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## OPPORTUNITIES AND RISKS OF COLLABORATIVE CONSUMPTION ECONOMY UNDER CONDITIONS OF DIGITALIZATION OF SOCIETY

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The object of the study is the Sharing Economy (SE) and its future in the context of globalization, digitalization of society and the fourth industrial revolution. A relatively recent notion of «Sharing Economy or the Collaborative Consumption Economy» has been formulated, and the main prerequisites for its occurrence have been identified. We have briefly explored the forms of Sharing Economy (SE) in various fields of activity (in transport, energy, real estate, tourism, finances, etc.). The possibilities and benefits of SE for various segments of the population, organizations, administrative entities, and the state are identified. The changes that have taken place in the economy in the last decade are described by several authors related to this ecosystem, such as Zoellick and Subacchi, among others. These changes have occurred within different industries and within companies that grow rapidly, due to globalization and the growing use of the Internet. Now we can observe how new terms appear; for example, the «Collaborative Economy» which seeks to reflect the growing role of entrepreneurs, promoting a new replicable model, which can be used in different cities regardless of their characteristics, and also involves work without strictly established hours or a certain degree of permanence, which some associate with the era of interdependence (Grevy, 2009). The problems and risks of SE are described. We have identified a range of issues (legal, organizational, economic, environmental, etc.) that arise during introduction of SE and which should increase its effectiveness. Some proposals have been put forward to improve the activities in the Sharing Economy, not only in the present but also in the future. Additionally, proposals are made for improving activities in the conditions of a shared consumption economy, and for improving the welfare of society in the future. The processes of digitalization of society are becoming the prerogative of the global economy and individual countries, which increases the significance of discussing these problems. The article should contribute to popularization of Sharing Economy and dissemination of information regarding which problems currently exist in it and that they need to be solved.

**Keywords:** sharing economy, internet, digitalization of society, online services, aggregates

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## ВОЗМОЖНОСТИ И РИСКИ ЭКОНОМИКИ СОВМЕСТНОГО ПОТРЕБЛЕНИЯ В УСЛОВИЯХ ЦИФРОВИЗАЦИИ ОБЩЕСТВА

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Объектом исследования является экономика совместного потребления (ЭСП), а также ее будущее в условиях глобализации, цифровизации общества и четвертой промышленной революции. Сформулировано сравнительно недавно появившееся понятие «эко-

номика совместного потребления», выявлены основные предпосылки ее возникновения. Кратко исследованы формы ЭСП в различных сферах деятельности (на транспорте, в энергетике, недвижимости, туризме, деньгах и т. д.). Выявлены возможности и выгоды ЭСП для различных слоев населения, организаций, административных образований и государства. Изменения, которые произошли в экономике за последнее десятилетие, охватили разные отрасли и компании, растущие под влиянием глобализации и возросшей популярности интернета. Сегодня возникающие новые термины, в частности, такие как «экономика совместного потребления», продвигают новую модель, которая может использоваться в разных городах независимо от их особенностей, а также предполагают работу без строго установленных часов или определенной степени постоянства, что некоторые связывают с эпохой взаимозависимости. Высказаны проблемы и риски, которые несет ЭСП. Выявлен круг вопросов (правовых, организационных, экономических, экологических и др.), которые возникают при внедрении ЭСП и которые должны повысить ее результативность. Выдвинуты некоторые предложения по улучшению деятельности в условиях ЭСП не только в настоящее время, но и в будущем. Также выдвинуты предложения по улучшению деятельности в условиях экономики совместного потребления в будущем для увеличения благосостояния общества. Процессы цифровизации общества становятся прерогативой глобальной экономики и отдельных стран, что повышает значимость рассматриваемых проблем. Исследование будет способствовать популяризации ЭСП и распространению информации о том, какие проблемы существуют на данный момент в ней и как их надо решать.

**Ключевые слова:** экономика совместного потребления, интернет, цифровизация общества, онлайн-сервисы, агрегаты

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*Introduction:* Modern society is characterized by rapid development of the digital economy, based on wide use of the Internet, information and communication tools, cyber-physical systems, Big Data technology, the Internet of things, cloud and other information technologies. Under the influence of globalization and increasing digitalization, the structure of the world economy is changing: many traditional industries are losing their importance, new industries are developing rapidly, new business forms are being introduced, new production and social relations are being generated. In particular, a concept such as the economy of collaborative consumption has emerged. Many experts note its appearance around 2010, after which it quickly became popularized in the media, economic and other journals [2]. A special role in this was played by the publication of the article by Rachel Botsman and Roo Rogers, «What is Yours: How Collaborative is Changing the World» [3].

Experts from the University of Valencia [4] indicate that the term sharing economy is closely related to the term collaborative consumption, which is discussed in the works of Gansky (2010), Botsman and Rogers (2010) [3]. Having considered these studies, we can state that both terms are synonymous.

Within the framework of this concept, the term «cooperation economy» can be confused with the term «joint consumption». However, taking into account the traditional definition of the economy, according to which the economy is interpreted as a science about the economy and related activities of people, about the use of various resources to meet the needs of the individual and the society as a whole, it should be understood that co-consumption is studied by the economy, and more specifically, by a narrower discipline called the sharing economy.

Our definition of Collaborative Consumption is the following: «Collaborative Consumption Economy is a dynamically developing socio-economic model

aimed at obtaining benefits from consumption of goods and services, coordinated through the Internet and other media, where the participants can share what they own and what they can do for a certain fee without losing ownership».

Collaborative Consumption began to play a large role after the 2008 financial crisis. Such large international servers appeared as the Airbnb rental platform, BlaBlaCar travel companion service (2008) and Uber taxi service (2009), which gave even greater importance to Collaborative Consumption, which meets various needs in markets around the world. Today, Collaborative Consumption is a powerful socio-economic movement of exchange of goods and services [5]. The macroeconomic and geopolitical situation in the world and the country has caused a decline in income among people primarily belonging to the middle class. This contributed to development of Collaborative Consumption trends, when it is important not to own the object, but to be able to use it. On the one hand, such a model of the economy provides benefits to those for whom owning the asset would be too expensive because of its high price or owning it would not be profitable due to its rare use. In addition, it is possible to receive additional income or cover the costs of ownership of the asset.

Studies have shown that Collaborative Consumption is currently undergoing rapid development, its scope of application is expanding, which is primarily promoted by digitization of society, Globalization 4.0, whose significance is, at the very least, indicated by the fact that the recent 49th annual Forum in Davos was dedicated to the theme «Shaping a New Architecture in the Age of the Fourth Industrial Revolution». All of the above speaks about the relevance of the problem under study.

*Goal of this study:* to consider the possibilities and risks of Collaborative Consumption, on the basis of systematization and analysis of existing and evolving forms of Collaborative Consumption, as well as to find out which organizational, economic and legal issues need to be addressed.

*Materials of research.* We consider the features and different approaches to the new business model, the Collaborative Consumption Economy, as well as

the scope, opportunities, risks and negative consequences associated with this.

The main characteristics of Collaborative Consumption are as follows:

- exchange of goods and services is carried out using the Internet and other information media, which primarily connect individuals;
- income is obtained with the help of little-used resources. Participants share their underutilized resources, which at the same time are necessary for others. Goods and services can be offered at a lower price to the consumer, which leads to lower costs and substantial savings;
- consumers get more opportunities to choose the necessary product or service since the range of suppliers is no longer limited to companies only;
- continuous improvement of competitiveness in the market: commercial companies must actively innovate and improve the quality of their services, taking advantage of the new economy with a completely different business strategy;
- Collaborative Consumption reduces unemployment, gives additional income to the unemployed, to the less busy or to people with low incomes due to entering new markets, including remote ones;
- virtual platforms of Collaborative Consumption allow their users to offer services themselves. Thus, new forms of independent work with wide income opportunities become relevant.

Let us consider the most popular organizational forms of The Collaborative Consumption.

**Online taxi services («peer-to-peer» taxi).** The Uber mobile service is well known all over the world, its largest competitor is the leader of the Chinese market, Didi Chuxing; YandexTaxi operates in Russia. These services are often mistaken for a taxi service aggregators, however, they position themselves as services that allow non-professional drivers to earn extra money during their free time. In fact, for example, in the UberPool service, the driver can pick up other fellow travelers, and the price of such a trip for each of them will be much lower. More and more of these services appear in the world, claiming to be a niche between urban public transport, tied to tight schedules and bus stop points, a city taxi too expensive for the masses, and a

personal car, which is getting more and more expensive to maintain and use. In 2017, mobile services accounted for about a third of the global taxi market, which reached \$108 billion. According to Goldman Sachs, by 2030, mobile services will exceed traditional ones by five times [6]. In Russia, the process of consolidating this area of the transport business is gradually taking place. In large cities, up to 85–90 % of the taxi market is already occupied by aggregators [7].

**Ridesharing and carpooling** is sharing a private vehicle with the help of online search services companions. There are many companies abroad and in Russia, whose services connect drivers and passengers who want to share the cost of a trip. BlaBlaCar and BeepCar are the most popular sites in Russia. Recently, such services as PoedemVmeste.ru, Poputchiki.ru, doedemvmeste.ru, etc., have appeared. Drivers provides their cars, management service, and traveling companions undertake travel expenses.

New startups of such services plan travel routes based on user needs, including a dynamic data-based routing system, providing competitive prices for services.

**Carsharing** is a system of short-term car rental with pay per minute, common mainly in large cities. People rent cars not from the company, but from each other. For many, this is a good alternative to public transport, private cars and taxi. The client pays only for the actual time of use of the car and fuel. The owner of the car is responsible for maintenance, paying taxes and insurance. The largest carsharing services in Russia are Delimobil and Yandex.Drive. In addition to cars, short-term rental of other types of transport is possible (bicycles, scooters, micro-electric transport), which is one of the most effective ways to solve the «last mile» issue in urban transport logistics of people. Today, carsharing is considered the main alternative to personal transport. According to expert estimates, the prospects for the development of the Russian market suggest an increase in the share of cars used in carsharing to 10 percent by 2025 [8]. Recently, in the world, carsharing companies have cooperated to make it more convenient for their customers to use carsharing in other countries. Consideration is being

given to replacing per-minute rent with per-kilometer. With the economic downturn in the country, there are more people willing to rent their cars.

**Airbnb** is an online platform for locating, searching and short-term rental of private housing around the world. This is a community of people who want to rent out their accommodation, and travelers who need this accommodation, based on trust and reputation. Airbnb offers better deals than in hotels, or much more attractive conditions for the same money. Services for rental housing help their owners to improve their financial situation, upgrade housing, promote the development of service services, and bring a similar market of services out of the shadows. The Airbnb short-term rental service is one of the leading in shared consumption economies. Rover.com, also known as Airbnb for Dogs, is also widely used if there is no place to leave the dogs, while the owner has to leave home for a while.

**Co-working** centers offer workplaces that can be rented for the required time (from an hour to a month) with technical equipment, high-speed Internet in the same office space with other tenants. Co-working centers can also offer a wide range of different services: from catering, meetings and business negotiations to hotel accommodation, which is very convenient, for example, for non-residents. Clients of co-working centers are aspiring entrepreneurs, start-ups, freelancers, companies (for events, seminars and conferences), business travelers, foreign guests.

**Crowdfunding** is the collaboration of people who voluntarily pool their money or other resources together, usually via the Internet, to support the efforts of other people or organizations. Fundraising can serve a variety of purposes, such as assistance to disaster victims, support from fans, support for political campaigns, funding for start-ups and small businesses, and more.

**Crowdlending** is a kind of crowdfunding when people voluntarily send their own money to implement an idea or project. Crowding assumes that funds will be subsequently returned to investors, and investors will be able to rely on certain interest or share in the business [9].

The economy of co-consumption offers new opportunities in **the field of education**: it can connect people who need to exchange knowledge or adopt the desired skills, and possibly gain access to previously inaccessible sources. Classical education, in turn, will develop interaction between teachers and students, as well as provide access to virtual platforms at lower cost using smartphones or other portable devices.

**Online freelance** means the employer and the performer can be located at any distance from each other. The freelancer is a free worker, a specialist who can simultaneously carry out private orders for different clients. The types of remote work are constantly expanding, including IT services, translations, design, programming, creation and promotion of websites, marketing and advertising, writing texts, business consulting, etc. According to NAFI analytical center, at the beginning of 2018, the share of freelancers in Russia grew from 10 to 18% of the working-age population, i.e., about 13.5 million people. A freelancer can work under an employment contract, under a civil contract as an individual or as an individual entrepreneur.

**Collaborative Energy** exchanges the energy from solar panels installed in private homes. The energy overly accumulated in the batteries of one house is used by others. Thus, such energy does not have additional costs for these communities. With this method, the future of the world will get more control and energy savings and better preserve the environment [10].

**Opportunities.** The Collaborative Consumption Economy offers producers new forms of independent work with wide opportunities for generating additional income. Sharing goods and services also benefits consumers, because it implies lower prices and more efficient use of the owner's existing resources offered to others. On the other hand, this is an opportunity for companies that can adapt and benefit from the new economy with a completely different business strategy [11].

Users in the transport sharing business models discussed above (ridesharing and carpooling, carsharing) are attracted by a lower price, a shorter waiting time for a car, the ability to place an order and track its performance using a mobile phone

application. The credibility of the service increases the ability to evaluate the direct performer. With the advent of transport services, the drivers have the opportunity to see incoming orders and accept them depending on their own load and proximity of the call. This significantly speeds up the process of receiving an order from the consumer to the direct executor. In the process of using transport and trip services, a lot of data is accumulated, which can be used as the basis of new types of business, providing people with comfort and personalization. The model of using transport services instead of owning transport is one of the most promising market segments based on a sharing economy model.

In transport logistics, servers appear that provide opportunities for sharing one container by several companies. The development of a vehicle-sharing business model has led to proliferation of Mobility as a service technology (Mobility as a Service, MaaS), which manages multimodal transportation in real time from the beginning of the route to the destination using different types of transport (public transport, transport rental, taxi, shuttles by request, etc.) and allowing to choose the best route according to a set of criteria (time, cost, user preference, etc.). With proper alignment of logistics processes, a manufacturer can save up to a third of its logistics budget. As it becomes less profitable for organizations to maintain their own fleet in these conditions, they increasingly transfer logistics to specialized companies for outsourcing. According to a McKinsey study [12], more than 60% of respondents plan to increase or significantly increase the use of transport services via new business models such as carsharing or ridesharing in the next 2 years.

The Collaborative Consumption Economy in transport has a positive effect on reducing the harmful impact of vehicles on the environment, primarily by reducing the number of vehicles while ensuring the required level of mobility. By sharing existing assets without the need to invest in new ones for exactly the same consumption, there will also be a reduction in the harmful effects on the environment.

The Collaborative Consumption Economy helps reduce unemployment and poverty. The new economy creates additional income for the

unemployed or owners of unpopular specialties whose skills are difficult to transfer to other activities. But they can, for example, drive a car, give private lessons or rent their property. In view of all of these considerations, Collaborative Consumption Economy provides citizens of different countries the opportunity to take advantage of their place of residence, taking into account the overall demand and its specificity [13]. The enterprises will increase the capacity utilization, which will undoubtedly have a positive result on their economies.

These trends help to reduce differences in age and gender, differences in specialties, education, etc., because anyone can use digital services, acting both as a consumer, and as a collaborator. This approach, for example, helped popularize the use of Internet payments, as well as everything new that comes with the Sharing economy.

The Collaborative Consumption Economy greatly enhances both demand and supply, with the result that the optimal price is revealed, which most closely matches market conditions. Moreover, market factors affecting the price (state intervention, regional differences, etc.) are eliminated as a rule. A low market price is not acceptable for many participants: the state, direct and indirect competitors of producers of goods and services, and producers themselves. Only consumers who receive the lowest possible prices for goods and services are satisfied with it.

The level of competition in the market is increasing: now companies must innovate more actively, produce new products, reduce prices and improve the quality of their services. The development of Collaborative Consumption Economy leads to reduction in the traditional market economy with its global corporations, banks and supply chains.

With the development of Collaborative Consumption Economy, urban municipalities are expanding the opportunity to promote public services. Through platforms for promoting social services, local residents will be able to offer their experience and knowledge to foreign citizens in order to achieve greater efficiency and lower resource costs in various areas, which will contribute to development of tourism.

**Risks.** Currently, the number of entrepreneurs who base their projects on the principles of Collaborative Consumption Economy in various sectors: transport, food, clothing, real estate, travel, money, etc., is growing. A business gains access to cheap labor, but at the same time it acquires great risks, in particular, legal ones. The state has little ability to regulate Collaborative Consumption Economy, since today its terminology is rather vague and there is practically no adapted legislation. This leads to certain risks and negative consequences, especially taking into account the high rate of emergence and spread of new business models of Sharing economy.

Collaborative Consumption Economy affects social issues. For example, carsharing and ridesharing services, especially when they are provided with benefits, can cause discontent of urban taxi services and car owners. There were demonstrations against Uber in a number of European countries (Belgium, France, Spain, etc.), accusing it of unfair competition, failure to comply with local rules regarding security, taxes and licensing. Recently, the State Duma of the Russian Federation submitted a draft Federal Law N 69583-7 «On Amendments to Certain Legislative Acts of the Russian Federation in terms of improving state regulation of passenger and luggage transport of passenger taxis in the Russian Federation», which aims to regulate the activities of taxi aggregators. This draft law provides for the duty of a taxi aggregator to cooperate only with licensed drivers by concluding information and service agreements with them.

Platforms that establish contact between customers and collaborators do not always provide adequate security or guarantees regarding the goods and services provided, although clients are able to evaluate the performers, but only hiring them and using the service. Companies that operate on the principles of Collaborative Consumption Economy themselves create a large number of criteria so that users have the opportunity to choose those who can be responsible for the product or service. But even such measures do not give full guarantees or insurance against accidents, theft, crime or inadequate quality of goods and services. Risks are

always present when the community independently regulates the system of analysis, rating, feedback.

Sberbank intends to take part in crowdlending, acting on its own platform as an intermediary in the transaction between those who want to invest their savings and those who want to attract these funds, earning a commission from borrowers as a percentage of the payment. In this case, the risk remains with the investor, who relies on the borrower's assessment provided by the bank [14].

The legal status of participants in the Sharing Economy and the form of contractual relations between them are not clear. For example, the question of the legal status of the Uber system is debatable. If this is an online information intermediation platform between the vehicle owner and the user, then its activity is outside the scope of national transport regulation and it is entitled to operate in all European (EU) countries without permits. If it is a transport company, then its activities are under the control of national authorities and may even be prohibited [15].

The issue of taxation also requires consideration. The state generates or tightens more and more taxes, but a coherent system of tax collection is not yet available. At present, the efforts of many states are aimed specifically at developing a new tax policy adapted to the economy of the future, including the Sharing Economy. Online payment has to be arranged for this purpose; drivers in ridesharing are currently paid in cash in Russia.

Freelancers have other risks associated with unregulated conditions, irregular working hours, lack of vacations, weak social protection, taxation, etc.

From January 1, 2019 to December 31, 2028 a special tax regime has been introduced for the self-employed in Moscow, Moscow, Kaluga regions and Tatarstan, the so-called «Tax on professional income» [16], which individuals may use, including individual entrepreneurs who receive income from activities in which they do not have an employer and do not attract employees. The tax on professional income is 4% of the income from the sale to individuals and 6% from the income from the sale to individual entrepreneurs for use by business and legal entities.

Relations associated with transport, housing, tourism and many other objects of the Sharing Economy are closely intertwined with legal relations in the insurance industry. It is necessary to develop a system of legal regulation to protect the interests of individuals and legal entities when certain insurance cases occur at the expense of monetary funds formed by insurers from paid insurance premiums (insurance premiums), as well as at the expense of other means of insurers using business models of ESP. For example, the issue of selling short-term unlimited insurance to car owners or tenant tourists during car sharing has not been resolved. Companies are only able to work with those who have already bought all the necessary insurance at their own expense. In the West, insurance companies see carsharing as an opportunity to earn money, since every car needs insurance.

With carsharing, there is a question of liability in case of accidents, as consumers are unlikely to use per-minute car rental if the car sharing agreement with the customer indicates liability for damage to the car. Customer might also use the cars without due care, fail to fix the car's problems or to use high-quality fuel, etc. This, in turn, may adversely affect the environment.

#### *Results of the study.*

1. The success of using virtual platforms implies a low price for the services offered that meet the needs of customers. That is why such services are more convenient to consume than traditional ones. Quick access to the offer and the reputation of virtual platforms determine customer loyalty.

2. In the sharing economy, ordinary people compete with professionals. However, as this type of economy is not subject to any regulation and based only on trust, consumers remain helpless in cases of fraud or poor professional practice. This aspect cannot be ignored; therefore, states need to introduce general regulation both for already existing companies and for representatives of platforms.

3. Due to the lack of labor regulation among people working on virtual platforms, the self-employed are subjected to an excessively high rate of work, based on their needs, but exceeding their

working time in many cases without any benefit or protection.

In the present study, the concept of Collaborative Consumption Economy is formulated. The completed studies have shown an extremely high scale and pace of development and penetration of the Collaborative Consumption Economy into the economy and public relations, promoted by active digitalization of society, wide spread of the Internet and other information media. Analysis of numerous publications and practices showed a positive impact of the Collaborative Consumption Economy on the incomes of people and organizations, unemployment and employment, competition in the market, the environment, etc.

However, many technical, legal, social, organizational, economic, environmental, behavioral and other problems have to be solved, in particular in insurance, taxation, increasing tax collection, security, etc. Information systems specialists are faced with the big task of developing communities, which should not only allow the consumer to familiarize themselves with the services provided, their collaborators and feedback on them, but also enter into paid service agreements between them, collect money and make payments between participants, calculate and pay taxes, make banking transactions, etc. State and local authorities should create the appropriate infrastructure.

*Directions for further research.* Analysis of studies in the field of sharing economy can be the basis for further research, for example, regarding classification and consideration of this industry from the standpoint of traditional 4P marketing (product, price, place, promotion), as well as for introducing directions in government policies. In addition,

studies of dynamics of measurements in consumer behavior as the economy of joint consumption evolves will allow manufacturers to better adapt products and services to the requirements of the modern market.

Additionally, marketing professionals need to examine the changes in consumer spending, determine preferred production volumes and their impact on pricing.

Pricing is an important area for further research in sharing economy.

In-depth studies show high importance of a co-consumption economy. A sharing economy operates exclusively in multilateral markets. Thus, pricing affects the demand for services and market capacity, since price affects the income level of each participant, and market participants are also effective distributors of market capacity.

*Conclusions.* Digitalization of society, the related changes in lifestyles and values lead to transformation of the consumption model, development of the Collaborative Consumption Economy, a relatively new trend in socio-economic development of all countries that is very promising and actively developing. In this regard, one of the essential issues that need to be urgently addressed is legal, economic and environmental regulation of its business processes. Government agencies, lawyers, economists and other specialists face major challenges in solving theoretical and practical issues of joint consumption organization, the legal status of participants, taxation, online payments, licensing, insurance, security, quality of services, etc. An urgent problem is continuous computer literacy of the population at user level and above.

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