

## Legal Regulation of Crowdsourcing as an Innovation Tool

Sergey Borodin<sup>1</sup>, Svetlana Domnina<sup>2</sup>, Nadezhda Razveykina<sup>3</sup> and Elena Shikhanova<sup>3†</sup>

<sup>1</sup>Moscow University of Industry and Finance "Synergy", Moscow, Russia

<sup>2</sup>Samara State University of Economics, Samara, Russia

<sup>3</sup>Samara National Research University, Samara, Russia

*Received: 8<sup>th</sup> July 2023; revised: 29<sup>th</sup> April 2024*

The relevance of this research is related to the fact, that there are no civil-law norms specifically regulating crowdsourcing activity in Russian legislation as well as in other countries; besides, rules of not only copyright, but also other legal institutions can be applied to crowdsourcing, which requires their differentiation. The discussion is caused by the question of the need to develop a separate set of legal standards that take into account the peculiarities of crowdsourcing activities. The purpose of the article is to consider crowdsourcing as one of the tools of innovation activity from at least two interrelated positions: in terms of legal regulation and a set of motivation measures for the indefinite number of people who are participate in crowdsourcing projects. Within these aspects, the theory of remuneration, developed to substantiate the concept of copyright, is analyzed. The study is concluded the positive and negative sides of crowdsourcing from a business and consumer perspective. It is proposed measures to strengthen relations in the field of crowdsourcing as a tool for innovation: creating a regulatory framework, improving motivation, economic incentives using various reward models, expanding the use of digital economy tools, as well as forms of public-private social cooperation.

**Keywords:** Copyright, Crowdsourcing, Digitalization of Innovation, Theory of Remuneration

Stimulation of innovation can be done using various options for generating ideas and developing products. Such options include their generation and development within the organization (in-house), transfer of part or all of these tasks to third parties (outsourcing), involvement of the general public, from experts to interested consumers of the final product (crowdsourcing).<sup>1,2</sup> A number of firms have experimented with crowdsourcing increases. Crowdsourcing new product and design is attractive and it is frequently marked as a paradigm shift in the organization of innovation, especially abroad.<sup>3,4</sup> But there is a focus on the problem of motivation for such activities.<sup>5-7</sup> Developments within the company and outsourcing already have the right basis, although they cause practical implementation issues. At the same time, crowdsourcing is becoming a widely used tool in modern innovation complexes due to the improvement of digital literacy and cheaper access to data. But in Russia, as in many other countries, it does not have legal regulation.

The purpose of the study is to consider crowdsourcing as a tool for innovation in the correlation of its legal regulation and motivation of

participants. For the purpose of the study, the following tasks were determined:

- Analysis of the need for legal regulation of crowdsourcing in the national legislation;
- Analysis of international experience in solving the problem of crowdsourcing legal regulation; and
- Consideration of approaches to the motivation of participants in crowdsourcing projects in conjunction with the legal regulation in Russia and abroad.

The object of the research is public relations in connection with the involvement of an indefinite number of people to participate in crowdsourcing, due to the needs of the development of innovative systems and new realities of the digital economy. The subject of the research is the legal environment and legal norms that create conditions for the implementation of crowdsourcing, as well as a motivation factor for achieving the goals of crowdsourcing.

The study requires an analysis of the need for legal regulation of crowdsourcing activities at the level of national legislation, taking into account international experience, as well as consideration of the issue of motivation of participants in crowdsourcing projects in conjunction with legal regulation. To achieve this goal, a set of complementary methods were applied,

<sup>†</sup>Corresponding author: Email: shikhanova.eg@ssau.ru

adequate to the subject of the study: theoretical analysis of philosophical, sociological and legal sources, as well as the study and synthesis of international experience of using crowdsourcing in innovation, a comparative analysis of foreign and Russian approaches to crowdsourcing regulation.

### Literature Review

The concept of crowdsourcing is not new in science and practice and we do not have to underestimate the value of scientific advances in this field, which was made long before the introduction of this concept. Various aspects of attracting individuals and the public to the development of software, as well as works of literature, science and art, are addressed in the different works of Acar<sup>8</sup>, Moudgalya<sup>9</sup>, Budnik<sup>10</sup>, Savelyev.<sup>11</sup> Questions of motivation to creation were considered by Burk<sup>12</sup>, Fisher<sup>13</sup>, Shershenevich.<sup>14</sup> However, the legal aspects of this phenomenon began to attract the attention of science recently both in Russia and abroad (issues of the legal consequences of crowdsourcing – Wolfson & Lease;<sup>15</sup> intellectual property management issues – Bauer, Franke, & Tuertscher;<sup>3</sup> implementation of labor relations in the form of crowdsourcing – Tavits<sup>16</sup>, Dolzhenko<sup>17</sup>) and, in our opinion, do not have convincing scientific reasoning.

So, let's turn to the research in the field of motivation to create software with open source: around 16.5 percent of the 79 respondents named altruism as the main motivator, 30 percent named identification with the open source community (referring to social recognition), and even 51 respondents (70.9%) pointed out the opportunity to improve their programming skills (ref. self-pride). Many of the interviewed participants take part in open source development in order to express their knowledge and gain positive feedback and references. More than half of the respondents (51.9%) participate in open source software development 'to build-up a network'. A particular motivator is eventually the 'expression of personal freedom', which is fostered by open source.<sup>18</sup> Based on the above, the authors conclude that the most obvious motivating factors include: financial incentives [closely followed by] fun-factor, contact and networking, appreciation by others, interesting scope, idea-development, being creative, proudness to personal contribution, expanding horizons, learn something new, new perspectives, inspiration and brain jogging. As a consequence, intrinsic motivation and non-financial

incentives are equal and encourage participation even in unpaid crowdsourcing activities.

In connection with the above research data, the particular interest is the theory of remuneration, proving the concept of copyright. Its main ideas can be vividly illustrated through the views Shershenevich, who was one of the founders of the concept in the 19<sup>th</sup>- early 20<sup>th</sup> century. First of all, he distinguished business activities aimed at direct material gain, from intellectual work, the motive of which can be the desire to express oneself, to gain fame, to influence certain spheres of public life. The civil law specialist came to the conclusion that creativity that is important for society cannot be stimulated by economic measures, since the goals of intellectual activity lie in a different plane (otherwise, it would contradict, in his opinion, the idea of intellectual work and reduce its role in society). The scientist noted that intellectual work is encouraged by internal incentives arising from spiritual needs, but not material considerations.<sup>14</sup> Philosopher of Law, Ihering reasoned in the same direction, analyzing the publishing contract marked that regardless of whether the author is counting on a royalties or not, the chance to publicize his work in order to satisfy personal ambition or scientific interest is a more important factor in concluding an agreement than money.<sup>19</sup> This is also confirmed by described in literature Breaux and Schaub experiments (2014)<sup>20</sup> which compare the effectiveness (accuracy and cost) of untrained crowd workers on a task with the effectiveness of trained experts (i.e., requirements engineers). Authors of experiments report that they could reduce manual extraction cost by up to 60% while preserving task accuracy, and for some tasks increase accuracy by 16%, based on their ways of task decomposition. Sitdikova notes that the success of further creative activity is not always directly related to high royalties.<sup>21</sup> The fact that works can be created for various reasons, without the stimulating effect of the introduction of exclusive rights, is also indicated by foreign professors.<sup>12</sup> Continuing the discussion of Shershenevich's statements, we underline that he denied the possibility of material stimulation of creativity and said that the regular creation of science, literature and art works is associated with the right to receive resources for an acceptable standard of living.<sup>14</sup> It follows from this that the purpose of copyright is not just the protection of the results of intellectual activity, but such material support of the author, which does not cause the need to search for

sources of livelihood, but ensures financial independence. Thus, the theory of remuneration implies that, although the author's material motivation does not lead to an increase in his creative activity, the fee for the intellectual work produced is necessary to preserve the possibility of such activities. It is noteworthy that the American researcher Fisher in his analysis "from the point of view of utopia" indicates that the author should receive a reward for the efforts and time costs that he makes to improve his abilities.<sup>13</sup> If a person decides to invest more time than others in a business that brings public benefit, then the size of the portion of social income that he is entitled to, will also be more.<sup>12</sup> This approach focuses on the distribution in favor of the author of increased welfare in connection with the role that he assumes, voluntarily engaging in creative activities. Let's pay attention to the similarity of this idea with the rationing of remuneration that existed in Soviet copyright.<sup>22</sup>

The analysis of the literature identified two obvious problems: the lack of comprehensive studies of crowdsourcing as a tool for innovation and the ambiguity of approaches to understanding the need for motivation and the legal regulation of crowdsourcing.

## Results

Crowdsourcing is based on attracting a potentially indefinite circle of people to the generation of ideas and innovations. At the same time, the participation of experts, non-professionals and consumers of a future final product can be either on the terms of obtaining a certain material reward, or without it. The process of working in a crowdsourcing project also can be organized in various ways. And even the absence of material remuneration does not necessarily entail a decrease in the creative activity of participants in crowdsourcing.

Currently, there are no rules specifically regulating crowdsourcing in Russian legislation. Depending on the form that it takes in innovation, the rules on the contract of paid services, the rules on competitions,

the rules on open licenses for the use of works of science, literature and art can be applied. In some cases, crowdsourcing activity leads to the subsequent labor relations with performers (Yandex experience). In this regard, it seems that the concept of remuneration rationing may have a further perspective in the digital economy, including in terms of its adaptation to crowdsourcing conditions.

It should be noted that in some countries (for example, Japan), in the absence of norms allowing to create amateur works based on protected results of intellectual activity, a developed creative space has emerged and functions to create amateur derivative works based on creative works of professional authors. Although national law prohibits such activities without the permission of the copyright holder. Thanks to this approach, the market for "professional works" gets an additional development. Todd<sup>23</sup> talks about a similar phenomenon - the so-called "Fanfics", which are creative works made on the basis of popular works, including the use of original characters. They are created by fans of these works and are distributed, as a rule, free of charge through information and telecommunication networks. Although the creation of "Fanfics" violates copyrights, rights holders, in general, do not require the termination of such activities. Such motivation is outside of intellectual property rights, it represents an element of culture. Simultaneously, the lack of legal regulation of such relations creates uncertainty that can narrow the scope of such involvement of user-authors only to areas related to art and entertainment. There are positive and negative sides of crowdsourcing for both business and the public, potential consumers (Table 1).

In order to reduce the negative effects of crowdsourcing and ensure its security, it is necessary to strengthen relations in this area through regulatory, motivating, incentive, use of digital economy tools and a combination of various forms of public-private social cooperation (Fig. 1).

Table1 — Positive and negative sides of crowdsourcing

Sides of crowdsourcing	For business	For consumers
Positive	Reducing the cost of developing innovative business ideas, the commitment of the audience, creating a positive image of the company	Realization of the creative principle, recognition, belonging, receiving goods with the necessary characteristics, quality, development of infrastructure
Negative	There are risks of theft of ideas, reduced confidentiality of information, the difficulty of control	Low cost of remuneration or lack of it, uncertainty of copyright

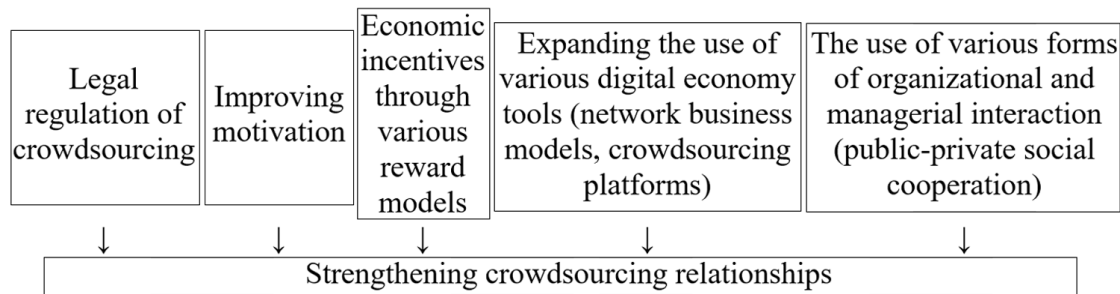


Fig. 1 — Factors of development and strengthening of crowdsourcing as a tool for innovation

## Conclusion

It seems that at the level of national legislation there is a need to develop a separate legal institution that regards the peculiarities of crowdsourcing activity and provides for different models of motivation of participants in crowdsourcing. At the same time, it is advisable to formulate the regulatory framework considering several alternative models of crowdsourcing activity: without remuneration, with partial remuneration, with the rationing of the mandatory remuneration of authors participating in crowdsourcing projects.

## References

- 1 Golubev Y, Crowdsourcing as an example of innovations at local level of management, *Problems of Economics and Management*, 10 (14) (2012) 40.
- 2 Izmalkova S, Role of technological platforms and technologies of crowdsourcing in management of innovative activity when forming regional infrastructure projects, *News of TulSU, Economic and legal sciences*, 4-1 (2014) 193.
- 3 Bauer J, Franke N & Tuertscher P, Intellectual property norms in online communities: How user-organized intellectual property regulation supports innovation, *Information Systems Research*, 27 (4) (2016) 724, doi: 10.1287/isre.2016.0649.
- 4 Lalit M & Reddy Y, Crowdsourcing security: Opportunities and challenges, *Proceedings - International Conference on Software Engineering*, (2018) 37, doi: 10.1145/3195836.3195862.
- 5 Liang H, Wang M-M, Wang J-J & Xue Y, How intrinsic motivation and extrinsic incentives affect task effort in crowdsourcing contests: A mediated moderation model, *Computers in Human Behavior*, 81 (2018) 168, doi: 10.1016/j.chb.2017.11.040.
- 6 Mo J, Sarkar S & Menon S, Know when to run: Recommendations in crowdsourcing contests, *MIS Quarterly: Management Information Systems*, 42 (3) (2018) 919, doi: 10.25300/MISQ/2018/14103.
- 7 Pee L, Koh E & Goh M, Trait motivations of crowdsourcing and task choice: A distal-proximal perspective, *International Journal of Information Management*, 40 (C) (2018) 28, doi: 10.1016/j.ijinfomgt.2018.01.008.
- 8 Acar O, Harnessing the creative potential of consumers: Money, participation, and creativity in idea crowdsourcing, *Marketing Letters*, 29 (2) (2018) 177, doi: 10.1007/s11002-018-9454-9.
- 9 Moudgalya K, Crowdsourced information technology content for education and employment, *Proceedings - IEEE 18th International Conference on Advanced Learning Technologies, ICALT*, 8433447 (2018) 39, doi: 10.1109/ICALT.2018.00016.
- 10 Budnik R, Informational properties of creative products, *European Social Science Journal*, 8 (2014) 546.
- 11 Savelyev A, Software-as-a-service - Legal nature: Shifting the existing paradigm of copyright law, *Computer Law & Security Report*, 5 (2014) 560, doi: 10.1016/j.clsr.2014.05.011.
- 12 Burk D, Law and economics of intellectual property: In search of first principles, *Annual Review of Law and Social Science*, 8 (2012) 397.
- 13 Fisher W, Reconstructing the fair use doctrine, *Harvard Law Review*, 101 (8) (1988) 1659, doi: 10.2307/1341435.
- 14 Shershenevich G, Copyright to literary works, *Kazan: Imperial University Publishing*, 1891.
- 15 Wolfson S & Lease M, Look before you leap: Legal pitfalls of crowdsourcing, *Proceedings of the ASIST Annual Meeting*, 48 (1) (2011) 1, doi: 10.1002/meet.2011.14504801135.
- 16 Tavits G, *Occupational health and safety requirements and flexible organization of the working time: Legal regulation of labour relations in Estonia* (Book Chapter, In: T. Davulis (Ed.) *Labour law reforms in eastern and western Europe*, Peter Lang AG), (2017) 293, doi: 10.3726/b11454.
- 17 Dolzhenko R, The methodological basis of institutional design of the new labour relations forms, *Bulletin of OmSU. Series: Economy*, 1 (2015) 72.
- 18 Šundić M, Leitner K-H, Crowdsourcing as an innovative strategy: A Study on Innovation Platforms in Austria and Switzerland, *Digiworld Economic Journal*, 89 1st Q (2013) 55-72.
- 19 Iering R, *Interest and law* (trans. Borzenko A. The Lip. Land Government, Yaroslavl), 1880, 149.
- 20 HuiGuo, Ozgur Kafali, Anne-Liz Jeukeng, Laurie Williams & Singh M P, C<sub>2</sub>ORBA: Crowdsourcing to obtain requirements from regulations and breaches, *Empirical Software Engineering*, 25 (2020) 532, doi: 10.1007/s10664-019-09753-2.

- 21 Sitdikova R, *Ensuring private, public and state interests by copyright* (Moscow: Statut), (2013) 159.
- 22 Gavrilov E, *Copyright, Publishing contracts, Author's fee* (Moscow: Legal literature Publishing), 1988, 176.
- 23 Todd D, *Digital Piracy. How piracy changes business, society and culture* (Translated from English Plostak L, Mapcina U Moscow: Alpina Business Books), 2013, 320.