given; the spheres of functioning of B2B digital sharing platforms in the global economy are considered, the trends in the development of the sharing economy of Russia are analyzed from the standpoint of the dynamics of the C2C sales development in e-commerce and digital interaction platforms; the institutional mechanisms and future trends in the development of information sharing platforms in China are considered.

1. Introduction

Currently, the new economic model, the sharing economy is gaining more and more attention in theoretical and practical aspects. This new model of socio-economic relations was a consequence of the formation of the information economy and the Fourth Industrial Revolution and, according to experts, became the basis for the formation of revolutionary changes in consumer behavior in comparison with the traditional business models. The main participants in the sharing economy have become new social strata, under the influence of which a different system of values is formed, associated with an increase in social and environmental responsibility and obtaining a synergistic effect of sharing, rather than the accumulation of material wealth.

The sharing economy is fundamentally different from the traditional competitive consumer economy, as sharing the value among all partners, such as consumers and workers, improves overall returns and productivity. The sharing economy uses modern technologies such as the Internet, big data, cloud computing and artificial intelligence to integrate and optimize the distribution of social resources to meet diverse needs, which is a new format and new model driven by the next round of scientific and technological revolution.

The problems of state regulation of the sharing economy include such points as:

• There is no institutionalization of sharing as an economic phenomenon;

• It is necessary to update the methodological approaches to assessing the market and the dominant position of firms in it;

• The difference between commercial activities on digital specialized platforms and sharing interactions is poorly differentiated;

• There is no clear system for financing interaction between sharing entities;

• There is no special mechanism of responsibility for the product received in sharing and its quality use;

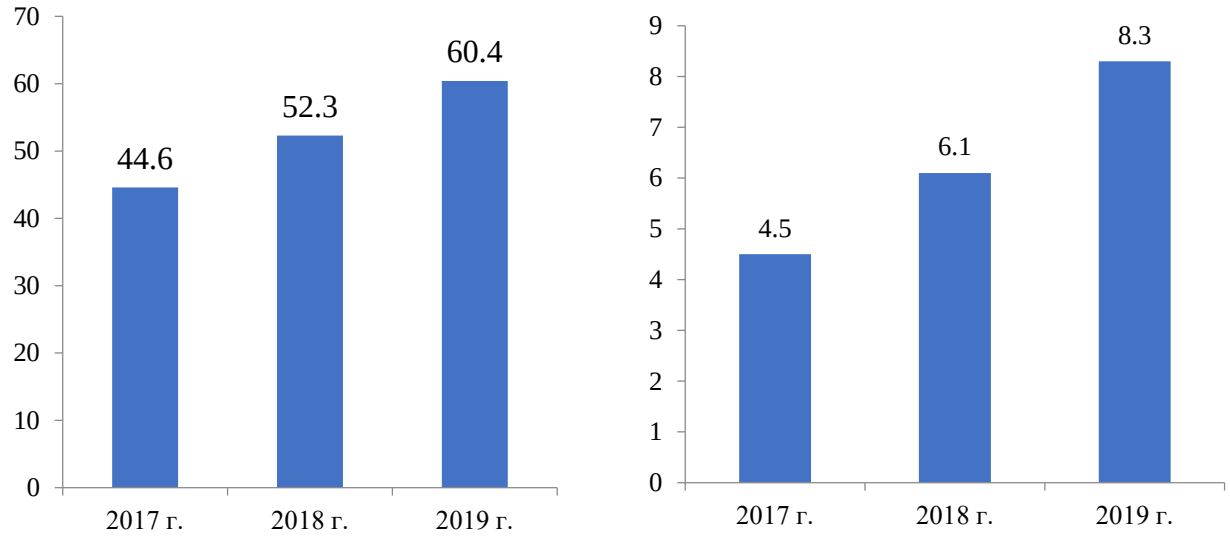
• There is no clear identification of the subject of regulation (the volume of income from appeals, economic relations, blockchain technologies);

• Requires systematization and additional institutionalization of the facts of unfair competition among information and standardized markets [1].

2. Sharing economy: global trends in its application and the situatiom in EU

The sharing economy in the world is developing in parallel with the institutional mechanisms developed by countries and for the purpose of its regulation. In accordance with the report of the European Commission "European action plan in the field of collaborative economy" (A European Agenda For The Collaborative Economy) recommendations have been developed not to limit the activities of digital trading platforms and classifieds, while sharing platforms do not have the right to distribute personal data and use intellectual property without the permission of the copyright holder [2]. If competent institutional and legal regulation of the sharing market is organized in the countries of the European Union.

The value of transactions in the sharing economy in the EU is constantly increasing (by 2019 it amounted to 60.4 billion euros); active growth is also demonstrated by income from sharing platforms (8.3 billion euros by 2019) (Figure 1) [3].



a) transaction value

b) platform revenue

Figure 1: Revenue and transaction value facilitated by sharing economy platforms in Europe in 2015-2019, billion euros

In the modern economic system, it is empirically difficult to determine the part of the sharing economy in the country's economy as a whole due to gaps in the methodology of its research. The most common is the assessment of the size of the sharing economy industries and their contribution to the country's GDP, which allows to assess the level of development of the sharing economy in

individual countries [4]. Nevertheless, only few of research agencies are working in this direction. For example, The Consumer Choice Center offers its own methods for assessing the level of development of the sharing economy based on an analysis of the infrastructure of the sharing environment in large cities around the world (Table 1) [5].

Table 1: Ranking of countries according to the Sharing Economy Index 2021

Place	Country	City	Rating
1	Estonia	Tallinn	100
1	Georgia	Tbilisi	100
2	Brazil	Sao Paulo	95
2	Latvia	Riga	95
2	Lithuania	Vilnius	95
2	Poland	Warsaw	95
3	Mexico	Mexico city	90
3	Norway	Oslo	90
3	Sweden	Stockholm	90
4	Finland	Helsinki	85
4	Germany	Munich	85
5	Germany	Hamburg	83
5	Switzerland	Zurich	83
8	China	Shanghai	75
10	USA	NY	70
11	Belarus	Minsk	65

The table shows the rating of countries calculated according to the proposed methodology. As we can notice, Estonia and its capital, Tallinn, suddenly became the leader in it with a maximum score of 100. The compilers of this rating argue that this is the result of the rapid growth of tourism, which contributed to the development of the sharing economy. Following the leader are Georgia, Brazil, Latvia, Lithuania, Poland.

According to the results of the Sharing Economy Index 2021, the top countries include developing countries and countries of Eastern Europe, which have the best sharing infrastructure compared to the leaders of the global economy. The most developed city of joint consumption in the China was Shanghai (8th place). Among the CIS, the leader was the Republic of Belarus (Minsk) with the result of 11th place, 65 points.

Many areas of economic activity have been affected by the COVID-19 pandemic, and the sharing economy is no exception. It is fair to say that this was one of the most heavily affected destinations by the coronavirus restrictions. Quarantines and lockdowns around the world have led to a sharp drop in demand for overseas property rentals and other sharing services and, as a result, some governments have tried to use the pandemic as a factor in further limiting the sharing economy. For example, in June 2020, Amsterdam banned short-term rentals including Airbnb from activities in three districts of its historic center, a ban that was lifted only in March 2021.

The sharing economy has shown exceptional ability to adapt to the challenges posed by the pandemic. Uber, for example, required its drivers to take selfies to prove they were wearing masks and avoiding contact with customers. The front seats were also required to be left empty to reduce interaction between drivers and consumers.

As a result, despite the pandemic, in 2020 Uber revenue grew more than 50% worldwide, Uber Freight, which helps carriers make bookings and allows shippers to send tender deliveries easily, grew by 57%.

3. Sharing economy and development of digital platforms in Russia

The development of information technology has had an impact on the digital platforms, reducing the need for their own physical infrastructure and assets. Digitalization makes it possible to use completely new solutions, such as online leasing services. IT makes it easy and inexpensive to create and scale platforms, enables actors to participate in networks, and improves the ability to use, analyze and share large amounts of data, which increases the value of platforms for all participants. In addition to the already established marketplaces, there are platforms such as Near Me50 that allow companies to create their own digital platforms. The core value of sharing platforms is the use of software to manage the customer experience associated with shared assets.

The sharing economy can be viewed as a bridge concept encompassing a range of ICT developments and technologies, including asset sharing, which encourages the sharing of goods and services through online platforms. Various B2B digital platforms can be divided into six areas of operation (Table 2) [6].

Table 2: Areas of operation of B2B digital sharing platforms

Sphere	Examples
Exchange of underused materials and resources	Cooksmill NetSystems (global platform for the exchange of raw materials and materials); Excess Materials Exchange (a global platform for the use of waste materials from enterprises); Globechain (U.K. Waste Resource Platform)
commercial space	Breather (office rental for a short time, co-working); Share My Office (a platform that allows businesses to rent out empty space); Storefront (the world's leading online marketplace for short-term retail space rentals); FLEXE (connects companies that need storage space and companies that have empty space).
Equipment rent	FLOOW2 (equipment sharing at all stages of the value chain); myTurn66 (inventory - sensors for equipment - leasing of underutilized capacity); Cat Rental Store (construction equipment rental through the platform); AgTribe (for leasing underused farm equipment); Cohealo (equipment sharing in the healthcare system);
Relocation of employees	SAP TwoGo (shared commuting to and from work); Uber for business (taxi for business); Zipcar for Business (car sharing subscriptions for business); Airbnb for Work (stops with private individuals on corporate trips).
Joint logistics	Cargomatic (management of free space at shippers).
Knowledge and skills	Upwork (a platform for choosing and working with freelancers); Cint78 (exchange of ideas in the IT environment).

The leading indicators of the sharing economy in 2020 were demonstrated by the C2C trade market, which grew by 48%, and the volume of transactions exceeded 830 billion rubles (Figure 2) [Absalyamov T.B., 2021].

This is due to the contract between Avito and the Russian Post, which gave advantages in the field of electronic commerce in the use of logistics at the level of the federal postal network. During the coronavirus pandemic, the demand for e-commerce has increased significantly, the age of participants and the geography of sharing have expanded. The most commonly used platforms were Avito (over 60%), Yula and VKontakte (about 40%).

Over the period 2017-2021, the sharing economy in Russia grew by almost 3 times, demonstrating a maximum growth of 50% by 2019. The top 5 sharing sectors in 2019 included C2C trading, P2P services, carsharing, carpooling, and short-term rentals. The epidemiological situation slowed down the growth of sharing, however, in contrast to the spheres of the material economy, the sharing

economy in the digital economy increased by 39%.

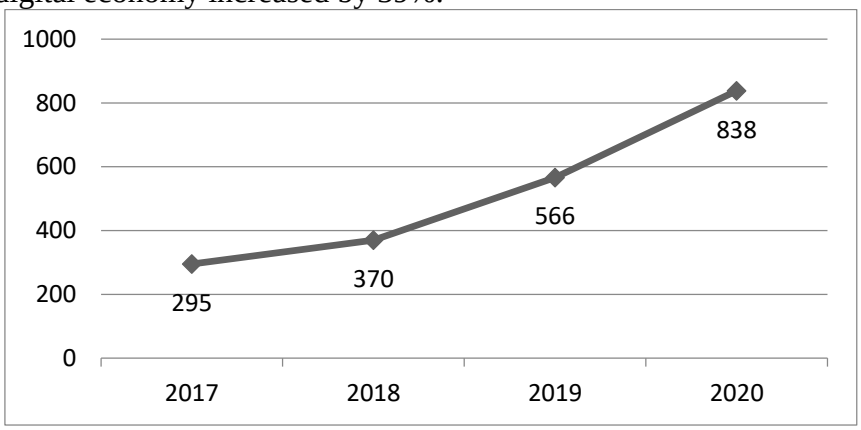


Figure 2: C2C sales, transaction volume in Russia, billion Russian rubles.

4. Pects for the development of the sharing economy in China

The highest growth rate of the sharing economy is demonstrated by China, where the part of the sharing economy reaches 10% of GDP and continues to grow at the level of 40% annually [7].

Experts attribute this to a massive transition to mobile payment systems, which are used by 86% of Chinese residents, as well as state support in the PRC for the transition to a sharing economy and the government's decision to cooperate with the business sector in the field of sharing.

So, back in March 2017, Premier Li Keqiang, in his report at the 5th session of the 12th National People's Congress, announced the development of the sharing economy as one of the key tasks of the state. In five years, the total turnover of sharing projects in China will exceed the turnover of traditional companies operating in the same niches. In 2025, more than 20% of GDP will come from the sharing economy. However, even in the situation of such active development, several popular car sharing services in China, Ofo and ToGo, faced bankruptcy and the withdrawal of key Chinese regions from the market. Their problems are similar to those of Lyft and Uber: competition leads to lower prices, higher marketing costs and risk investments.

However, this type of economy has great potential for development in the PRC, and is an important way to promote economic modernization and common development achievements, giving new impetus to the quality economic growth of China's economy. Thus, according to the "Annual Report on the Development of the China Sharing Economy (2019)", the amount of transactions in the sharing economy of China reached 2.942 billion yuan, an increase of 41.6% over the year.

The term "sharing economy" was included in the Chinese government's report for the period from 2016 to 2018, as well as in the "13th Five-Year Plan" of the PRC until 2030. Currently, sharing business areas are concentrated mainly in the areas of transportation, rental, training, maintenance and service delivery. In 2019, researchers estimate that approximately 800 million people in China participated in joint economic activities, with 78 million service providers employing 6.23 million workers. This means that more than half of the Chinese population was employed in the sharing economy, while it showed a steady growth in market size (Figure 3) [8].

The number of participants in the sharing economy providing services is about 75 million, and the number of platform employees is 5.98 million. By 2019, 34 out of 83 Chinese unicorn companies had typical attributes of the sharing capitalization exceeding 1 billion US dollars.

Science and technology parks, such as Zhuji 2025 Creative Industry Park, play an important role in organizing the sharing economy in the PRC, which promote the digital transformation and upgrading of the traditional manufacturing industry through intelligent platforms such as the 3D printing innovation technology center, the industry 4.0 product verification center, Virtual Reality

R&D Labs and Industrial Animation Design Center; A number of industrial Internet platforms such as toman bearing cloud, huansi textile ecological cloud and chuangbo longzhi cloud have emerged in the park, which have improved the product innovation level by building intelligent application models such as smart manufacturing, network collaboration, personalized customization, etc.

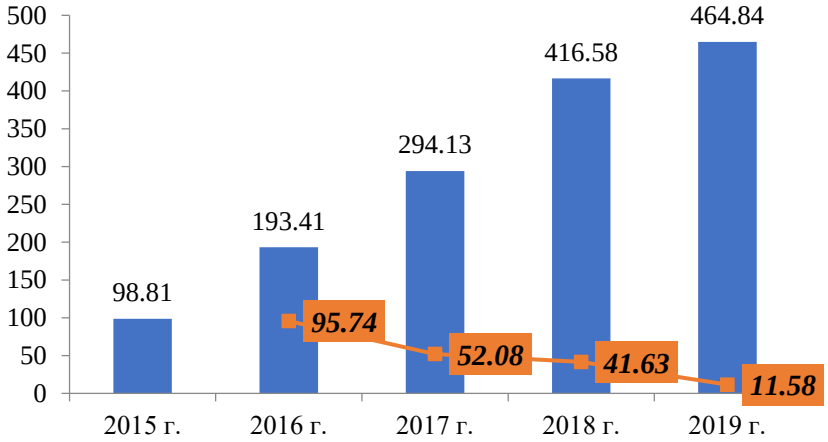


Figure 3: Dynamics of the sharing economy in China in 2015-2019, USD billion.

Sharing elements in the PRC focus on solving the problems of high cost and low efficiency in the production process, improving the efficiency of resource allocation, and realizing the momentum for the transformation and modernization of the manufacturing industry. Promising are intellectual transformations through the form of "Internet + design", which is implemented in the form of innovative clusters that unite intelligent factories (for example, zhuji 5d intelligent manufacturing valley), intelligent manufacturing experience centers, practical training centers, intelligent testing centers, industry research and development centers, cloud big data service centers, recovery centers and other innovative entities, which radically changes the traditional production mode, promotes technology transfer/

5. Conclusion

The new economic model of consumption - the sharing economy - is emerging at the intersection of online social networks, mobile technologies and social movement, in response to the global economic crisis and the reduction of people's purchasing power. The sharing economy began to gain momentum as a response to the financial crisis and overconsumption. The lack of financial resources contributed to the spread of ideas about collective ownership, about joint consumption.

Of particular relevance is both the identification and study of the institutional characteristics of the sharing economy, the features and patterns of its formation, and the study of its contribution to the formation of the new economy. Despite the actively ongoing research in this area, today we can notice the insufficiency of the theoretical and methodological base of the institutional foundations for the development of the sharing economy. The search for new scientific approaches to the study of the essential features of the sharing economy, the factors of its development, social, economic and environmental consequences have formed the need to deepen research in this area.

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