

# Impact of Digital Economy on Well-Being of Population

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**Abstract**—The relevance of the topic is due to the need to study the impact of ratings on economic development. The article examines the digital impact on government regulation in Russia, through the rating system. A comparative analysis of the international economic development indices of Russia and the leading countries is being conducted. In the context of the innovative vector of the development of the Russian economy, the use of information and communication technologies to improve the well-being of the population is described. The development of digital technologies contributes to their penetration into all areas of our lives and, having gained wide recognition, transforms the level of well-being of citizens. Innovations in information and communication technologies affect citizens' behavior, information needs and how people work and share information. Further advances in digital innovation will greatly enhance this change and provide us with exceptional services and well-being that were not previously expected. Digitalization blurs boundaries, resulting in a constant interconnection of societies at the international level.

**Key words**—well-being of the population, information, international ratings

## I. INTRODUCTION

The current phase of economic development is characterized by an accelerating digitalization process, where the innovative infrastructure of countries plays a crucial role. The globalization of the economy, which began at the end of the last century, has contributed to the creation and development of many supranational institutions of power, which have resulted in the ability to remotely influence domestic government regulation. National governments are required by national governments to take into account international regulations prescribed and provided by supranational institutions of power and various regional integration authorities groups that not only alter the current situation and fortunes of many countries around the world, but also exert significant pressure and economic impact. The impact has both a direct and indirect impact on the well-being of the population living in the territory.

In the study of well-being at the level of the world economy, it can be stated that all the countries of the world are uneven in their development, in some countries the issue of survival is acute, in others the majority of the population lives in relative well-being. The world's supranational institutions of power are constantly faced with the task of balancing these two opposing poles and creating new living conditions for people in which their lives would be long, happy, healthy and

filled Creativity. The well-being of the population is made up of the capacity of each individual country to ensure a decent level of living in its territory. Many Governments are striving to improve the standard and quality of life of their citizens. The assessment of well-being is possible through research conducted by various world rating agencies, which demonstrates the course and economic policy pursued in the country.

Ensuring sustainable growth of well-being and competitiveness are the essence of national ideas and priority projects of the may (2018) Presidential Decree and the Russia-2024 Social and Economic Development Strategy [1].

The development of the Russian Federation is closely related to the peculiarities and trends of world economic formation and formation, now many countries of the world are evolving under the influence of digitalization. In the digital economy, needs are very different from pre-existing needs.

The digital economy as any complex social phenomenon created by technological progress has a number of features of its own :

- 1) The digital economy is a translation (transition) to a digital accounting system.
- 2) Digitalization can be quite dense and systematic, or chaotic, unexpectedly releasing large numbers of workers.
- 3) Digitalization provides companies or statesmen with the most complete and objective information about the state of affairs (in a company or in the national economy), extracting it from a myriad of sources for decision-making. This increases the need to comply with the Adequacy Act, which is consistent with the intellectual level of managers with the level of information.
- 4) Leaders at all levels where economic processes have to be regulated should be people with exceptional intelligence.

P. Shchedrovitsky's point of view is a fair, when he writes, is that “by digitizing various processes and creating so-called digital twins, we will be able to quickly compare and compare what we could not before: for example, efficiency project or benefit from the use of a material” [2].

## II. METHODS AND MATERIALS

In the study of the well-being of the population at the level of the world economy, it is possible to face the problem of the need to give an objective and complete assessment of the

available diverse information, which has resulted in the international industry different kinds of indices and ratings. At present, a system of relations based on rating consciousness has developed. They form rating psychology and thinking [3].

The author proposes to investigate three independent rankings presented by different institutions:

- 1) International index of happiness;
- 2) Ranking of prosperity countries;
- 3) The global competitiveness index.

The World's Happiness Rankings is an international research project sponsored by the United Nations as part of the Global Sustainable Development Solutions Network initiative to show the achievements of countries around the world and individual regions in terms of their ability to provide their residents with a happy life (Table 1).

TABLE I. INTERNATIONAL INDEX OF HAPPINESS WITH 2012-2019 YEARS [4, 5]

2012	Country	2019	Country	Rating
1	Finland	1	Finland	7.76
2	Norway	2	Denmark	7.60
3	Denmark	3	Norway	7.55
4	Iceland	4	Iceland	7.49
5	Switzerland	5	Netherlands	7.48
6	Netherlands	6	Switzerland	7.48
7	Canada	7	Sweden	7.34
8	New Zealand	8	New Zealand	7.30
9	Sweden	9	Canada	7.27
10	Australia	10	Austria	7.24
...	...	...	...	...
<b>59</b>	<b>Russia</b>	<b>68</b>	<b>Russia</b>	<b>5.64</b>

The Table dynamics show data from The World Happiness Report from 2012 to 2019, with an annual study of global happiness conducted in more than 156 countries happy citizens. Finland as a repeated leader is considered the happiest country in the world, leading the top five Nordic countries. The happiest of all this country make developed social support (2nd place in this indicator), high level of freedom in making vital decisions (5th place), and low level of corruption (4th place). However by generosity Finns occupy only the 47th place (2019) among all the countries of the ranking. It should be noted that Denmark, Norway, Iceland, Netherlands, Switzerland, Sweden, New Zealand, Canada and Austria are in the top ten, along with Finland. United Kingdom ranked 15th and USA 19th. Russia is in 68th place, although in 2016 the level of happiness of citizens increased (56th place), nevertheless even with a good result in terms of GDP per capita (45th place), we significantly lose to competitors in the perception of corruption (127th place),

freedom in making vital decisions (107th place) and in readiness for charity (101st place).

The second equally interesting rating is the study of social well-being and its development on a global scale. This index of prosperity of the world countries is calculated by the Legatum Institute. This indicator measures the results and successes of the countries of the world in terms of the prosperity of the state.

The place of each country is formed as the weighted average value of these indicators. The statistics used in the ranking are derived from various supranational institutions of power (UN, World Bank, WTO and other institutions). Accordingly, the lower the rating, the worse the country's performance in this category (Table 2).

TABLE II. RANKING OF PROSPERITY COUNTRIES 2012-2018 [6]

2010	Country	2018	Country	Rating
1	Norway	1	Norway	80.9
2	Denmark	2	New Zealand	80.9
3	Finland	3	Finland	80.5
4	Australia	4	Switzerland	79.7
5	New Zealand	5	Denmark	79.3
6	Sweden	6	Sweden	79.1
7	Canada	7	United Kingdom	79.1
8	Switzerland	8	Canada	79.0
9	Netherlands	9	Netherlands	78.9
10	USA	10	Ireland	78.9
...	...	...	...	...
<b>63</b>	<b>Russia</b>	<b>96</b>	<b>Russia</b>	<b>57.0</b>

Based on data provided by the rating agency, Denmark took the leader in the quality of life index in 2018. Russia went down again in the rankings. In 2010, Russia ranked 63rd, but over a period of 8 years the method of counting has changed repeatedly. Thus, based on the ranking of countries on quality of life, it is possible to evaluate each country. If we look at this indicator more broadly, we can draw a conclusion about public health, family and social life, material well-being, political stability and security, climate and geography, job security, political freedom and gender equality.

The third index, which characterizes the readiness of the country, is the development of information and communication technologies in countries of the world. This study is the most valuable because it demonstrates the potential of countries and the possibilities of its development. Used as a means of analysis to build comparative ratings that reflects the level of development of digital society in different countries (Table 3).

**TABLE III. RANKING COUNTRIES FOR THE GLOBAL NETWORK INTERACTION INDEX FOR 2012-2018 [7, 8]**

2012 [12]	Country	2018	Lead countries	Rating
1	Sweden	1	USA	78
2	Singapore	2	Singapore	75
3	Finland	3	Sweden	73
4	Denmark	4	Switzerland	71
5	Switzerland	5	United Kingdom	70
6	Netherlands	6	Finland	683
7	Norway	7	Denmark	68
8	USA	8	Netherlands	67
9	Canada	9	Norway	65
10	United Kingdom	10	Japan	65
...	...	...	...	...
<b>56</b>	<b>Russia</b>	<b>36</b>	<b>Russia</b>	<b>46</b>

At the heart of the division of countries into leading countries, catch-up countries and newcomer countries is such a figure as GDP per capita, so, the leaders' countries, it averages 54,100 U.S. dollars, catch-up countries \$16,300, and the new countries \$3,700. [3].

We see that leaders have more access to new technologies, so their knowledge levels increase every year, and intelligent networking contributes to a new cycle of economic growth. There is now an annual race between countries to increase participation in intelligent networking, which will subsequently lead to the transformation of the digital industry. However, the data show that improved infrastructure is having a positive impact on demand [4]. As the Russian Federation considers the availability of Internet bandwidth, the number of users is growing at a slower rate than expected. The positive impact of information and communication technologies is felt both from the economic and social points reflected in the rating. With the digitalization of the economy, the problem of uneven development at the global, country and regional levels becomes the least acute, because with certain competencies, the price of backwardness (costs for those who have not had time to fit into the new, the globalized world economy system) is declining many times compared to the past, made possible by the expansion of the digital flow, which we now believe is exponentially growing.

### III. RESULTS

The main strategic goal of Russia's development today is to transition the economy to an innovative path of development, increase competitiveness and improve the well-being of citizens. The formation of the digital economy is based on the latest advances in information and telecommunications technologies and beyond. Information as a factor of production is now growing much faster than we can expect, because it is influenced by the law of "accelerating impact" opened by R. Kurzweil.

There is a faster production of new technology and technology, as we use traditional tools to develop technology and produce new products, research becomes more powerful, digital technologies allow creating new ones innovation technology through recombination, which requires little or no research and development.

New technological developments contribute to the rapid growth of the economy; their spread is facilitated by global digital networks, opening up fundamentally new opportunities for international information exchange. The formation of the digital economy transforms the well-being of citizens, with its subsequent growth. The observed trend blurs national boundaries, allow highly skilled professionals participating in the development and implementation of many world projects in various fields, exporting their services and implementing newly created ones.

Unfortunately, the digitalization of society brings not only benefits and conveniences to man, but also new problems. One problem is the information disparity between people, countries and their regions in the new digital environment of society. There is a problem of information asymmetry and opportunistic behavior of agents in different kinds of surveys. The quality and quantity of information provided, as well as the degree of awareness, are different for everyone.

The asymmetry of information and opportunistic behavior depends on the depth and completeness of the material proposed for research. This quality of the material depends primarily on the amount of investment in the study, the professional level and competence of the expert, opportunistic behavior of the agent working with primary information, asymmetry on the part of the interviewee, etc. There are many factors and conditions that affect the quality of information. Thus, the information received is not an objective given, but a subject of choice made under the influence of many circumstances.

At the heart of any level of well-being is the economic component - based on mutually beneficial cooperation and personal interest of the interested parties of the economy.

The basis for information asymmetry may be:

- Imperfect competition (high level of market power and entry barriers);
- Situations where information in the market for rational consumer choice and decision-making is not enough (information is not available, information is unconscionable, information is too expensive);
- High transaction costs (including the cost of seeking the necessary information and the cost of obtaining compensation in the event of unfair conduct by the seller);
- The case of insufficient production of public goods;
- External effects (external) - benefits or costs not reflected in contracts (agreements), etc.
- Therefore, we believe that the digital component of improving the well-being of citizens is:
  - Attention to the transformation of the quality of the modern worker;
  - Destructure the value of the relationship over time;

- Continuous focus on developing and improving the institutional framework;
- Modifying the nature of freedom and property.

The growth of the economy and the well-being of the population depend on many aspects and economic one of them. Thus, indicators become one of the arguments for decision-making by economic actors on investment placement, business prospects, etc. in a particular region. The political aspect is used as an element of political rhetoric, in a media context, or an argument in disputes with political opponents. Participation in international rankings can therefore be of political importance to emerging economies. The research aspect is related to quantitative and qualitative assessments of the degree of development and dynamics of the phenomenon assessed and its components. The strategic aspect is due to the fact that process monitoring systems are a mandatory element of effective public policy and in the form of tools to determine vectors and dynamics of movement towards the goal.

Rankings of countries, regions, organizations and enterprises have become an important information tool, a mechanism for establishing and maintaining business relations.

Independent assessments of the economic financial and industrial condition, as well as possible changes in the state of countries, regions of enterprises, banks, insurance and investment companies, pension funds and other business entities are important for to increase the level of confidence of partners and clients to assess investment opportunities, including attracting foreign investors.

Ratings, for example, can be used in decision-making on the scope, timing and nature of investments in development and maintenance of production, as well as calculating the level of risk of financial investments, when assessing the prospects of business relationships. As already noted, the rating is a comprehensive assessment of the state of the subject, allowing attributing it to a certain level of development. Therefore, in our view, production opportunities are closely related to the conditions of the digital environment and the availability of basic production resources.

#### IV. CONCLUSION

To sum up the above, with the formation of the global world order, a digital economy has been formed, which

requires measuring not only economic but also non-economic indices. In the digital economy, the state's impact is being transformed, influenced by both supranational institutions and national institutions of power, as well as by the population through online referendums and votes. There is a gradual transparency in the decisions taken; the population has the opportunity to influence the activities of the government in real time, bypassing various administrative barriers, and those - to respond to them in a timely manner. The digital economy stimulates the reduction of spatial barriers, increasing the tightness and power of communication through the Internet resource.

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