METHODOLOGY FOR THE ASSESSMENT OF TRANSFORMATION OF POLITICAL AND ECONOMIC SYSTEMS OF THE STATE UNDER THE CONTEXT OF GLOBALIZATIONS

[1]Serguei D. Kozlov, [2]Oleg, N. Slobotchikov, [3]Mikhail V. Shatokhin, [4]Natalia A. Zaitseva, [5]Elena E. Udovik, [6]Elena I. Artemova, [7]Dmitry A. Syanov

ABSTRACT-- *In the context of an increasing global world order, there is a need to create a relatively universal methodology that allows with a certain degree of certainty to assess the state's position in it, taking into account the level of development of national political and economic systems. The purpose of this study is to develop a methodology for assessing the transformation of the political and economic systems of the state in the context of globalization. The use of the national competitiveness index is proposed as a universal indicator for assessing transformation processes in this area of research. The author substantiates the relevance of the formation of a statistical-analytical apparatus for assessing the national competitiveness of the state, taking into account the index approach. A model which is presented in the work, allows one to identify patterns of transformation of the country's political and economic systems based on a synthesis of the existing challenges of the global world, the most relevant of which are economic growth, the level of human potential development, e-government, and the degree of democratization of the political regime. The developed author's model for assessing the transformation of political and economic processes is of a universal methodological nature and can be used for various national formations. The use of the index method creates the prerequisites for identifying trends in the development of the studied phenomena in the medium term. As a practical adaptation of the proposed methodology, the author performed a*

[1] * *Doctor of Political Sciences, Professor, Vice-Rector, Institute of World Civilizations, Moscow, Russia. kozlovsd@inbox.ru, ORCID 0000-0002-8548-2699*

[2] *Doctor of Political Sciences, Professor, Rector, Institute of World Civilizations, Moscow, Russia, rektor@imc-i.ru, ORCID 0000-0002-4672-195X*

[3]*Doctor of Economics, Professor, Leading Researcher at the Center for Research on the History and Development of World Civilizations, Institute of World Civilizations, Moscow, Russia, shato-hinm@mail.ru, ORCID 0000-0002-4149-0662, Doctor of Economics, Professor of the Department of Political Science and Mass Communications, Financial University under the Government of the Russian Federation (Financial University), Moscow, Russia, shato-hinm@mail.ru, ORCID 0000-0002-4149-0662*

[4] *Doctor of Economics, Professor of the Department of Hospitality, Tourism and Sports Industry, Plekhanov Russian University of Economics, Moscow, Russia, zaitseva-itig@mail.ru, ORCID 0000-0002-0048-5509*

[5] *Doctor of Pedagogical Sciences, Professor of the Department Economics and Finance, Kuban State Technological University, Krasnodar, Russia, ydovik-ydovik@rambler.ru, ORCID 0000-0003-0550-8965*

[6] *Doctor of Economics, Professor, Head of Department Economic Theory, Kuban Agrarian University, Krasnodar, Russia, elenarush@yandex.ru, ORCID 0000-0002-4168-6112*

[7] *Associate Professor of the Department Machines and Devices of Food Production, KG. Razumovsky Moscow State University of Technologies and Management (the First Cossack University), Branch of Meleuz, Meleuz, Russia, saynov@yandex.ru, 0000-0002-8548-2699*

situational analysis of the results of applying the model of national competitiveness in the context of globalization based on the use of the method of selective observation.

I.   INTRODUCTION

The main trend of the existing socio-economic development of both national systems and the world economy as a whole is globalization (Podshibyakina et al., 2018; Balli, Pericoli & Pierucci, 2018). Globalization contributes to the erasure of various kinds of borders between social formations and the formation of a single economic and political space. In the context of the noted trends in the development of socio-economic systems, it is of particular importance to develop a certain universal methodology that allows to build patterns and compare the levels of evolutionary dynamics of their functioning. The mechanism of interaction between the state and society is traditionally built in two main areas: economic and political (Butakova et al., 2018). These areas of functioning of the national formation closely intersect, which requires an investigation of the laws of their development in interconnection and interaction. In the context of an increasing global world order, there is a need to create a relatively universal methodology that allows with a certain degree of certainty to assess the state's position in it, taking into account the level of development of national political and economic systems.

The utilization of this methodology will create an analytical foundation for justifying the program directions for optimizing the development of the political and economic space of the state in order to increase its stability in the world economy and form an evolutionary model of national competitiveness. Achieving the necessary level of national competitiveness is important not only to improve the status of any given country in the geopolitical space, but also to ensure its state security in the face of the global challenges. In this regard, the issues of assessing the transformation of political and economic systems based on the use of a relatively verified statistical and analytical methodological apparatus are of high relevance.

II.   METHODOLOGICAL FRAMEWORK

The purpose of this study is to develop a methodology for assessing the transformation of the political and economic systems of the state in the context of globalization. The goal of the work is achieved in the process of solving the following list of tasks:

substantiate the relevance of the formation of a statistical-analytical apparatus for assessing the national competitiveness of the state;

to form a model that allows to identify patterns of transformation of the political and economic systems of the country;

conduct a situational analysis of the results of applying the model of national competitiveness in the context of globalization.The methodological basis for the implementation of this work has become a number of general scientific research methods, among which it is necessary to single out research, analytical synthesis, scientific abstraction, statistical, economic and analytical, econometric, selective observation. The use of this set of methods will allow creating a reliable model for identifying the patterns of transformation of the political and economic

systems of the country. The adaptation of the methodology developed in the work will take into account the use of a reliable statistical base of publicly available information sources.

III. RESULTS

In the scientific community, a wide range of methods and tools are used to identify patterns of development of a particular phenomenon. Given the scope of the research presented in the work, the most relevant will be the use of the index method to justify the evolutionary trends in the transformation of national political and economic systems of the state in the face of global challenges. The use of indices as key performance indicators will create the necessary foundation for ensuring the universality of the use of the developed methodology and the adaptation of its main components to any national formations.

The initial stage in the development of a methodology for assessing the transformation of the economic and political systems of a state is the construction of a relative universal indicator for solving this problem. It is proposed to use the coefficient of national competitiveness as this universal indicator in the work. The relevance and significance of the application of this coefficient is determined by the fact that it should correspond as much as possible to the most significant challenges of the emerging global world order.

Thus, the identification of the main components of the national competitiveness coefficient must be made, taking into account their correlation with the most significant trends in global evolutionary development. Justification of the complex of the presented elements has the following regularity:

The economic growth. The strategic goal of developing the world economy in general and the national economy of any state in particular is the formation of high rates of economic development. Achieving significant indicators of economic growth determines the status and position of the country in the framework of the global economic system. To justify the development trends of this phenomenon, the index of economic growth will be used in the work;
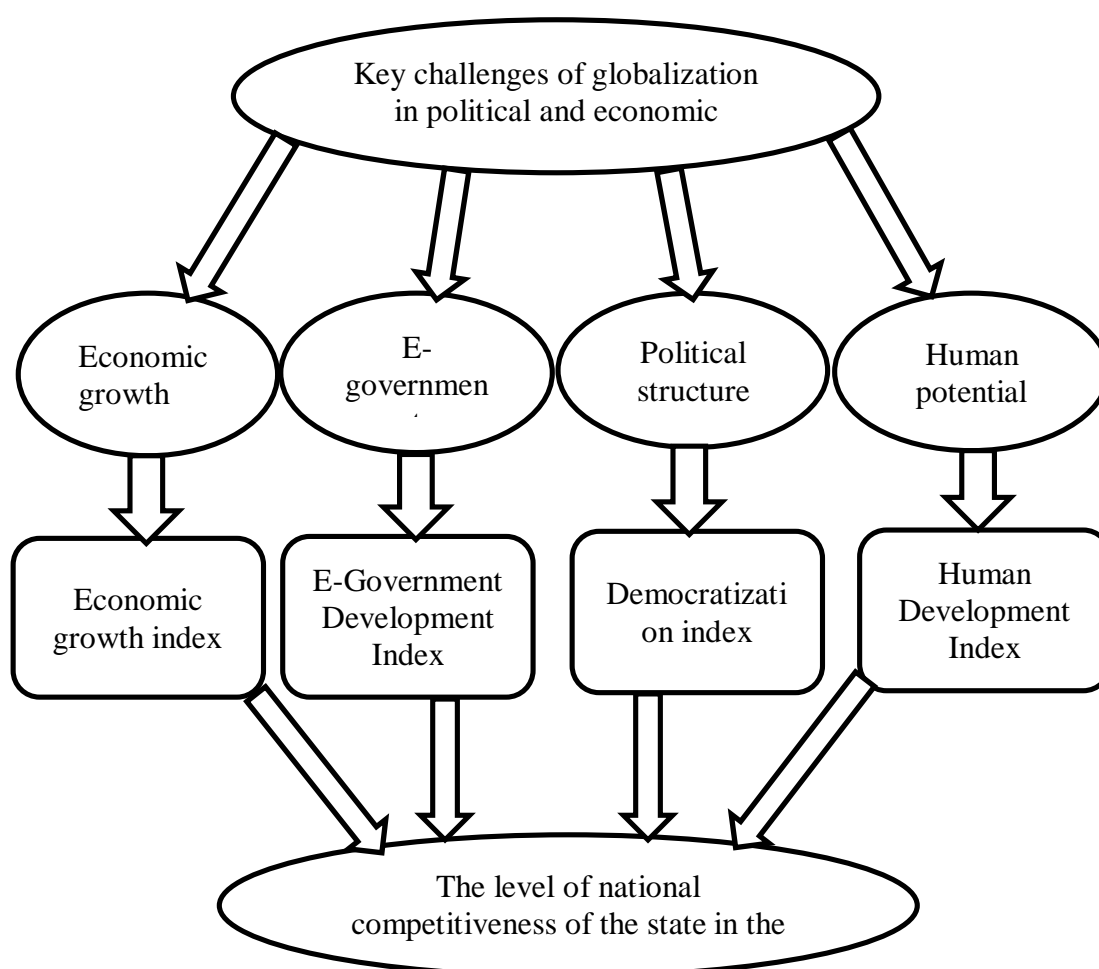
E-government. The main means of communication between the state and society in the context of globalization is e-government. The evolution of e-government components determines not only the quality of public service delivery, but also the degree of understanding of the needs of socio-economic development of each individual citizen. The digitalization of the activities of public authorities has a key impact on the effectiveness of the implementation of managerial functions in the country. The active use of information technology in the public administration system on a global scale requires each national entity to intensively introduce innovative developments in this field in order to build close and operational international communication relations (Karateev, 2018). To reflect the degree of transformation of this component of the country's political and economic system, the index of development of electronic government will be used in the work;

Political structure. The existing political system in the country is an important criterion for its entry into the global public space. Features of the national political regime have a significant impact not only on the geopolitical position of the state in the world, but also on the degree of its communication with other partner countries in the global space. The "unsatisfactory" political regime in the country with respect to generally accepted democratic standards in world practice can lead to financial sanctions, disruption of socio-economic interactions and a decrease in the overall level of national competitiveness. In addition, the stability of the political situation in the country has

a significant impact on domestic economic processes, which include trust in the degree of state protection of private property rights, investment activity of citizens, and the level of entrepreneurial activity. To assess the "quality" of the development of the national political system in work, it is recommended to use the democratization index;

Development of human potential. Despite all existing global trends, man is the cornerstone of the functioning of any socio-economic system. The quality of life of an individual, the degree of protection of his rights and freedoms ultimately reflect the evolutionary stage of development of both the national economic system and the world structure as a whole. The formation of an integral civilizational model of human development is the core of achieving harmonization of global communications in the world. To assess the transformation processes in this field of research, the use of the human development index is proposed.

Taking into account the considered components of the key patterns of transformation of the political and economic space in the context of globalization, an enlarged model for assessing the national competitiveness of the state is presented in Fig.1.

Figure 1: An enlarged model for assessing the national competitiveness of the state in the context of globalization

Assessment of the national competitiveness of the state takes into account the application of the method of selective observation at a certain point in time. At the same time, in the process of performing separate analytical

calculations, statistical information data for longer time periods are used. The calculation of the state's national competitiveness index in the work is proposed to be carried out according to the following formula:

$$I_{gnc} = \sqrt{\sqrt{I_{ep}^2} * \sqrt{I_{eg}^2} * \sqrt{I_{hd}^2} * \sqrt{I_{dem}^2}}, \qquad (1)$$

where:

I_{gnc} - index of national competitiveness of the state;

I_{ep} - economic growth index;

I_{eg} - e-government index;

I_{hd} - human development index;

I_{dem} - index of democratization.

In general, the methodology for calculating the national competitiveness index includes two main stages. At the first stage, the criterion indicators of the second level are calculated, which are subsequently used in the index system to determine the value of the general universal index. This procedure relates to the second stage of assessing the transformation of the political and economic systems of the state in the context of globalization. Thus, when constructing a model, we consider the methodology for calculating second-level indices, which are used to determine the general universal indicator of national competitiveness.

The definition of the economic growth index is based on the use of an indicator characterizing the value of gross domestic product per capita. In order to obtain a comparable and analytically significant result, the value of the studied indicator for the current time period is compared with the average value for the last ten years. The study of the dynamics of the economic growth index is based on the calculation of a ten-year moving average. The calculation of the economic growth index takes place according to the following formula:

$$I_{ep} = \frac{GDP/p.c._i}{\overline{GDP/p.c}}, \qquad (2)$$

where:

I_{ep} - economic growth index;

$GDP/p.c._i$ - the value of gross domestic product per capita in the current period;

$\overline{GDP/p.c}$ - the average value of gross domestic product per capita over the past ten years, including the current period.

The calculation of the e-government index has recently become a very relevant topic for scientific discussion. An analysis of the dynamics of this indicator is used to assess the digitalization level of the public administration system existing in the country. Certain methodological developments in calculating the e-government index are presented in scientific articles by various authors, among which are the publications of the following (Gabazova, 2017; Tikhovodova, 2016; Nikonova, 2017).

When constructing the model for assessing national competitiveness developed in this study, it is proposed to use the following algorithm for calculating the e-government index:

$$I_{eg} = 1/3*OSI + 1/3*TII + 1/3*HCI, \qquad (3)$$

where:

I_{eg} - e-government index;

OSI - online services index. This index represents the ratio of the number of services in the system of state and municipal administration provided by means of digitization tools and instruments in the total volume of services of this type;

TI - telecommunications infrastructure index. The definition of this indicator is based on the estimated ratio, which reflects the number of subscribers with fixed wide-profile Internet access per 100 people;

HCI - human capital development index, which is the level of higher education coverage of citizens of the country. The calculation of this sub-index is based on determining the ratio of the number of countries' citizens with higher education per 100 inhabitants.

A key characteristic of the functioning of the political system of a country is the existing regime of state power in it. In the framework of generally accepted international standards, the most optimal regime for ensuring the necessary level of economic growth and protecting the rights and freedoms of the individual is recognized as democratic (Baglikova, 2017). Of course, this characteristic of the optimal organization of state power is very conditional, at least because the democratic regime in its pure form does not exist in its idealistic understanding. At the same time, international public organizations in all their diversity emphasize the need for every government to expand the use of democratic principles and criteria for the implementation of state power. The presence of an "external image" of the democratization of public relations, the activities of power structures is a key condition for the country's participation in the system of international communication partnerships, which, in turn, are at the heart of globalization of the global world order (Ulmaeva, 2014). The absence of a clear external sign of democratization of a country's political system can become a reason for its isolation from international communications and the exclusion of their general trend of globalization, which ultimately will serve as a significant factor in reducing the level of national competitiveness. In this regard, to assess the "quality" of the political system in the context of globalization, it is necessary to assess the severity of this criterion on the basis of a universal indicator. In a number of scientific publications (Zubritskaya, 2017; Salmina, 2018, Zhuravleva, 2017), it is proposed to calculate the democratization index to assess the conformity of the country's political system with generally accepted conceptual democratic criteria. Based on a synthesis of research materials of these authors, the following model for calculating the democratization index is proposed:

$$I_{dem} = I_{compet} * I_{parti}, (4)$$

where:

I_{dem} - democratization index;

I_{compet} – political competition index;

I_{parti} – political participation index.

In order to determine the total value of the democratization index, it is necessary to calculate the index of political competition and the index of political participation. The index of political competition is the ratio of the percentage of votes received by all parties in the representative body of state power regarding the percentage of votes of the leader party. To determine the index of political participation, it is necessary to form the ratio of the number of citizens who actually voted to the total number of citizens who currently had the right to vote.

Last but not the least, the index of human development is located in the generated model for assessing national competitiveness. The value of the human potential index reflects the level of significance of the development of each individual within the framework of the functioning of the country's economic and political systems. The use

of this index also gives an idea of the development of human progress as a whole within the framework of this socio-economic formation (Gumenyuk, 2018). An increase in the level of development of each individual contributes to the formation of a common evolutionary path for the functioning of the entire socio-economic system. The methodology for calculating the human development index is based on a comparison of the actual indicator in a particular study area with its generally accepted maximum and minimum criteria (Kuznetsova, 2019). The total algorithm for calculating the human development index includes the determination of the three constituent indicators. The first in the series of these indicators is the index of life expectancy, which is determined by the following formula:

$$I_{l.e.} = \frac{LE_{actual} - LE_{min}}{LE_{max} - LE_{min}}, \qquad (5)$$

where

$I_{l.e.}$ - life expectancy index;

LE_{actual} - actual level of life expectancy of citizens. Data for calculation is based on publicly available official statistical sources of information;

LE_{min} - minimum life expectancy. In the framework of the presented calculation algorithm, the value of this indicator is used at the level of 25 years; LE_{max} - maximum level of life expectancy. In the framework of the presented calculation algorithm, the value of this indicator is used at the level of 85 years.

At the next stage, the index of the achieved level of education is calculated. The definition of this index is based on the calculation of literacy indices and education enrollment indices (Nesterov, 2018). The formula for calculating the literacy index is as follows:

$$I_{lit} = \frac{Lit_{fact} - Lit_{min}}{Lit_{max} - Lit_{min}}, \quad (6)$$

where:

I_{lit} - literacy index;

Lit_{fact} - literacy rate of the population under 15 years of age;

Lit_{min} - the minimum proportion of literate people under the age of 15 years is assumed to be 0%;

Lit_{max} - the maximum literacy rate of population is 100%.

The method of calculating the index of educational coverage is presented by the following formula:

$$I_{educ.} = \frac{LE_{fact} - LE_{min}}{LE_{max} - LE_{min}}, \qquad (7)$$

where:

I_{educ} - index of education coverage;

LE_{fact} - actual value of the share of the population receiving education at the age of 6-24 years from the total number of citizens in this age group;

LE_{min} - minimum education enrollment rate is 0%;

LE_{max} - the maximum level of education enrollment is assumed to be 100%.

Based on the presented indicators, the formula for calculating the index of the achieved level of education has the following form:

$$I_{le} = 2/3 * I_{lit.} * 1/3 * I_{educ.}, \qquad (8)$$

where:

I_{le} - estimated value of the index of the achieved level of education;

I_{educ} - index of education coverage;

$I_{lit.}$ - literacy index;

The third component of the presented index system is the index of real GDP per capita, the calculation formula of which is as follows:

$$I_{GDP} = \frac{GDP_{fact} - GDP_{min}}{GDP_{max} - GDP_{min}}, \qquad (9)$$

where:

I_{GDP} - index of real GDP per capita;

GDP_{fact} - the actual value of the country's GDP per capita, taking into account purchasing power parity;

GDP_{min} - the minimum value of GDP per capita, taking into account purchasing power parity, is taken in the amount of $ 100;

GDP_{max} - the maximum value of GDP per capita, taking into account purchasing power parity, is taken in the amount of 40 thousand dollars.

Taking into account the synthesis of the presented indicators, the human development index is determined by the following formula:

$$I_{hd} = 1/3 * I_{GDP.} + 1/3 * I_{LE} + 1/3 * I_{LT}$$

where:

I_{hd} - human development index;

I_{GDP} - index of real GDP per capita;

I_{LE} - calculated value of the index of the achieved level of education;

I_{LT} - the index of expected lifetime.

As a practical adaptation of the proposed methodology, a situational analysis of the results of applying the model of assessing national competitiveness in the context of globalization based on the use of the method of selective observation was curried out. The results of analytical calculations are presented in table 1.

Table 1: Assessment of the transformation of political and economic systems of the state in the context of globalization

Country	Value of the national competitiveness index						
	2013 y.	2014 y.	2015 y.	2016 y.	2017 y.	2018 y.	Deviation of 2018 from 2013
USA	9,064	9,129	9,098	9,122	9,131	9,239	0,175
Canada	8,113	8,085	8,107	8,313	8,213	8,278	0,165
Germany	8,231	8,543	8,438	8,327	8,310	8,475	0,244
China	8,782	8,815	8,883	8,867	8,920	8,985	0,203
Norway	9,735	9,617	9,698	9,758	9,815	9,887	0,152
France	7,891	8,910	7,853	7,778	7,910	7,975	0,084
Sweden	9,581	9,509	9,533	9,613	9,750	9,769	0,188
Russia	5,137	5,120	5,218	5,232	5,312	5,378	0,241

Source: Information portal of analytical information Gtmarket (2018) and Information portal of analytical information tadviser (2018)

IV.   DISCUSSION AND CONCLUSION

According to the results of the study, it can be noted that the calculation of the national competitiveness index is important in order to identify trends in the transformation of the political and economic systems of the country in the context of globalization. Using the developed methodology allows achieving two main results within the framework of the issue under study. First of all, taking into account the value of the index of national competitiveness, it is possible to compile a rating of countries for this indicator and determine the position of an individual state in the global world. The second feature of the presented model is that it allows dynamically evaluating the vector of transformation of the political and economic systems of a country. The practical validity of this area of analytical work lies in the fact that the integral model for calculating the national competitiveness index includes the most relevant indicators of the functioning of the economic and political systems of national formations in the face of global challenges. A comparative analysis of the magnitude of the universal index over a number of time periods will make it possible to elicit general trends in the transformation of the political and economic system of the state. Analysis of the statistical material presented in the work allows concluding that for the period 2013-2018, the majority of the studied countries revealed positive trends in the transformation of political and economic systems. This conclusion is based on an increase in the national competitiveness index within the studied time interval. The highest value of the national competitiveness index, taking into account the proposed methodology, was determined for Sweden and Norway. In 2018, in comparison with 2013, Russia's index of national competitiveness increased by 0.241 points, which is one of the most significant indicators among the considered set of states. However, in general, the absolute value of the national competitiveness index of Russia is significantly lower than that of the leading countries, which requires significant changes in the political and economic systems to form positive transformational trends.

REFERENCES

1. Baglikova, M.S. (2017). Indices of democracy in comparative political science. Journal of historical, political science and international studies, 1(60), 101-110

2. Balli, F., Pericoli, F.M. & Pierucci, E. (2018). Globalization and international risk-sharing: The role of social and political integration. European Journal of Political Economy, 55, 324-345

3. Butakova, M.M., Sokolova, O.N., Zaitseva, N.A., Larionova, A.A., Povorina, E.V., Kushch, E.N. (2018). Assessment of the background for interregional economic cooperation. Espacios, 39, 22-31.

4. Gabazova, Ya.D. (2017). International assessment of the development of e-government in the Russian Federation (on the example of the UN e-government development index). Young researcher of Don, 5(8), 170-177.

5. Gumenyuk, I.S. (2018). Human Development Index: advantages and disadvantages of the tool for assessing the level of social development. In the collection: Current spatial development trends and priorities of social geography. Materials of the international scientific conference in the framework of the IX Annual Scientific Assembly of the Association of Russian Geographers-Social scientists. Resp. ed. N.I. Bykov, pp. 217-221

6. Information portal of analytical information Gtmarket. (2018). URL: URL https://gtmarket.ru

7. Information portal of analytical information tadviser. (2018). URL: http://www.tadviser.ru

8. Karateev, A.Yu. (2018). Democracy and Digital Inequality. Russian Political Science, 4(9), 39 - 46

9. Kuznetsova, L.M. (2019). Human development indices as the main strategic tool of the concept of human development. Economic environment, 2(28), 54-60.

10. Nesterov, A.A. (2018). The methodology for measuring intellectual potential through the index of intellectual development according to one of the elements of the index of human development. In the collection: Actual problems and development trends of the modern economy. Materials of the international scientific and practical conference, pp. 385-391

11. Nikonova, A.S. (2017). The e-government development index as a priority for modernizing the economy of the EAEU member countries. In the collection: Problems of sustainable development of the Russian regions. Materials of the international scientific-practical conference. Resp. ed. S. G. Simonov, pp. 228-232

12. Podshibyakina, T.A., Zaitseva, N.A., Larionova, A.A., Kosolapov, A.B., Zhenzhebir, V.N., Palastina, I.P. & Polozhentseva, I.V. (2018). Evaluation of the influence of economic and national factors on the dissemination of political ideas in the context of globalization. Modern Journal of Language Teaching Methods, 8, 62-68.

13. Salmina, A.A. (2018). Features of understanding democracy and their relationship with the resource characteristics of the population: the example of Russia and Germany. Sociological journal, 24(3), 76-97

14. Tikhovodova, A.V. (2016). E-government as a new quality of interaction between the state and civil society. In the collection: Problems of use and innovative development of inland waterways in the basins of great rivers. Proceedings of the international scientific and industrial forum, pp. 44-50

15. Ulmaeva, L.N. (2014). Indices of Consolidated Democracy: An Evaluation of the Effectiveness of the Democracy Project of the 1990s. Power, 9, 55-59.

16. Zhuravleva, E.S. (2017). Indices and criteria for the development of democracy in a modern state. In the collection: Civilization of Law and the Development of Russia: Issues of Theory and Practice. Collection of scientific articles based on the materials of the XIII All-Russian Scientific and Practical Conference, pp. 93-100

17. Zubritskaya, A.V. (2017). The economic efficiency of democracy. Science without borders. 11(16), 29-33