

FIVE-SECTOR MODEL OF THE CIRCULATION OF RESOURCES, INCOME, AND EXPENDITURE IN THE SHARING ECONOMY

Natalia Shilonosova, South Ural State University
Yulia Butrina, South Ural State University
Sergei Aliukov, South Ural State University

ABSTRACT

The purpose of our study is to develop a new model of the circulation of resources, income, and expenditure in the sharing economy. To achieve this, we solved the following four tasks: 1. when studying the key aspects of the sharing economy, we revealed that the theory, methodology, and practice of the sharing economy have not yet been formed. 2. When studying the degree of penetration of online services into the economy based on a survey of young people, we found that the penetration degree is rather high. 3. When forming the new model of the circulation of resources, income, and expenditure in the sharing economy, we added a fifth sector - sharing aggregators - to the existing four-sector model, with further analysis of the interaction of all five sectors. 4. When modeling and detailing the interaction of resources, income, and expenditure in the sharing economy, we revealed that new real and cash flows are formed in the resulting model, which should be taken into account by the existing economic sectors, from households and to the outside world, to build new balances of the microeconomic and macroeconomic interaction.

Keywords: Sharing Economy, Sharing Aggregators, Sharing Services, Circulation of Resources, Income, Expenditure.

INTRODUCTION

Currently, the sharing economy as a collaborative consumption economy is becoming more widespread. Sharing is defined as any activity related to the additional use of property held by consumers, as well as obtaining certain benefits during this use. Various online services have been created and successfully develop within the framework of the global network and platform infrastructure (Lymar, 2018; Sadovskaya, 2018, Rinne, 2019).

The concept of collaborative consumption in economic science was highlighted by Rachel Botsman and Roo Rogers, the co-authors of the book *“What’s Mine Is Yours: The Rise of Collaborative Consumption”* (Botsman & Rogers, 2010) and Rachel Botsman’s presentations at the 2010 TED conference. A new socio-economic model, which should revolutionize into the consumption of goods and services, was developed.

In 2011, the sharing economy was included in Time Magazine’s List of Ideas That Will Change the World Soon (Walsh, 2011).

The idea of the collaborative consumption economy is reflected in the function of traditional business, which leads to its transformation and increased efficiency. The idea is implemented by two methods. The first method involves the transition of online platforms which were an e-commerce platform for the owners of any property (individuals) and customers (individuals)

39 but did not work efficiently enough, to an online service representing the interests of a company
40 (legal entity) owning the assets leased to the same customers. Such platforms include, for example,
41 Lyft, Rent the Runaway, Zipcar. This method reflects the evolutionary transformation of the
42 business and is associated with the quantitative optimization of resources.

43 The second method involves companies using the sharing principles and creating spe-
44 cialized online platforms. Such companies include, for example, large hotel chains such as Hilton,
45 Radisson, and carmaker Ford. This method reflects the revolutionary transformation of traditional
46 business and is associated with the qualitative optimization of resources. The difference between
47 these two methods lies primarily in the fact that in the first method, online platforms become an
48 addition to the existing business model, while in the second method; online platforms are the basis
49 of a new business model, according to which a modern business is built. This transition is mainly
50 preconditioned by the fact that consumers are more and more inclined towards the on-demand
51 economy (Yeung, 2015). Therefore, companies from different countries are delving into this hy-
52 brid business model.

53 However, there is a disjointed view of the mechanisms and infrastructure of the function of
54 the sharing economy. A holistic approach should include stable terminology, a description of the
55 principles and socio-economic models of sharing relationships at the micro and macro levels, the
56 psychology of sharing relationships, issues of state regulation (legislation, taxes and social con-
57 tributions, benefits), operation of companies owing online platforms, insurance, technical and
58 technological aspects of the online sharing service functioning, self-employment, ecology, logis-
59 tics, transformation of the traditional business, social effects, financial literacy, pricing, transaction
60 costs, etc.

61 The purpose of the work is to develop a new model of the circulation of resources,
62 income and expenses in the conditions of the sharing economy.

63 Tasks to be solved.

- 64 1. Study and identification of key aspects of the sharing economy from theoretical sources.
- 65 2. Studying the degree of penetration of online services into the economy based on a survey of young
66 people and determining the prospects for the development of the sharing economy.
- 67 3. Formation of a new methodology for the circulation of resources, income and expenses in the conditions
68 of a shared economy by building a general model and describing real and cash flows through shared
69 aggregators.

70 **METHODOLOGY**

71 **Key Aspects of the Sharing Economy**

72 We should immediately note that the practical establishment of the sharing economy is
73 represented by the rapid development of car-sharing and rental housing, and the basis of such an
74 economy in business is online platforms (Richardson, 2015).

75 We will highlight five key aspects of the sharing economy:

- 76 1. Scientific works show that car and housing sharing programs (overnight stop, travels) provide people
77 with short-term access to personal property without the higher costs and responsibility which may be
78 connected with ownership and, importantly, with a rather high level of service needs (Birdsall, 2014).
79 Authors have considered non-traditional, non-institutionalized trends in the sphere of traveling, which
80 undermine basic tourism, providing travelers with a wider range of alternatives, including home ex-
81 changes (Forno & Garibaldi, 2015).

- 82 2. Some authors view sharing as one of the ways to protect the environment. Reusing things can change the
 83 output and reduce the burden on nature since less non-renewable resources will be consumed (Kessler,
 84 2015; Teubner, 2014).
- 85 3. An important aspect of sharing relations is trust, an increase in the economic importance of interpersonal
 86 aspects, and direct transactions between households (Chica et al., 2017; Hawlitschek et al, 2016). Mis-
 87 trust risks are associated with insurance issues (Weber, 2014).
- 88 4. The issues of sustainability of the sharing economy, the prosperity of the entities involved in it, and
 89 social equality are important for the economy (Heinrichs, 2013).
- 90 5. It is essential that the sharing economy provides people with an additional opportunity to find temporary
 91 work, gain extra income, improve social interaction, and receive access to information resources, which
 92 are otherwise unable to be achieved (Dillahunt & Malone, 2015). Through various information channels,
 93 unemployed people or people experiencing financial difficulties will learn about the sharing economy
 94 potential, which may increase employment among these population groups.

95 The sharing economy had the tools to restore the global economy after the crisis of
 96 2008-2010 (Pais & Provasi, 2015).

97 We will give a brief description of the above aspects of the sharing economy in Table 1.

№	Key aspects	Benefits
1	Property	Reducing costs, reducing the importance of ownership
2	Use	An increase in the frequency, improving environmental
3	Interpersonal relationships	Increasing trust between people, increasing the importance of social ties
4	Economic growth	Increasing sustainability, improving the social environment
5	Employment	Additional income, reduced unemployment

98 Table 1 shows that all five key aspects of the rank economy imply benefits, while the first
 99 three aspects relate to the level of microeconomics and the fourth and fifth aspects characterize
 100 benefits at the macroeconomic level.

101 The importance of the collaborative consumption economy determines the efficiency of
 102 economic development, while the legal regulation of the collaborative consumption economy is
 103 essential. This includes solving legal problems and regulating the relations between property
 104 owners and users transferred to sharing, labor relations, and other legal issues in such segments as
 105 car-sharing and ride-sharing, food sharing, home exchange, etc. (Bychkov, 2019).

106 The development of the digital economy in Russia is a key factor of economic growth and
 107 improving the quality of life (Sologubova, 2018). The transformation of property relations is
 108 connected with profound changes and the appearance of a network of interaction (Maryganova,
 109 2018). The influence of the sharing economy on market relations is significant (Pykhteeva &
 110 Vinogradov, 2018), while the sharing economy undermines the competitive foundations of the
 111 market (Litvinov, 2018). At the same time, the sharing economy is a new business model
 112 (Yuldashev, 2018).

113 We should highlight a specific feature of the modern economy: the phenomenon of eco-
 114 nomic uberization (Tagarov, 2019). Let us highlight in particular the phenomenon of sharing
 115 economy as a new promising engine of tourism in Russia (Eremeeva et al., 2018). New marketing
 116 tools are being developed to promote online travel services (Graf & Savelieva, 2018). There is an
 117 innovative transformation of society due to the increasing role of information and knowledge and a

118 fundamental change in the infrastructure and life in the smart cities format from the perspective of
119 sharing economy (Komleva et al., 2016). The issues of economic socialization of an individual and
120 the use of the value approach are becoming important in the collaborative consumption economy
121 (Drobysheva, 2013). The economic culture of the metropolis is changing (Raskov et al., 2017).

122 Some features of the sharing economy development in Russia have been outlined
123 (Gabrielyan, 2018) and the fundamentals of the collaborative consumption economy have been
124 developed (Golovetsky & Grebenik, 2017). The sociocultural futurological phenomenon of col-
125 laborative consumption has been highlighted (Kuzmina, 2017) and several psychological and legal
126 problems of sharing have been identified (Pykhteeva & Vinogradova, 2018).

127 There have been attempts to determine the parameters of the collaborative consumption
128 economy in 2016-2019, as well as long-term forecasts. For example, McKinsey Company's sur-
129 vey determines the number of people employed in this area. In 2016, 30% of the working-age
130 population of the United States had additional part-time jobs, including those connected with
131 sharing (Manyika et al., 2016).

132 It is generally very difficult to quantify the parameters of the sharing market since the
133 necessary methodology and mechanism for recording and regulating this phenomenon does not
134 exist. Nevertheless, the scales can be measured indirectly. According to PwC's estimates, in 2015,
135 there were over 300 companies in Europe established in different sectors of the collaborative
136 consumption economy. Their total annual income amounted to over 4 billion Euros. In the United
137 States, there were four times more such companies at that time (Yip, 2017).

138 The sharing economy is associated with the phenomenon of gignomics or gig economy,
139 which includes uber-like services representing part-time work opportunities for the unemployed
140 (later on they fall into the category of freelancers), hearing-impaired, and other people (Adactilos
141 et al., 2018). New digitalization contours have been formed (Revenko, 2018). The economic de-
142 velopment sustainability is determined through the development of the collaborative consumption
143 economy (Stavtseva, 2018). Various positive and negative aspects of the sharing economy have
144 been determined (Ulyanova & Arzharova, 2015). The function of online platforms is determined
145 from the standpoint of the issues of the technology, efficiency and areas for development (Sena,
146 2015).

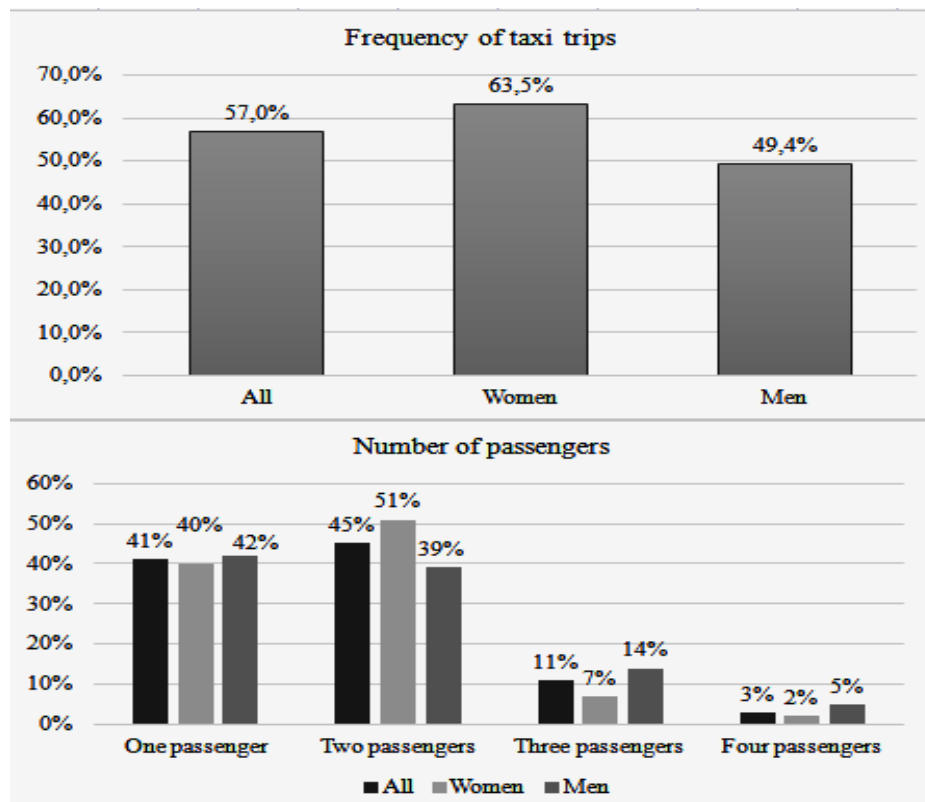
147 The results of the private car rental development and the possible decrease in demand and
148 job loss have been analyzed (Green, 2014). The issue of the hybrid nature of the sharing economy
149 as an economy of interaction between the market and non-market economy, which requires ap-
150 propriate approaches to the development of the collaborative consumption economy, has been
151 investigated (Scaraboto, 2015). The relatively new network business has already been character-
152 ized as a traditional business and new models for its construction are being formed (O'Reilly,
153 2015).

154 The new facts of the economic life in the sphere of collaborative consumption have been
155 studied, accumulated, and generalized, the research vocabulary has been developed to some ex-
156 tent, a special object has been crystallized, and the basic theoretical and methodological founda-
157 tions of the sharing economy have been formed. However, the theory, methodology, and practice
158 of the sharing economy have not yet been formed. That is, intensive development of the theory of
159 sharing economy is currently underway, and this process is far from completion.

160 **Analysis of the Degree of Penetration of Online Services into the Economy**

161 To understand the degree of penetration of online services into the economy and the
162 development of sharing, we chose the city taxi segment, operating according to the collaborative

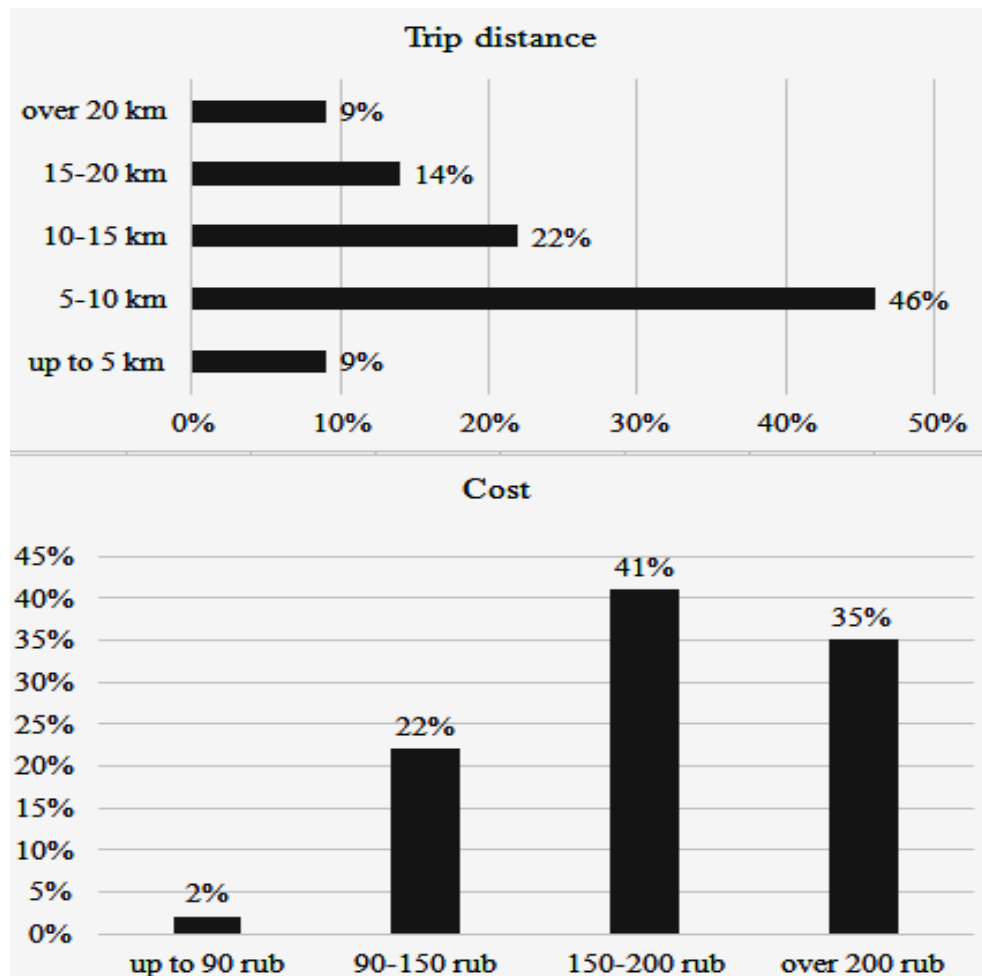
163 consumption concept. The study was carried out through a survey of 179 people with an average
 164 age of 20 years old. The survey was conducted in writing among students in October 2019. The
 165 survey is called “*Satisfaction with Taxis*” and concerns the economic use of Uber/ Yandex taxi in
 166 the city of Chelyabinsk, Russia. The survey contains 13 questions grouped in three pools: (1) travel
 167 conditions, (2) extra charges, and (3) discounts. We proposed several answers and asked the
 168 respondents to choose one. The respondents included 83 men (46.4%) and 96 women (53.6%). Let
 169 us consider the results obtained by the polls. Figure 1 shows the answers to the two questions of the
 170 first pool “*Travel Conditions*”.



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FIGURE 1
FREQUENCY AND NUMBER OF PASSENGERS TRAVELING BY TAXI

175 We can see from Figure 1 that to the first question “*Do you often take a taxi using online*
 176 *platforms?*” 57% answered positively, which means that more than half of the respondents have
 177 already actively used the platform. Moreover, women use these platforms more (63.5%) than men
 178 (49.4%). This means that online platforms have actively entered their lives. The answers to the
 179 second question “*How many passengers are usually in the taxi, including you?*” showed that the
 180 usual number of passengers in the taxi is two (47%) or even one (40%). This means that economies
 181 of scale do not play a major role, the trip itself is important and, moreover, taxi trips can be
 182 considered as a living standard similar to having a car with a personal driver. Figure 2 shows the
 183 answers to the next two questions of the first pool.



184
185
186 **FIGURE 2**
THE DISTANCE AND COST OF A TAXI TRIP

187 Figure 2 shows that the answers to the question “*What distance do you most often need to*
188 *travel by taxi?*” showed that the most common trip distance is 5-10 km (46%); 48% of women
189 and 43% of men gave such an answer. This means that it is not the speed of the trip, but the
190 comfort of traveling that matters. The fourth question “*What is the usual cost of this taxi ride?*”
191 shows that the most frequent answer is 150-200 rubles (40% of the respondents answered so),
192 which gives us the correct economic understanding of costs in this survey. As for the fifth
193 question “*To what amount can you assess the difference in the “Economy” and “Comfort”*
194 *categories?*”, the most common answer is 50 rubles (39% of the respondents), but since the
195 answer is related to the distance and the cost of the trip, there are variants of answers differing
196 both upward and downward. This question is can be related to the next two pools by the cost
197 estimates through the system of extra charges and discounts.

198 Summing up the pool “*Travel Conditions*”, we can note that online taxi platforms have
199 become widespread in our lives, they are easy and convenient to use for traveling individually
200 and for long distances. Pool 2. Extra charges. We selected the two most common extra charges

201 and proposed two new services for which charges are expected. Table 2 shows the answers for
 202 questions 6 through 9.

Table 2			
SURVEY RESULTS COVERING THE SECOND POOL EXTRA CHARGES, %			
Name	Share of answers, total	Including	
		answered by women	answered by men
How much are you ready to pay for special conditions (for example, rush hour or rain)?			
a) 0 rub	43	42	45
b) 30 rub	28	30	25
c) 50 rub	26	26	25
d) 80 rub	2	1	5
e) 110 rub	1	1	0
Total	100	100	100
How much are you ready to pay for reducing the taxi waiting time from 15 minutes to 5 minutes?			
a) 0 rub	55	49	60
b) 30 rub	36	46	25
c) 50 rub	7	5	10
d) 80 rub	2	0	5
e) 110 rub	0	0	0
Total	100	100	100
How much do you agree to pay extra for choosing the driver's profile (gender, age)?			
a) 0 rub	78	73	84
b) 30 rub	16	20	12
c) 50 rub	6	7	4
d) 80 rub	0	0	0
e) 110 rub	0	0	0
Total	100	100	100
How much do you agree to pay extra for additional selectable parameters (for example, a special aroma, favorite music, opening the door, etc.)?			
a) 0 rub	69	67	71
b) 30 rub	20	24	17
c) 50 rub	8	8	7
d) 80 rub	1	1	4
e) 110 rub	1	0	1
Total	100	100	100

203 Table 2 shows that most of the respondents do not welcome extra charges, especially for new,
 204 unknown services. However, in each question there is a cost choice of extra charges; further research can
 205 deal with the analysis of this choice made by individual respondents.

206 Pool 3. Discounts. As opposed to extra charges, for varieties of discounts are also considered,
 207 both by the type of the existing discount offers and new ones. Table 3 shows the answers for questions 10
 208 through 13.

209

Table 3			
SURVEY RESULTS COVERING THE THIRD POOL "DISCOUNTS", %			
Name	Share of answers, total	Including	
		answered by women	answered by men
What discount rate do you think is appropriate for having no luggage?			
a) 0 %	15	14	16
b) 5 %	40	42	37
c) 7 %	13	13	13
d) 10 %	13	16	10
e) 15 %	19	15	24
Total	100	100	100
What discount rate do you think is appropriate for the young passenger age (up to 22 years)?			
a) 0 %	31	17	27
b) 5 %	31	35	27
c) 7 %	13	10	16
d) 10 %	13	18	7
e) 15 %	22	20	23
Total	100	100	100
What discount rate do you think is appropriate for a form of payment convenient for the driver (for example, cash or card)?			
a) 0 %	21	21	22
b) 5 %	41	42	41
c) 7 %	11	16	5
d) 10 %	15	10	19
e) 15 %	12	11	13
Total	100	100	100
What discount rate do you think is appropriate for a subscription for 5 upcoming trips?			
a) 0 %	4	2	6
b) 5 %	13	10	16
c) 7 %	16	23	8
d) 10 %	30	32	28
e) 15 %	37	33	42
Total	100	100	100

210 Table 3 shows that discounts are welcome, especially for a subscription. Where most of
 211 the respondents chose a 5-percent discount for young age, the form of payment, and lack of
 212 luggage, the majority chose a 15-percent discount for the five-trips subscription.

213 Summing up the survey, we can note that the degree of penetration of online services into
 214 the economy is rather high. Consumers do not only use online services but also understand them
 215 well, having their own wishes and preferences in terms of economic characteristics.

216 **The Formation of a Five-Sector Model of the Circulation Of Resources, Income, and** 217 **Expenditure**

218 The basic idea of the sharing economy is that it is more profitable to pay for rent than for
 219 a whole purchase. Attempts have been made to build different models, such as the model of

220 interaction between users of the sharing economy Tagarov (2018), the model of interaction
221 through the justification of the reasons for resorting to the sharing economy Golovetsky &
222 Grebenik (2017). Let us note some of the problems of the sharing economy that are characteristic
223 of these models: a low level of trust in institutions in general and in social services in particular;
224 the presence of information inequality between age groups and localities of different sizes; the
225 lack of adaptation of existing state regulatory measures to the realities of a peer-to-peer digital
226 economy.

227 Let us consider how the sharing economy changes the circulation of resources, income,
228 and expenditure. First of all, we should note that four significant sectors are distinguished in the
229 well-known circulation model: households, business, state, and foreign (the outside world). This
230 model can be considered as a two-sector (households and business), three-sector (by adding the
231 state), four-sector (by adding the outside world). Each of the models has two markets: a resource
232 market and a market of goods and services.

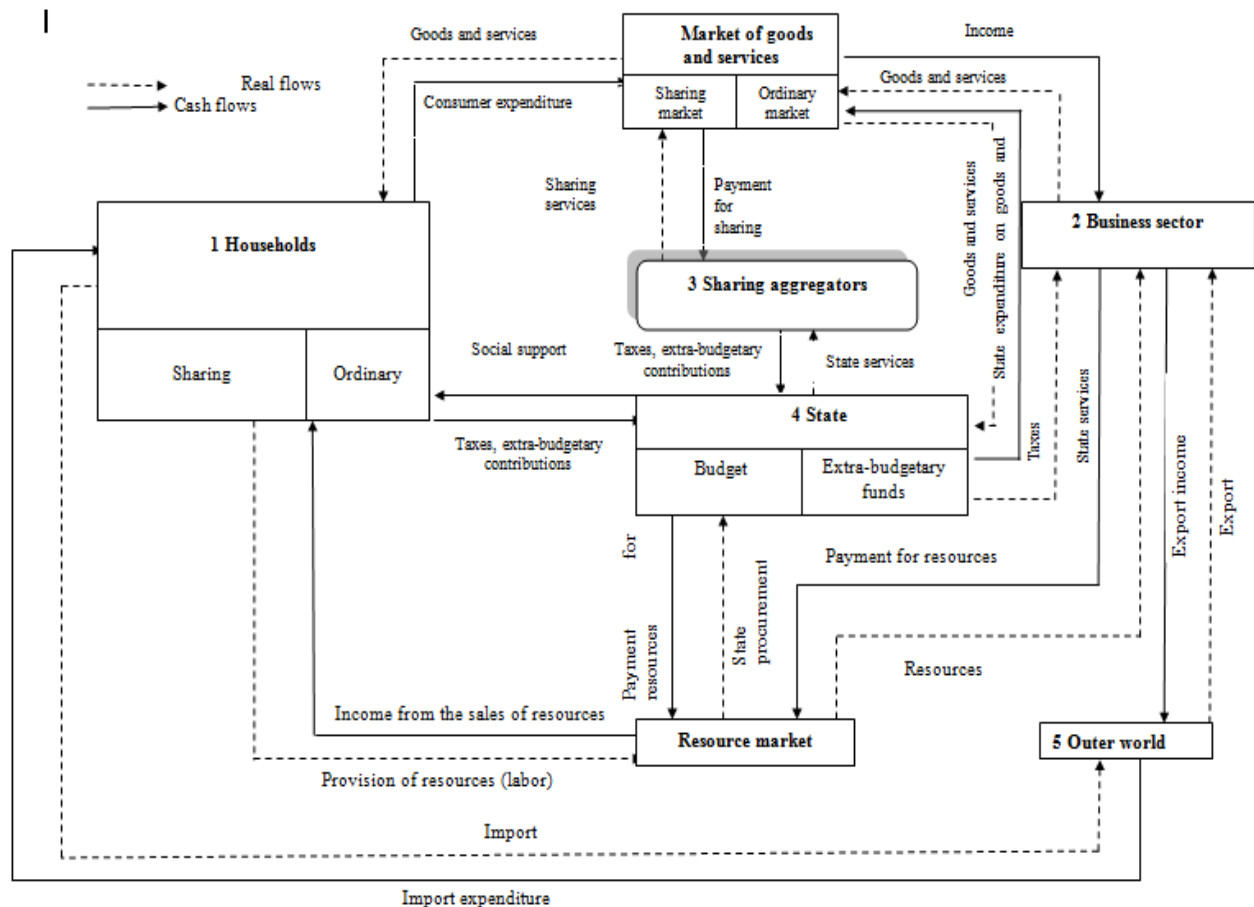
233 Due to the development of a new segment—the sharing economy—the market of goods
234 and services should be divided into two types based on the availability of an information
235 platform: the ordinary market (without a platform) and the sharing market (with a platform).
236 Notably, these two markets will exist in the economy; a full shift to the sharing economy will not
237 occur in the near future. In the resource market, similar to the market of goods and services, a
238 new segment is appearing—the sharing economy. Therefore, the resource market also has to be
239 divided into two types based on the availability of a platform: the ordinary market (without a
240 platform) and the sharing market (with a platform). Since sharing aggregators have the
241 information platform, they should be introduced into the model.

242 We propose to supplement the existing four-sector model with a fifth sector, thus making
243 the model more complex. Let us consider the new five-sector model of the circulation of
244 resources, income, and expenditure.

- 245 1. Households. Let us introduce a new feature in household classifications—by the availability of sharing
246 property. Consequently, households can be divided into two types: owners of sharing property (those
247 who have such property) and consumers of sharing property (those who do not have such property).
248 We should say that there are households who do not own any sharing property as well as households
249 who own several forms of sharing property (for example, a car and a tool).
- 250 2. Business sector. This is a sector of interaction. We should emphasize here that a sharing service is just
251 a service. Goods and works are in the business sector, and the sharing service is attached to them.
252 Business becomes the second nature of any person who begins to realize himself/herself not as a
253 “*screw*” in a business environment (for example, in coal mining or manufacturing of a weaver loom),
254 but as a person of interaction, helping other people, satisfying their needs, and at the same time gaining
255 rewards (income) for it. This is very important when maintaining an income and expenditure balance.
- 256 3. Sharing economy aggregators. It is assumed that aggregators operate in different markets, although
257 they can also combine them in the form of providing a “*turnkey*” service. For example, offering a
258 service to find housing and a car to travel to the chosen location. When implementing the win-win

- 259 strategy, a synergy effect may occur, and the sharing service becomes uniform, and, therefore, more
 260 complete. Moreover, it is very important for a chain of different necessary options from the list to
 261 appear; the service becomes complete (for example, by adding guide services to housing and transport
 262 services). We should note here that sharing economy aggregators can become tax agents for the
 263 sharing property owners. As a result, sharing aggregators can pay taxes from the sharing property
 264 income, just like they charge a fee for the provided sharing services.
- 265 4. Public sector. The state is represented in the form of both budgetary and extra-budgetary income, and
 - 266 expenditure.
 - 267 5. Foreign economic sector.

268 Figure 3 shows the five-sector model of the circulation of resources, income, and
 269 expenditure in the sharing economy. The model is an economic circulation, as it shows the
 270 circular movement of resources, goods, and services (real flows are counterclockwise lines)
 271 ensured by the oncoming movement of cash flows (cash flows are clockwise lines).



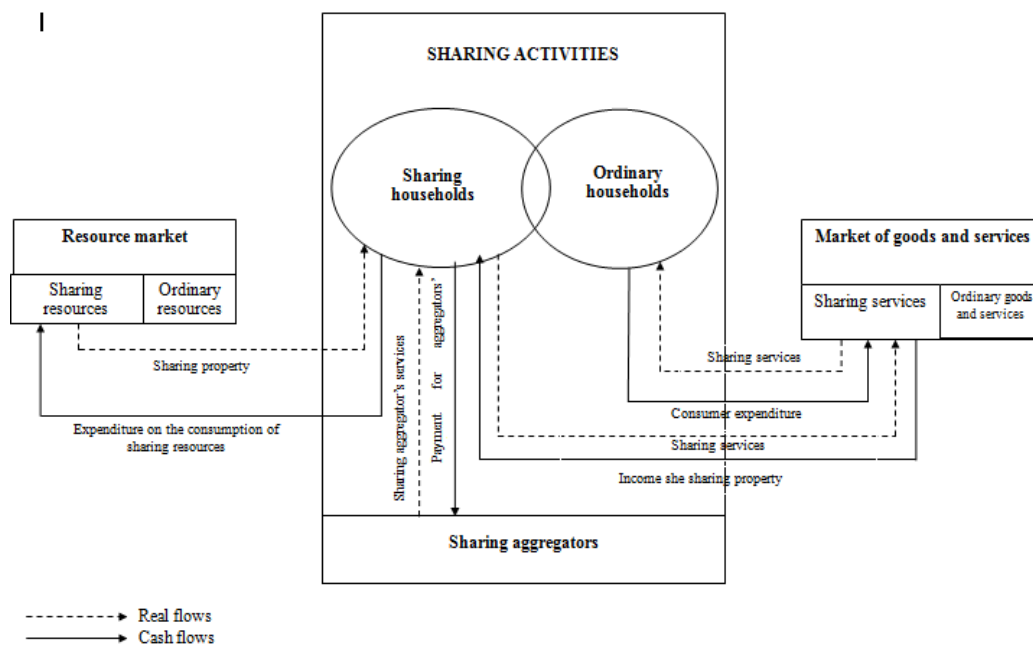
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FIGURE 3
A FIVE-SECTOR MODEL OF THE CIRCULATION OF RESOURCES, INCOME, AND EXPENDITURE IN THE SHARING ECONOMY

276 Figure 3 shows that in the resource market, households offer their resources to the
 277 business sector, which presents a demand for these resources. Resource prices are formed as a
 278 result of the supply and demand interaction in this market. When prices are formed, households
 279 provide resources to the market. Further, the market provides the resources to the business sector,
 280 which converts them into goods and services, and then delivers them to the market of goods and
 281 services (real flow is shown by solid counterclockwise lines). The business sector, in turn, bears
 282 the expenses of paying for the resources (cash flow), which are income to the households from
 283 the sale of the resources (dashed clockwise lines). In this model, sharing aggregators appears,
 284 which interact with the sharing market, both in providing services and in paying for them.

285 **Modeling and Detailing the Interaction of Resources, Income, and Expenditure in the**
 286 **Sharing Economy**

287 A more detailed diagram of the interaction of resources, income, and expenditure in
 288 the sharing activities is shown in Figure 4.



289

290 **FIGURE 4**
 291 **INTERACTION OF RESOURCES, INCOME, AND EXPENDITURE IN THE SHARING**
 292 **ACTIVITIES**

293 Figure 4 shows that in the resource market, the sharing segment provides the sharing
 294 property to the sharing households, which in turn provide sharing services to the market of goods
 295 and services (the sharing services segment). This segment provides sharing services to ordinary
 296 households (counterclockwise). The ordinary households bear consumer expenses and pay for
 297 them in the services market, which generates income from the sharing property to sharing

298 households (clockwise). Sharing aggregators provide the services of a sharing aggregator to the
 299 sharing households and receive payment from the sharing households. Additionally, the sharing
 300 households incur expenses on the consumption of sharing resources (sharing property).

301 Let us present the condition of the general economic equilibrium in the well-known
 302 four-sector model in the form of an equation - formula (1), which reflects leaks (outflows) and
 303 injections (inflows).

$$304 \quad S + T + Im = I + G + Ex, \quad (1)$$

305

306 where S is savings of households;
 307 T—tax payments net of transfers;
 308 Im—expenditure on importing goods and services;
 309 I—investment expenditure;
 310 G—public expenditure;
 311 Ex—income from exporting goods and services.

312 When sharing (the five-sector economy model) appears, individual elements of the
 313 economic equilibrium equation are transformed - formula (2).

$$314 \quad (S_{Sh} + S) + (T_{Sh} + T) + Im = (I_{Sh} + I) + (G_{Sh} + G) + Ex, \quad (2)$$

315 where SSh is the savings of sharing households;
 316 TSh—tax payments related to sharing activities, net of transfers;
 317 ISh— investment expenditure related to sharing;
 318 GSh—public expenditure on sharing.

319 Considering the microlevel (Fig. 4), the equilibrium model can be represented in the form
 320 of formula (3), which includes sharing (arranged in brackets) and traditional outflows and
 321 inflows.

$$322 \quad (S_{Sh} + T_{Sh}) + S + T = (I_{Sh} + G_{Sh}) + I + G. \quad (3)$$

323 Thus, sharing aggregators, as interaction participants, regulate sharing activities, i.e., new
 324 flows appear and should be taken into account by all economic sectors, from households to the
 325 state and the outside world. New conditions for the macroeconomic equilibrium are being
 326 formed, which should be studied in the future. Instead of one basic macroeconomic formula,
 327 there are two (microeconomic and macroeconomic), which show how it is most efficient to
 328 balance sharing households and the state.

329 The scientific contribution of the research is to determine a new model of the circulation
 330 of resources, income and expenses in the conditions of the sharing economy, as well as to
 331 analyze the degree of penetration of online services into the economy.

332

RESULTS AND DISCUSSION

- 333 1. A study of the key aspects of the sharing economy showed that the theory, methodology, and practice
334 of the sharing economy have not yet been formed.
- 335 2. An analysis of the degree of penetration of online services into the economy shows a fairly high degree
336 of penetration. Consumers don't only use online services but are also adept at using them, having their
337 own wishes and preferences in terms of economic characteristics.
- 338 3. The formation of the five-sector model of the circulation of resources, income, and expenditure is
339 attributed to the development of a new fifth sector—sharing aggregators. The addition of sharing
340 aggregators to the existing well-known four-factor model of circulation results in the appearance of a
341 new understanding of the economic circulation of resources, goods, and services with the oncoming
342 movement of cash flows.
- 343 4. Modeling and detailing the interaction of resources, income, and expenditure in the sharing economy
344 characterizes the economic equilibrium condition reflecting leaks (outflows) and injections (inflows).
345 This condition shows how it is possible to efficiently balance sharing households and the state.
- 346 5. In the current conditions of the restrictive measures related to the threat of COVID-19, the importance
347 of the objective conditions for the penetration of online services into the economy and the development
348 of the sharing economy is increasing, the actualization of sharing aggregators is strengthening, and the
349 relations with all five sectors of the circulation of resources, income, and expenditure are
350 consolidating.

351

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