



Problematic points of methodologies for measuring quality of life: Human Development Index, World Happiness Index, Well-being Index

Puntos problemáticos de las metodologías para medir la calidad de vida: Índice de Desarrollo Humano, Índice de Felicidad Mundial, Índice de Bienestar

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Contents

- [1. Introduction](#)
 - [2. Research objects](#)
 - [3. Discussion](#)
 - [4. Conclusion](#)
- [Bibliographic references](#)

ABSTRACT:

The Human Development Index introduced a new approach to tracking progress in human development and contributed to a number of positive consequences related to the ideas about human development. In view of the need to take into account new social challenges, the Human Development Index is becoming especially relevant. The humanistic approach as the structural basis of the Human Development Index has shown that the modern world scales the range of choice for everyone who is ready for self-improvement, training and creative work. We believe that index development is impossible without considering the creative potential of nations, as well as individualistic characteristics that have become global. In our research, we discuss the concepts of labor sustainability as a key element of the World Happiness Index. We have analyzed the variation of the Confidence Index, which is based on creative development with regard to the innovative opportunities associated with patenting. The statistics on patenting and registration of startups has been presented as an evidence-based option in the "environmental friendliness – creative development" relationship.

Keywords: Human Development Index, patenting, startup, trust, labor sustainability, environmental friendliness.

RESUMEN:

El Índice de Desarrollo Humano introdujo un nuevo enfoque para seguir el progreso en el desarrollo humano y contribuyó a una serie de consecuencias positivas relacionadas con las ideas sobre el desarrollo humano. En vista de la necesidad de tener en cuenta los nuevos desafíos sociales, el Índice de Desarrollo Humano se está volviendo especialmente relevante. El enfoque humanista como la base estructural del Índice de Desarrollo Humano ha demostrado que el mundo moderno escala el rango de elección para todos los que están listos para la superación personal, la capacitación y el trabajo creativo. Creemos que el desarrollo del índice es imposible sin considerar el potencial creativo de las naciones, así como las características individualistas que se han vuelto globales. En nuestra investigación, discutimos los conceptos de sostenibilidad laboral como un elemento clave del Índice de Felicidad Mundial. Hemos analizado la variación del Índice de confianza, que se basa en el desarrollo creativo con respecto a las oportunidades innovadoras asociadas con las patentes. Las estadísticas sobre patentes y registro de nuevas empresas se han presentado como una opción basada en la evidencia en la relación de "respeto al medio ambiente - desarrollo creativo".

Palabras clave: Índice de desarrollo humano, patentes, inicio, confianza, sostenibilidad laboral, respeto al medio ambiente.

1. Introduction

The Human Development Index (HDI) is an indicator that measures human development in most countries and regions of the world (United Nations, 2019). The combined formula is calculated annually by the United Nations Development Program (UNDP) experts in close collaboration with independent international experts. The developed indices are based on statistical indicators, as well as analytical developments of national institutions and international organizations (United Nations, 2019). The concept of human development refers to a number of domains; it focuses on a long and healthy life (Blanchflower & Oswald, 2005), the expansion of human potential, the expansion of reach and choice, the creation of favorable conditions for humans (Diener, 2000). For many years, the time-consuming research on human development in the countries studied has been systematized by the Human Development Index. The UN credibility and deep respect for its institutions do not allow casting doubt on the calculation methodology and analytical formulations. It is these studies that helped many countries to make a significant breakthrough in economic development (Diener, 2000), social indicators (Leigh & Wolfers, 2006) and social development (Wills, 2009). This contributed to the HDI research around the world (United Nations, 2019), as well as the evolution in measurements and formulations. The controversy in methodological approaches should be eliminated and adapted taking into account modern requirements and global progress. The new components of the HDI index, which were included in 2010, namely: the IHDI – Inequality-adjusted Human Development Index, the GII - Gender Inequality Index (Charmes & Wieringa, 2003), the MPI - Multidimensional Poverty Index, are based on the national average indicator (United Nations, 2019) and should be improved.

The spread of liberal democracy that was predicted by Francis Fukuyama (1995) has changed the world community out of all recognition. Some democratic socialist countries, whose democratic policies were similar to communist ideology, went through the difficult stages of decommunization and headed for democratization. A completely different public worldview was formed by significant changes in ideology (Fukuyama, 1996) and government policy. In his work "The End of History", Fukuyama stated that the main method of maintaining the world order is force. However, later he recognized the need for non-interference in the process of democratization of the state and society (Fukuyama, 2006). In addition, globalization has changed the image of planet (McGillivray, 2006), as well as the ways of life (McGillivray, 2007), thinking and acting (Vemuri & Costanza, 2006). The key problems and global threats that have appeared in recent decades should be highlighted; they can be structured according to the following criteria:

- social and financial inequality, nationwide discrimination (Charmes & Wieringa, 2003);
- safety: despite pacific political statements, there more security concerns (Fukuyama, 1995);
- climate change that affects life-sustaining activities (Bravo, 2014);
- political issues: the ideological crisis of the world, the desire for political freedom (Wickrama & Mulford, 1996).

The issues related to assessing human capital through the existing conceptual developments have not been fully developed and require a more constructive measurement. In addition, there is a question of changing the assessment strategy (Rospatent, 2019). From this perspective, the main objective of measurements is to solve existing challenges and overcome the inconsistency of indicators, especially of the ones related to income statistics.

It is obvious that individual and collective characteristics cannot be identified by the average indicators (McGillivray, 2007). while regional (territorial, national) indicators tend to color the truth. For example, the income level in Moscow and Rybinsk is significant different and the average value of this indicator does not provide a truthful overview. In addition, the analysis of these indicators does not take into account individual assets. Generalization is not always justified and appropriate, especially when human interests and prospects are involved. The compensatory aspect of statistical indicators is characterized by inconsistency. Individual indicators lose their value producing asymmetric distribution of information (Böhringer & Jochem, 2007). At present, the need for the improved approaches to the assessment of these indicators is caused by the changes in individual states. Let us consider the system of "environmental friendliness – the creative consequences of labor sustainability – trust" as a result of the attitude to the political system. Francis Fukuyama believed that the success of capitalism in various communities is determined by trust rather than financial factors, which can guarantee the economic well-being of society. In his book "The Great Disruption", Fukuyama analyzes the growth of mistrust between people, as well as the crisis of trust in public institutions and each other; he emphasizes that it is

trust that reflects the ability of people to unite outside their families and without total state control (Francis, 1999).

2. Research objects

1. Labor sustainability. Modern labor conditions imply a number of issues related to social conditions and needs of society. The attention should be paid to the factors that contribute to the establishment of social labor values. Individual criteria may be different. However, it is possible to identify the key satisfaction criteria that have social characteristics and can be common for both developed and developing countries. The questions associated with the possibility of obtaining pleasure from work, career growth, prospects for a pay rise, finding the balance between work and private life; the absence of gender, national or other discrimination should be attributed to the psychological criteria. It is the psychological satisfaction (or dissatisfaction) that affects the creative development of a person. In other words, the quality of work affects the environmental sustainability of the individual's attitude to work.

2. Creativity as the dominant factor of the national intellectual capital. In 2010, the HDI was adjusted. This led to the accumulation of productive abilities of the population. The transformation of indices focused on the creative potential of a person affects society well-being. The intellectual capital of a society is based on a system of the criteria presented in Table.1

Table 1
Criteria that determine the intellectual potential of society

Education	training of skilled workers
Knowledge	qualifications
Science	competence
Innovation	intellectual development

The intangible capital of society accumulated in recent decades in a number of developed countries contributes to the creative development of the individual. It is considered the main driver of economic growth. It is the creative and innovative potential of the country that increase the HDI.

Patenting is one of the tools for realizing the creative and innovative potential. The development and implementation of innovations should be considered as the indicators of human well-being and the creative potential of society. For example, The United States Patent and Trademark Office (USPTO) provides information on the number of patents registered by the inventors of a certain country. It also proves that this indicator is higher in developed countries. Thus, the number of patents registered by US citizens is 1958188 compared to 5 in Afghanistan. It should be noted that only international patent can be registered and innovative activity in Afghanistan is not limited by a small number of patents.

It should be noted that the intellectual activity of society should be predicted and protected at the primary level. The state interest in making more investment in creativity and unlocking the creative potential of citizens is manifested through the introduction of educational programs on patenting. In our opinion, educational programs should include a standardized model for training technical and economic personnel focused on the intensification of the Russian innovation market. The model should imply:

- creation of favorable conditions for the intensification of patenting and the activities of startups;
- creation of specialized faculties where patenting is the main specialization;
- introduction of new specialties, especially technical specialties. The introduction of additional courses on "Patenting in Russia and abroad", "Innovation and inventive work" can be proposed on a trial basis;
- introduction of competencies in educational programs to create a virtual patent for technical students, taking into account all prospects, including the financial ones;
- implementation of innovative projects along with research institutes.

The activities aimed at encouraging student innovations will demonstrate the state's interest in training new personnel and contribute to increasing the effectiveness of federal grant programs

and state investment in innovation. This will increase public trust. Investments in educational projects and stimulation of rationalization abilities will allow the state not only to protect its intellectual capital, but also to develop a new program for the intellectual design of competitive patents.

In addition, we believe that the problem of the “innovation leak” deserves special attention. To analyze the dynamics of the intellectual property migration and to determine the number of international patents filed by Russian inventors for the study period, we used the data obtained from The United States Patent and Trademark Office (USPTO) (2019). We have differentiated the time lag indicators and obtained the inventive activity distribution according to this criterion. We have also determined the share of patents of Russian inventors who have not indicated Russia as a priority country. We believe that this indicator characterizes the migration of intellectual property and innovative ideas.

The analysis of Table 2 and Figure 1-2 shows that the majority of Russian inventors do not indicate the Russian Federation as a priority country, i.e. they do not believe that their work may be appreciated in the Russian Federation. However, the share of such inventors is steadily declining (Fig. 1).

Start-ups that are extremely popular with young people from different countries can be attributed to the tools of forming a state innovation fund. North America and Asia are the leaders in this direction. In Russia, young entrepreneurs successfully introduce their ideas, most of which are unique, and challenge traditional methods of doing business. However, innovative ideas do not guarantee success. Business cannot be easily promoted even if there is a great idea. In this case, investing in startups is quite a challenging task due to the clear imperfection of the legislative framework governing the specified field of activities. When searching for investors, young people pay attention to the possibilities of financial donors from developed countries. This can be proved by the example of Silicon Valley in the United States, where the potential of young entrepreneurs from around the world has been concentrated due to the priorities of the state investment policy in innovation.

Currently, Russia has switched to the digital patenting system. This demonstrates the state’s intentions to facilitate interaction with inventors by reducing the service time and increasing accessibility, transparency and security of the services provided by Digital Rospatent. However, the researcher or the patent holder is not fully protected, which reflects the imperfection of the intellectual property legislation. For example, a product patented for 5 years becomes a public domain after the expiration of the term. Consequently, the inventors do not own their inventions and cannot earn money on the results of their intellectual property. There is special attention to medical patents.

Figure 1
The dynamics of international patents of Russian inventors who have not indicated Russia as a priority country for the 1990-2020 period

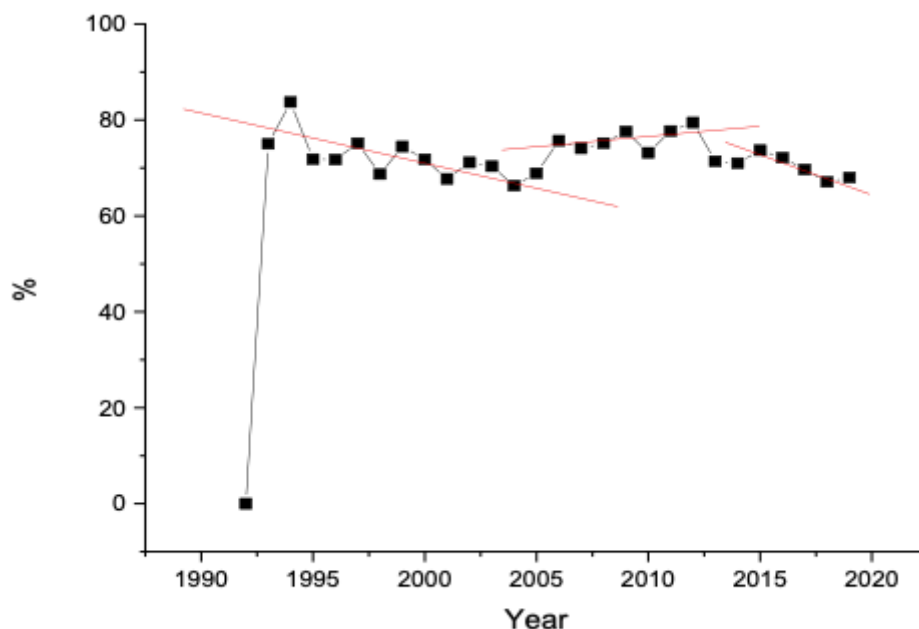
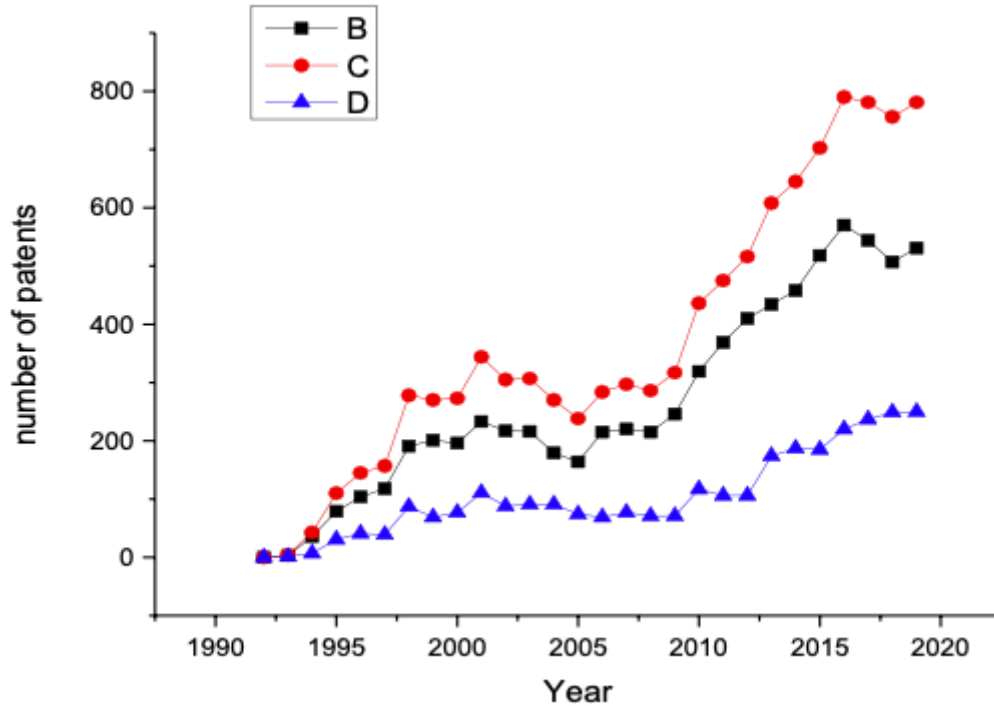


Figure 2

The dynamics of the international activity of Russian inventors for the 1990-2020 period



B is the number of patents for inventions in which the inventor is a citizen of Russia and a priority country is the Russian Federation; C is the total number of Russian international patents; D is the number of international patents in which the inventor is a citizen of Russia and a priority country is the Russian Federation.

Table 2

The dynamics of the "migrating" patents of Russian inventors for the 1992-2019 period

Year	Number of patents for inventions in which the inventor is a citizen of Russia and a priority country is the Russian Federation. Curve B.	Number of Russian international patents. Curve C.	Number of international patents in which the inventor is a citizen of Russia and a priority country is the Russian Federation. Curve D.
1992	0	0	0
1993	3	4	1
1994	36	43	7
1995	79	110	31
1996	104	145	41
1997	118	157	39
1998	191	278	87
1999	201	270	69
2000	196	273	77

2001	233	344	111
2002	217	305	88
2003	216	307	91
2004	179	270	91
2005	164	238	74
2006	215	284	69
2007	220	297	77
2008	215	286	71
2009	246	317	71
2010	319	436	117
2011	369	475	106
2012	410	516	106
2013	434	608	174
2014	458	645	187
2015	518	703	185
2016	570	790	220
2017	544	781	237
2018	507	756	249
2019	531	781	250

The research may last for decades and it is not comparable to five-year studies in terms of its material and intellectual performance. Another problematic aspect may be the legal protection of intellectual property. The inventor is not protected against commercial fraud, information leakage, reverse engineering, etc. There are known cases when products were patented abroad and another state was given the right to possess exclusive information. It can be argued that this is a political issue that demonstrates distrust in state institutions. A similar trend is typical for startups. It should be noted that the Russian Federation tends to increase the attractiveness and comfort of the registration system and legal protection of intellectual property. However, we believe that brain drain is a negative phenomenon that demonstrates distrust in state institutions. In our opinion, the number of international patents of the inventors who have not indicated their home country as a priority country is an indirect characteristic of citizens' distrust in their country. A new indicator of the effectiveness of managerial decisions can be trust, which may become a new segment in the HDI formula. We are talking about introducing a new indicator for calculations and solving existing challenges, at least in the CIS countries. The practice of alternative indices, which were compiled based on national indicators, has already been implemented by the governments of Australia, Ireland and the United Kingdom (at the beginning of 2000). For example, the UK uses GNW (gross national well-being) rather than GDP. Such formulas are not characterized by reliability as the concept of well-being is subjective. In our opinion, a new index based on the principle of trust may become relevant for the British, especially in the light of the recent Brexit events. The trust-based index can also be used to assess the influence of factors during economic

and social crises, natural disasters, political exacerbations. The relevance of the Trust index correlates with the ability to take political measures in this direction, which is important for all subjects of the global political space.

Labor sustainability as a Happiness Index element is a methodologically problematic aspect of the analysis of international indices. India, Eastern Europe, Latin America, Russia, and China are actively involved in modern international migration processes (outsourcing, offshoring, part-time work, remote work). The constant growth of requirements to highly demanded qualifications and insufficient competence have become global. Highly qualified personnel take a stand in the global market and lay claim to the best working conditions. Technology intensification poses an additional problem of skills mismatch. Some European countries cannot fill the vacancies because there are no necessary qualification skills. For example, in Italy, Greece and Spain, about 50% of vacancies are not closed due to the lack of specialists with the necessary qualifications despite their high level of youth unemployment. Consequently, the vacancy rating and its cost are increased. The question of individual moral and behavioral skills will also be relevant. Work ethics, motivation, cautiousness, time-management, multi-tasking, softskills and many other personal characteristics play an important role in the modern list of qualification requirements. People-oriented employers who value the work of their employees are ready to provide extremely comfortable working conditions. The attractiveness of some offices may surprise with the presence of a kitchen, bars, a recreation area, a gym, a relaxation room, psychologist services and much more. The practice of home-offices (an employee can work and live, in many cases, for free) provides employees with the most comfortable conditions.

3. Discussion

Currently, there have been profound changes in consciousness and ideology (Leigh & Wolfers, 2006), as well as in all other spheres. Obviously, Francis Fukuyama's prophecy was fulfilled in both the political and social-economic spheres. Completely new forms of communities with their own mentality typical for particular territories have become powerful players on the world stage (United Nations, 2019). The desire to improve the quality of life has united dramatically different social communities. Democracy has penetrated into all spheres of life and created a new empire – the liberal democracy empire (Fukuyama, 1996). The foreign policy courses of most European countries operate under the umbrella of humanistic ideals aimed at improving the well-being and life of people. The HDI shortcomings are explained by the use of the average indicators of national reports, which do not reflect the real differentiation of international indices. The credibility of UNDP structures (United Nations, 2019) cannot be called into question. However, the studies of this political institution are based on national reports, which rely on insufficiently reliable statistical indicators. The lack of an objective assessment is a question of another study, but the reasons behind the existing problems (Vemuri & Costanza, 2006) which mislead the world community are connected with the pursuance of high positions in world rankings rather than with the desire to improve living standards. This problem is mainly observed in the post-Soviet states, which are focused on political factors (Vemuri & Costanza, 2006) and subjective goals aimed at willingness to sacrifice the interests of their citizens for the sake of high political ratings. However, this was justified 20 years ago. Today, in the period of universal availability of information, false ratings result in social conflicts with the state (Smith et al., 2013). The 2019 Ukrainian presidential election is a good case in point: 73% of voters voted for the candidate with no political experience. This happened due to the candidate's political non-involvement in the previous regime and his high trust rating. It should be noted that the reliability of the results of the election process was not questioned. Thus, Ukrainian people have mounted a legitimate coup d'etat as a result of their distrust in the populist promises of all candidates. Ukrainian politicians underestimated the public intellectual capital: political instruments that always worked in the past have become outdated and populism is no longer able to have the same effect as before.

The indices of human happiness and well-being tend to become obsolete and analytics needs new evaluation criteria. Global priorities accelerate the index context change (McGillivray & Clarke, 2006). This should be taken into account in the regional analysis. A comparative analysis of the differentiation of the Trust index in European and post-Soviet states is relevant for the development and subsequent implementation of corrective measures for the benefit of present and future generations.

The distrust of the young generation in state migration policy is demonstrated by labor and intellectual migration, indicating the loss of personal and collective human resources.

4. Conclusion

Thus, the HDI is a reliable characteristic of social development. International indices of happiness and well-being are subjective and prone to dynamics and plasticity. This has been fully proved by the events taking place in the last two decades. The semantics of the concepts of the indices has evolved and modified. It seems probable that modern interpretations that are said to be outmoded require correction. We believe that the Trust Index should also be included in the World Happiness Index and Well-being Index. The indices can be ranked by the criterion of registering patents and start-ups demonstrating the creative self-actualization of the population.

In modern conditions, special skills and qualifications, self-education, a creative approach and a high level of self-organization are the development vectors and creative drivers in the system of labor sustainability.

The environmental friendliness and the comfort of work are no longer relevant in the form they existed 20 years ago. High qualification requirements to an employee contribute to the continuous self-development of a person. A creative approach to work should prevail if an individual strives to keep up with the times. Inventiveness should serve national interests; it should not be just a commodity. Intellectual property should be valued not only in monetary terms, but also be legally protected by the state.

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[Index]

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