



Reducing the Digital Divide as a Mechanism to Ensure Sustainable Economic and Social Development

Natalia A. Povetkina , Anna S. Zueva , and Anna A. Kopina

Abstract

With the development of the use of information technology, the digital divide (gap) between different social groups is spreading. As a rule, the victims of the digital divide are the older people and migrants. The paper analyzes and develops proposals for reducing the digital divide as a mechanism for ensuring sustainable economic and social development. The research object is public relations in the field of providing access to information, regardless of access to digital technologies. The authors identified the main directions for reducing the digital divide: providing citizens with access to the Internet as one of the basic human rights and the use of public-private partnerships and tax mechanisms to stimulate access to the Internet. The key research methods include analysis, synthesis, and comparative legal and statistical methods. The author's positions and scientific schools in the field of information technology regulation are being studied. In conclusion, the authors substantiated the necessity of developing a methodology for reducing the digital divide as a mechanism for ensuring sustainable economic and social development of Russia, as well as maintaining a balance between reducing the digital divide and combating digital slavery by countering the threats of information subordination of the Internet user.

Keywords

Tax administration · Internet · Social network · Digitalization · Digital divide · Digital inequality · Digital slavery

JEL Codes

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N. A. Povetkina (✉) · A. S. Zueva · A. A. Kopina
Institute of Legislation and Comparative Law under the Government of the Russian Federation, Moscow, Russia

1 Introduction

In the conditions of the information society, the digital divide (gap) is aggravated—the lack of equal opportunities for all citizens to access information and electronic services. On June 11, 2020, UN Secretary-General António Guterres, at the General Assembly, dedicated to the role of new technologies in achieving the Sustainable Development Goals, noted that under the influence of the COVID-19 pandemic, it becomes vital to receive reliable and timely information about the infection. However, the digital divide does not provide the same opportunities for people to access the Internet (Guterres, 2020). Thus, along with economic and social inequality, it is precisely digital technologies that come to the fore. Simultaneously, the digital divide is observed between different countries and citizens of the same country.

On the one hand, the Internet is necessary to obtain the necessary services. One of the first international acts adopted in the field of determining the right to access the Internet was the Okinawa Charter of the Global Information Society, which was adopted in 2000. According to paragraph 9 of this Charter, countries should strive to ensure that every person has access to the Internet. Paragraph 10 of the Charter determines that a key component of the strategy should be a continuous movement towards universal access for all (Presidential Executive Office, 2000). For example, according to the Federal State Statistics Service of the Russian Federation, only 80% of households in Russia had access to the Internet in 2020, of which only 65.9% from a personal computer (including a phone or tablet) (Federal State Statistics Service of the Russian Federation, 2020).

On the other hand, a person becomes a hostage to the situation and is forced to use information and telecommunication networks to receive information, government services, and, in the pandemic conditions, food and medical services. The phenomenon in which a person is deprived of the opportunity to choose whether to use information technology in their daily lives or not has been called “digital slavery.” Over

the past 20 years, this concept has been transformed from the mandatory use of information technology (the imposition of electronic services) to the exploitation of information about an Internet user and the violation of human rights to paid work. Additionally, the Internet space becomes an additional threat to a person's information and economic security.

2 Materials and Methods

The authors applied various research methods, including the analysis of the negative consequences of the deepening of the digital divide and state policy approaches aimed at providing citizens with access to the Internet in the framework of achieving sustainable development goals, as well as synthesis (generalization) of foreign and Russian experience in the field of combating digital slavery.

The authors analyzed articles, monographs, and dissertations related to the legal regulation of relations on the Internet, theories of digital slavery, and the digitalization of public finance.

The scientific contribution to the study of the legal regulation of relations on the Internet was made by Azizov (2016), Baturin (1991), Tedeev (2007), Khabrieva (2018), Petrova et al. (2021), and others.

Dobrinskaya and Martynenko (2021), Belyaczskaya and Kniazkova (2018), Norris (2001), and others work on the issue of digital inequality (gap).

The theory of digital slavery is described by Rogerson and Rogerson (2007), Professor Emeritus of Computer Ethics and former Director of the Center for Computing and Social Responsibility at De Montfort University; Dennis Snower (2018), Professor at the Hertie School of Government (Berlin), Senior Fellow, Blavatnik School of Government, University of Oxford, President of the Global Solutions Initiative.

The issues of digitalization of the tax and financial sphere are analyzed in scientific studies by Tsindeliani et al. (2019), (Povetkina et al. (2020), Povetkina et al. (2018), Matytsin (2021), Zueva et al. (2021).

3 Results

3.1 The Right to Access the Internet

We should agree with R. A. Klychev, who draws attention to the fact that the current state of the information society in Russia and the content of strategic documents that determine its development allows us to talk about the right to access the Internet as one of the fundamental rights of a citizen in the Russian Federation (Klychev, 2020). However, it is not

entirely clear how to determine the content of this right and what components must be considered apart from directly maintaining the work and ensuring its safe use. In this regard, legal science is faced with the task of formulating the concept of "the right to access the Internet." The content of this concept depends, among other things, on the country's policy to eliminate the digital divide.

The content of this right cannot be limited only to issues of expanding the availability of public services via the Internet or the development of digital technologies, artificial intelligence, or robotics. It should include the formation of conditions for the development of the network itself and ensuring the technical ability of users to connect to this network. It is no coincidence that the Decree of the Government of the Russian Federation "On approval of the state program of the Russian Federation 'Information Society'" (April 15, 2014 No. 313), among the national development goals, also includes the goal of ensuring an increase in the share of households provided with broadband access to the Internet up to 97% in 2030. According to this document, the achievement of this goal will contribute to providing residents with equal opportunities for accessing the Internet (Government of the Russian Federation, 2014). Simultaneously, according to the "Unified Plan for Achieving the National Development Goals of the Russian Federation for the period up to 2024 and for the planning period up to 2030," the activities that will be carried out to achieve this goal practically do not include tax incentives, which is a significant omission from the developers of the program" (Ministry of Economic Development of the Russian Federation, 2021).

3.2 Digital Slavery in the Context of the Spread of Human Rights Violations on the Internet

In the context of the spread of facts about human rights violations in the virtual space, it is required to make changes to the legislation of the Russian Federation in terms of guaranteeing human rights on the Internet, which has no analog in real life. The legal technique is undergoing significant changes in a dynamically changing world (Khabrieva, 2021).

For example, it is necessary to control the use of targeted native advertising on the Internet and the settings for generating news feeds on social networks. Nowadays, the lack of state supervision over the rules for the formation of content in social networks that affect the behavior of the users of social networks in real life allows for manipulating human consciousness (Zueva & Vasilixina, 2021). Simultaneously, social networks turn into a political institution that

participates in managing the life of civil society (the fifth force), along with the legislative, executive, and judicial branches of government and the media.

Additionally, the issue of gratuitous use by the owners of social networks of personal data for commercial purposes remains outside the legal field. Currently, the financial statements of the owners of social networks show an increase in excess profits due to the commercial use of user data (Matytsin, 2021). Moreover, people enter information about themselves (e.g., audio, video, photos, and text files) on their own, under the influence of content, and take surveys, wasting their time and money without receiving any material compensation for their work in return. In essence, this is how slaves provide their masters with free labor; in return, their owners give them free food, clothing, and shelter. Similarly, network users provide the owners of social networks with free information in exchange for the opportunity to communicate with each other. Moreover, slaves are free to “leave their masters” (change the social network) if they wish, but when they do, they must leave everything—their information, their friends and acquaintances, their reputation, and other external aspects of their personality. The solution to this problem is seen in providing an assessment of the used data in social networks with the subsequent possibility of their sale.

However, the difficulty lies in the fact that there is currently no legal basis for protecting a user of a social network from slavery. The current international conventions for the protection of human rights do not contain norms regulating forced labor in the virtual space (Council of Europe, 1950; International Labour Organization, n.d.; United Nations, 1926).

3.3 Public-Private Partnerships for Bridging the Digital Divide

Demographic changes negatively affect the digital divide. For example, an increase in the number and proportion of older people, a decrease in the birth rate, and migration processes require increased and improved electronic services. Due to the need to reduce the digital divide, the use of information and communication technologies, including big data and artificial intelligence, can help improve the level of health care, education, and training, develop support for socially vulnerable groups, predict natural disasters, and increase social and political integration. Along with government measures, governments of all countries should encourage public-private partnerships to provide e-services.

Foreign practice shows the successful results of such cooperation, including in the field of finance (Povetkina & Veremeeva, 2019). The digital divide has become a new challenge in the provision of banking services, taxation, and

money circulation (Kuzovleva et al., 2021). An example of such cooperation is the digital platform MONI, developed and adopted in Finland and later throughout the EU. During the migration crisis from January 2014 to July 2017, the Finnish Migration Service received more than 41,000 asylum applications. During this period, migrants faced long waiting times for residence permits and local identity documents. During this time, the refugees could not access banking services, in particular monthly social payments. To bridge the digital divide, in 2015, the government partnered with Finnish startup MONI to launch a digital financial services pilot program to allow refugees to receive money and pay bills without opening a bank account. MONI has developed a prepaid debit card (Mastercard) associated with a unique digital identity stored on the blockchain that does not require a bank account or identity documents. The service facilitates social transfers between the government and refugees and creates a digital footprint that allows for credit scoring and increased access to other financial products such as credit. This technology is currently used in most European countries (Zueva, 2021).

However, the world practice has not so many similar examples of bridging the digital divide. Thus, the issue of protecting human rights in virtual space remains extremely relevant (Inshakova, 2021).

3.4 Tax Mechanism for Reducing the Digital Divide

In current conditions, the need for the participation of the state government in stimulating citizens' access to the Internet and reducing the digital divide determines the implementation of public finance policy (Povetkina et al., 2020). The development of tax administration is largely associated with the need to ensure access of taxpayers and other obliged entities to the Internet. However, the ongoing processes indicate that budget funds are allocated for the development of the services themselves while operating costs are shifted to the obliged persons. For the most part, citizens are presumed to have the necessary technical devices; this fact causes tension and creates conditions for digital inequality. For example, the desire of the country to reduce costs, related to the fulfillment of the obligation to pay taxes, led to the emergence of initiatives to establish the obligation for taxpayers to use the digital services of the tax authorities (Ministry of Finance of the Russian Federation, 2021; Frolova & Tsepova, 2021; Povetkina & Kopina, 2020).

The object of personal income tax is income. However, the legislation on taxes and collections allows the possibility of accounting for significant and socially significant expenses of the taxpayer through the system of tax deductions. Nevertheless, there is currently no deduction that would somehow

allow compensating the expenses of an individual related to meeting the needs for accessing the Internet. There is no non-taxable minimum that considers the physiological needs of the taxpayer, despite the existence of a general rule of establishing the tax taking into account the actual ability to pay it. Thus, we can assume that further development of the system of taxation of individuals will be carried out by more differentiation of taxpayers.

4 Conclusion

The foregoing emphasizes the importance of ensuring the recognition of the right to access the Internet and includes in it the rights to access technologies and technological devices, which will create conditions for its implementation, satisfying the minimum needs and leveling the financial conditions for their implementation. This can be done through direct budget financing of the relevant state programs, as well as through various tax incentives only for organizations to produce products and technologies and individuals who make expenses to provide themselves with the necessary technological devices.

The solution to these issues will also ensure the uniform development of the constituent entities of the Russian Federation. Thus, due to the COVID-19 pandemic, the labor of remote workers began to be actively used, which means the possibility of equal access to the labor market, regardless of the place of residence of an individual, if an individual has access to the Internet. In this regard, overcoming the problems of digital inequality can slow down the internal migration of the population to large cities and allow for the uniform socio-economic development of territories. The availability of the Internet also affects the availability of continuing education, which, in the age of advanced technology, is a prerequisite for ensuring universal employment.

In this regard, it is proposed to develop a methodology for reducing the digital divide as a mechanism for ensuring the sustainable economic and social development of Russia. Moreover, it is necessary to justify the experimental legal regulation of digital innovations on the Internet in terms of reducing the digital divide between the country's citizens.

Thus, the use of information technology brings great benefits to society: the level of health care, education, and training is increasing through the use of big data and artificial intelligence to increase the personalization of services; the support for vulnerable groups of the population is developing; the level of the forecasting and managing natural disasters is growing; social and political integration is increasing. However, it is necessary to strike a balance between reducing the digital divide and combating digital slavery by countering the threats of informational subordination of the Internet user.

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References

- Azizov, R. F.-O. (2016). *Legal regulation on the Internet: Comparative and historical-legal research* (Dis. Doctor of Sciences). St. Petersburg, Russia: St. Petersburg State University. Accessed January 18, 2022, from <https://disser.spbu.ru/files/disser2/1247/disser/33k9dZ03tx.pdf>
- Baturin, Y. M. (1991). *Theoretical problems of computer law* (Abstract Dis. Doctor of Sciences). Institute of State and Law of RAS.
- Belyaczskaya, T. N., & Kniazkova, V. S. (2018). Ecosystem of electronic economy: Digital divide and ICT skills. *Vesnik of Yanka Kupala State University of Grodno. Series: Economics. Sociology. Biology*, 8(1), 6–14.
- Council of Europe. (1950). *Convention for the Protection of Human Rights and Fundamental Freedoms (November 4, 1950)*. Rome, Italy. Accessed January 18, 2022, from <https://docs.cntd.ru/document/1000003045>
- Dobrinskaya, D. E., & Martynenko, T. S. (2021). Digital divide and digital inequality in the conditions of digitalization of society. In N. G. Osipova (Ed.), *Social inequality in the modern world: New forms and features of their manifestation in Russia* (pp. 149–184). Perspektiva.
- Federal State Statistics Service of the Russian Federation. (2020). *The use of information technologies and information and telecommunication networks in households*. Accessed January 18, 2022, from https://www.gks.ru/free_doc/new_site/business/it/ikt20/Статистические%20таблицы%202020%20г..html
- Frolova, E. E., & Tsepova, E. A. (2021). Controlled foreign companies of Russian residents in the context of world trends. *RUDN Journal of Law*, 25(4), 814–830. <https://doi.org/10.22363/2313-2337-2021-25-4-814-830>
- Government of the Russian Federation. (2014). *Decree “On approval of the state program of the Russian Federation ‘Information Society’” (April 15, 2014 No. 313)*. Moscow, Russia. Accessed January 18, 2022, from <https://base.garant.ru/70644220/>
- Guterres, A. (2020, June 11). *Remarks to the virtual high-level meeting of rapid technological change on the achievement of the sustainable development goals*. Accessed January 18, 2022, from <https://www.un.org/sg/en/content/sg/speeches/2020-06-11/remarks-rapid-technological-change-achievement-of-the-sustainable-development-goals>
- Inshakova, A. O. (2021). The key directions of the legal development of the national priorities of international strategic partnership. *Legal Concept*, 20(4), 6–11. <https://doi.org/10.15688/lc.jvolsu.2021.4.1>
- International Labour Organization. (ILO). (n.d.). *Abolition of Forced Labour Convention (June 25 1957 No. 105)*. Geneva, Switzerland: ILO. Accessed January 18, 2022, from <https://normativ.kontur.ru/document?moduleId=1&documentId=27192>
- Khabrieva, T. Y. (2018). Law facing the challenges of digital reality. *Journal of Russian Law*, 9, 5–16. https://doi.org/10.12737/art_2018_9_1
- Khabrieva, T. Y. (2021). Identification of law in modern social regulation. *Questions of Philosophy*, 12, 5–17. <https://doi.org/10.21146/0042-8744-2021-12-5-17>
- Klychev, R. A. (2020). The internet information and communications network as a means of exercising of civil constitutional rights. *Constitutional and Municipal Law*, 5, 16–19. <https://doi.org/10.18572/1812-3767-2020-5-16-19>
- Kuzovleva, N., Tarasova, N., Zueva, A., Prokofieva, L., Anzorova, S., Bushueva, N. V., . . . Abdusattarova, S. (2021). Digitalization of the

- banking sector as a new reality: Development prospects and economic risks. *Academy of Strategic Management Journal*, 20(6). Accessed January 18, 2022, from <https://www.abacademies.org/articles/digitalization-of-the-banking-sector-as-a-new-reality-development-prospects-and-economic-risks.pdf>
- Matytsin, D. E. (2021). Internet investing as a remote algorithm of the retail investment financing. In E. G. Popkova & B. S. Sergi (Eds.), *Modern global economic system: Evolutional development vs. revolutionary leap* (pp. 1850–1857). Springer. https://doi.org/10.1007/978-3-030-69415-9_204
- Ministry of Economic Development of the Russian Federation. (2021). *Unified Plan for Achieving the National Development Goals of the Russian Federation for the period up to 2024 and for the planning period up to 2030*. Accessed January 18, 2022, from https://www.economy.gov.ru/material/dokumenty/edinyy_plan_po_dostizheniyu_nacionalnyh_celej_razvitiya_rossiyskoy_federacii_na_period_do_2024_goda_i_na_planovyy_period_do_2030_goda.html?ysclid=I3qfgvb9I4
- Ministry of Finance of the Russian Federation. (2021). *Draft of the Federal Law “On amendments to Articles 11.2 and 32 of Part One of the Tax Code of the Russian Federation in connection with the improvement of the procedure for sending tax notifications and tax payment requirements”*. Accessed February 20, 2022, from https://minfin.gov.ru/ru/document/npa_projects/?id_4=7550-o_vnesenii_izmenenii_v_stati_11.2_i_32_chasti_pervoi_nalogovogo_kodeksa_rossiiskoi_federatsii_v_svyazi_s_overshenstvovaniem_poryadka_napravleniya_nalogovykh_vedo
- Norris, P. (2001). *Digital divide: Civic engagement, information poverty, and the Internet worldwide*. Cambridge University Press.
- Petrova, E. A., Inshakova, A. O., & Kalinina, V. V. (2021). Information technology impact analysis on the structural changes dynamics in the regional economy. In E. G. Popkova & B. S. Sergi (Eds.), “*Smart technologies” for society, state and economy* (pp. 1033–1044). Springer. https://doi.org/10.1007/978-3-030-59126-7_114
- Povetkina, N. A., & Kopina, A. A. (2020). “Digital” rights of the taxpayer. *Taxes*, 5, 40–44.
- Povetkina, N. A., Kudryashova, E. V., Ledneva, Y. V., & Veremeeva, O. V. (2020). Women in public finance of Russia and the world. *Woman in Russian Society*, 4, 66–81.
- Povetkina, N. A., Pyatkovskaya, Y. V., Trunchevsky, Y. V., & Ryzhova, E. V. (2018). Monitoring the corruption-generating factors and the effectiveness of corruption prevention measures in tax authorities. *Russian Journal of Criminology*, 12(5), 641–650. [https://doi.org/10.17150/2500-4255.2018.12\(5\).641-650](https://doi.org/10.17150/2500-4255.2018.12(5).641-650)
- Povetkina, N., & Veremeeva, O. (2019). Models of diversification of investment projects in enterprises. *International Journal of Civil Engineering and Technology*, 10(2), 1460–1466.
- Presidential Executive Office. (2000, July 21). *Okinawa Charter on Global Information Society (adopted by G8 leaders)*. Accessed January 18, 2022, from <http://en.kremlin.ru/supplement/3170>
- Rogerson, S., & Rogerson, A. (2007). ETHicol – Digital slavery. *IMIS Journal*, 17(5). Accessed January 18, 2022, from https://www.researchgate.net/publication/313619199_Digital_Slavery
- Snowder, D. (2018, August 22). *The digital freedom pass: Emancipation from digital slavery*. VOXeu-CERP. Accessed January 18, 2022, from <https://voxeu.org/article/digital-freedom-pass-emancipation-digital-slavery>
- Tedeev, A. A. (2007). *Theoretical foundations of legal regulation of information relations formed in the process of using global computer networks* (Dissertation of Doctor of Legal Sciences). Moscow, Russia: Moscow University for the Humanities. Accessed January 18, 2022, from <https://lawtheses.com/teoreticheskie-osnovy-pravovogo-regulirovaniya-informatsionnyh-otnosheniy-formiruyuschih-sya-v-protsesse-ispolzovaniya-glo>
- Tsindeliiani, I. A., Anisina, K. T., Burova, A. S., Kopina, A. A., Migacheva, E. V., & Rodygina, V. E. (2019). Main elements of taxation in the conditions of the development of digital economy. *Utopia Y Praxis Latinoamericana*, 24(Extra5), 129–137.
- United Nations. (1926). *Convention on Slavery (Geneva, 25 September 1926, as amended by the Interim Protocol of 7 December 1953)*. Geneva, Switzerland; New York, NY. Accessed January 18, 2022, from https://www.un.org/ru/documents/decl_conv/conventions/convention_slavery.shtml
- Zueva, A. S. (2021). Digital gap in the Information society. In A. E. Melkov, A. S. Zueva, & R. A. Migunov (Eds.), *XV youth science week of the North-Eastern Administrative District of Moscow* (pp. 17–19). Stratagema-T.
- Zueva, A. S., Musatova, D. A., Britvina, V. V., Sorokin, A. Yu., & Nurgazina, G. E. (2021). *Application of information technology to combat cyber fraud*. CEUR Workshop Proceedings, 2922, 119–124. Accessed January 18, 2022, from <http://ceur-ws.org/Vol-2922/paper014.pdf>
- Zueva, A. S., & Vasilixina, Y. V. (2021). Legal regulation of personal data protection in social networks. *Theory and Practice of Project Education*, 1(17), 37–38.