



TO THE QUESTION OF THE IMPORTANCE OF COMBATING THE SHADOW ECONOMY IN RUSSIA

Svetlana Pyankova¹, Mikhail Kombarov^{2*}

^{1,2}Ural State University of Economics, Ekaterinburg, Russia

E-mails: ¹silen_06@list.ru, ²mikhail.kombarov@list.ru

Received: 23 February 2022

Accepted: 07 April 2022

Online Published: 07 May 2022

ABSTRACT:

In their history, many countries of the world had to go through a stage of stagnation. Thus, the UK faced this problem in the 1960s–1970s, the USA in 1970–1982, and in Russia this stage began in 2013 and continues to this day. The factor that makes it difficult to get out of it is the presence of underdeveloped regions within this country, i.e. the unevenness of its spatial development. This factor, in turn, may be due to some other negative circumstances. The present study is aimed at establishing the key of these circumstances and at developing possible ways to level it.

Methods: *study of the hypotheses presented in the scientific literature and their verification using regression analysis.*

Results: *it has been established that a number of threats to the economic security of Russia, which includes the unevenness of its spatial development, is a connected chain, the initial link of which is a significant level of the shadow economy, amounting to more than 30% of GDP, due to the high scale of corruption.*

Conclusions: *the main tool to combat the shadow economy in Russia, necessary to ensure its economic security, is the improvement of anti-corruption policy, the main goal of which should be to increase the CPI to 70-85 points. With such a scale of corruption, the level of the shadow economy in the country under study will drop to about 12% of GDP, as a result of which its GRP per capita will be more than 70 thousand US dollars in 2010 prices, i.e. exceed that of many economically developed countries.*

Keywords: Russia; threats to economic security; shadow economy; investment climate; corruption; regions.

JEL classification: E26, O17, R10

Paper type: Research article

Citation: Pyankova, Sv., Kombarov, M. (2022). To the question of the importance of combating the shadow economy in Russia. *Access to science, business, innovation in digital economy*, ACCESS Press, 3(2): 159-176.

[https://doi.org/10.46656/access.2022.3.2\(6\)](https://doi.org/10.46656/access.2022.3.2(6))

INTRODUCTION

In the Russian Federation, Presidential Decree No. 208 of May 13, 2017 adopted the Strategy for the Economic Security of the Russian Federation for the period until 2030 (Decree No. 208 of May 13, 2017, 2017) which provides a detailed list of adverse factors and trends that impede the implementation of Russia's strategic national priorities, one of which is economic growth.

Their negative and visible impact on this parameter is evidenced by the fact that in the first half of the recent decade, its economy entered a stage of stagnation, from which it has not yet been able to get out. This

* Corresponding author, Mikhail Kombarov, mikhail.kombarov@list.ru



indicates the priority for the Russian authorities to take all possible measures aimed at eliminating these factors and trends, indicating the relevance of this study.

The problem of Russia's economic growth and its economic security regularly falls under the close attention of many researchers. Thus, members of the Russian Academy of Sciences A. G. Aganbegyan (Aganbegyan, 2012) and V. V. Ivanter (Ivanter, 2018) made a significant contribution to its study. In addition to them, K. N. Yusupov, Yu. S. Toktamysheva, A. V. Yangirov, R. R. Akhunov (Yusupov et al., 2019), Ya. V. Murashov, T. A. Ratnikova (Murashov & Ratnikova, 2017), O. M. Lizina, T. E. Badokina (Lizina & Badokina, 2020), A. F. Mukhametov (Mukhametov, 2019), and many other economists. However, despite the rather deep elaboration of this problem, today in the specialized literature there is still no clear answer to the question of which of the 25 threats to Russia's economic security listed in this doctrine causes the greatest damage to the state of its economy. The search for this answer, as well as the development of recommendations for eliminating this threat, is the purpose of this study, to achieve which it is necessary to consider all these factors and trends, establish the presence of any relationships between them and determine the parameters that are closely related to the presence of such a threat and with its scale.

METHODOLOGY

Under the gross world product, it is customary to understand the total value of all final goods and services produced on planet Earth during one year, i.e. the sum of the GDP of all countries in the world. Considering the contribution of certain states to the volume of this product, we can conclude that it is traditionally described by the so-called modified Pareto law: 20% of countries produce about 75% of this volume, and the remaining 80% - about ¼ of it. The first group includes prosperous European countries, as well as Canada, the USA, Israel, Cyprus, Hong Kong, Singapore, Taiwan, South Korea, Japan, Australia and New Zealand. All of them, according to the Ghanaian diplomat, Nobel Peace Prize winner Kofi Annan, allow all their citizens to live freely and safely in a safe environment, i.e. are economically developed. The second group is represented by countries whose economy, due to certain factors, is characterized as developing, i.e. is at the stage of economic development. These countries can be found in almost all regions of the world and their common feature is the desire to complete this stage, and therefore, to add to the list of states of the first group. The stable positive dynamics of such a macroeconomic indicator as the volume of GDP per capita acts as an indicator reflecting the successful course of the process of solving this problem (Larin & Tarunina, 2015, pp. 3, 17). This indicator, in turn, is closely dependent on the volume of real GDP, expressed in billions of US dollars in 2010 prices. According to the conclusions of doctors of economic sciences, K. N. Yusupov, A. V. Yangirov and R. R. Akhunov and Candidate of Economic Sciences, Yu. S. Toktamysheva, the annual growth rate of the latter, which is understood as the rate of economic growth, should, in order to ensure an acceptable dynamic of the first of these parameters, be at least 3-4% (Yusupov et al., 2019, p. 152).

Looking at the economic growth rates of the developing countries of the world over the past three decades, it is easy to see that among them there are countries that often do not cope with their task. One of them



is Russia, which has the widest resource potential. Information about the pace at which its economy grew during the specified time interval is presented in Figure 1.

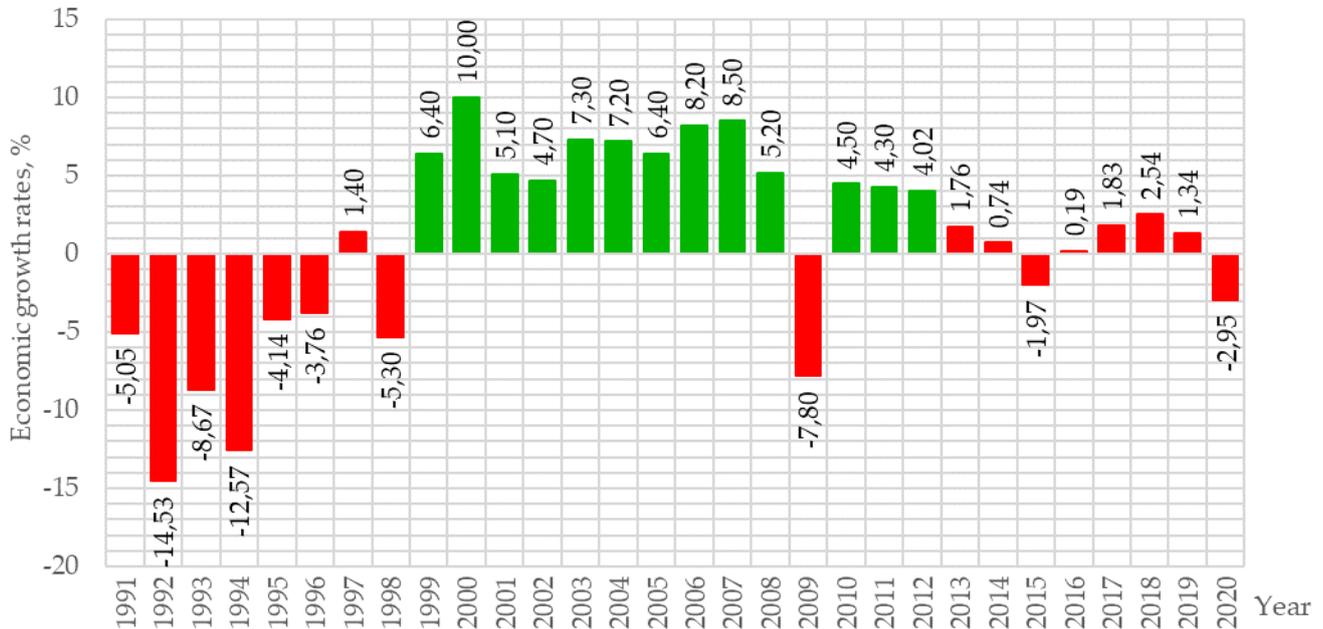


Figure 1. Economic growth of Russia in 1991 – 2020

Source: Created by author (Business and economic data for 200 countries. URL: <https://ru.theglobaleconomy.com/>)

Figure 1 clearly shows that, having overcome the deep crisis of the 1990s, the Russian economy over 10 years (1999–2008 inclusive) grew at a rapid pace, often exceeding the threshold mark by more than 2 times. These years can be safely called the only golden time in the recent economic history of Russia, since after their end it has never achieved such success. As for 2010-2012, during this period, despite the acceptable growth rates of real GDP, various unfavorable factors were already observed in the Russian economy. Academician A. G. Aganbegyan includes in their list lower investment volumes compared to the level of 2008, the scale of housing construction and indicators of the commissioning of residential buildings, the volume of production of machinery and equipment, real budget revenues adjusted for the inflation index, as well as the emergence of a budget deficit (Aganbegyan, 2012, pp. 10-11). In addition, Figure 1 shows that over the specified period of time, these rates tended to decrease - at the end of 2011 they did not reach the level reached a year earlier, a year later they turned out to be even weaker, and already in 2013, the economy of the studied countries entered the stage of stagnation, in which it is today. At the same time, a Russian scientist, V.V. Ivanter, who is a member of the Russian Academy of Sciences, back in 2018 announced the presence of a number of positive factors in it that could push it forward. This is a small amount of public debt compared to many other countries, quite autonomous in relation to the dynamics of energy prices, the ruble, the growth in the profitability of oil and gas exports, etc. (Ivanter, 2018, p. 25). However, such factors, as Figure 1 shows, do not realize their potential. This state of affairs is explained by Newton's third law, which states that "the force of action is equal to the force of reaction." These counteracting circumstances are the realities observed



both in Russia and around the world, which represent a threat to the economic security of the country under study. These include:

- the fact that the developed countries of the world have a goal to use their advantages as an instrument of global competition;
- strengthening of structural imbalances in the global economy and financial system, growth in the volume of private and sovereign debt, as well as the difference between the valuation of real assets and derivative securities;
- adoption by foreign countries of measures of a discriminatory nature in relation to key sectors of the Russian economy, restriction of access to foreign financial resources and modern technologies;
- deterioration of the conflict situation in the zones of Russia's economic interests and near its borders;
- increased instability of world commodity and financial markets;
- change in the structure of consumption of energy resources and world demand for them, technological backwardness of Russia from foreign countries;
- the formation, without the participation of Russia, of interstate economic associations that carry out activities in the field of regulating trade, economic and financial and investment relations (the Trans-Pacific Partnership can be cited as an example) (Perskaya, 2016), which can harm its national interests;
- the exposure of the Russian financial system to global risks, as well as the weak security of the information infrastructure of the financial and banking system from various information threats;
- scientific and technological changes, as a result of which there is a sharp decrease in the role of traditional factors for ensuring economic growth, and the exhaustion of the raw material export model of economic development;
- the absence of Russian non-commodity companies among the global leaders of the world economy;
- an unfavorable investment climate, which, together with high business costs, excessive administrative barriers and inefficient protection of property rights, has a negative impact on the volume of investments in the real sector of the economy;
- low innovative activity, a significant lag behind developed countries in the development and implementation of new and promising technologies, in particular, digital economy technologies, a relatively low level of qualification and key competencies of Russian specialists;
- depletion of existing mineral deposits, which results in the depletion of the resource base of the fuel and raw materials sectors of the economy;
- low competitiveness of non-commodity exports, which negatively affects its scale, which also turns out to be limited under the influence of an underdeveloped market infrastructure and the country's weak involvement in the global "chains" of value added;
- limited access to long-term financial resources;



- poor development of transport and energy infrastructure;
- imbalance of the budget system;
- relatively low efficiency of public administration;
- significant scale of the shadow economy, including a high level of criminalization and corruption in the economic sphere;
- a significant difference in income levels between representatives of the poorest and richest segments of the population, which tends to grow, one of the reasons for which are the disproportions in the territorial development of Russia;
- decline in the quality of human potential associated with a decrease in the quality and accessibility of medicine and education;
- unfavorable migration situation, expressed in the outflow of highly qualified personnel, as well as young scientists and promising students to Germany, the USA and other developed countries, and the influx of migrants from neighboring countries who do not have education and the proper level of professional training;
- shortage of labor resources;
- excessive requirements in the field of environmental safety and the growth of costs for ensuring environmental standards of production and consumption.

A successful fight against the listed factors and trends is a necessary and sufficient condition for ensuring the required growth rates of the Russian economy. The methods of such struggle, the use of which is likely to lead to significant results, will be discussed below.

RESULTS AND DISCUSSION

Studying the specialized literature on threats to the economic security of Russia, it is easy to see that many authors are of the opinion that one of the most dangerous threats that cause very serious damage to its economic development is a significant level of the shadow economy. To confirm this hypothesis, a regression analysis of the dependence of the volume of GDP per capita of the country under study on the scale of the shadow sector observed in it will help. The initial information necessary for the implementation of such a procedure is presented in Table 1.

Table 1. The level of the shadow economy in Russia and the volume of its GDP per capita in 1991 - 2015

Year	Shadow economy level, % of GDR	GDR per capita, USD in 2010 prices	Year	Shadow economy level, % of GDR	GDR per capita, USD in 2010 prices
1991	39,73	9061,76	2004	37,68	8360,25
1992	31,49	7737,48	2005	36,41	8929,30
1993	41,53	7070,54	2006	35,47	9693,20
1994	45,04	6183,90	2007	34,59	10535,13
1995	45,65	5928,96	2008	32,60	11087,82
1996	46,83	5714,63	2009	36,79	10219,89
1997	48,73	5804,21	2010	33,70	10675,00
1998	47,72	5505,70	2011	32,03	11125,34



1999	42,05	5876,20	2012	31,88	11553,58
2000	41,91	6491,07	2013	32,21	11731,38
2001	40,81	6851,11	2014	31,04	11608,76
2002	40,78	7206,19	2015	33,72	11355,24
2003	40,08	7767,41			

Source: Created by author (Medina, Schneider, 2018, pp. 66, 74; *Business and economic data for 200 countries*. URL: <https://ru.theglobaleconomy.com/>)

Note: Information on the level of the shadow economy in Russia for 2016 and subsequent years is not presented in the source

An important point that should be paid attention to when visually examining Table 1 is the fact that, following the results of 1992, when the level of the shadow economy in Russia dropped to a mark that was record low until 2014, its GDP per capita population also turned out to be relatively low, since the economic reforms carried out during this year had a decisive influence on its behavior. Having removed the specified time point from the presented interval, you can start processing the data shown in the table (Figure 2).

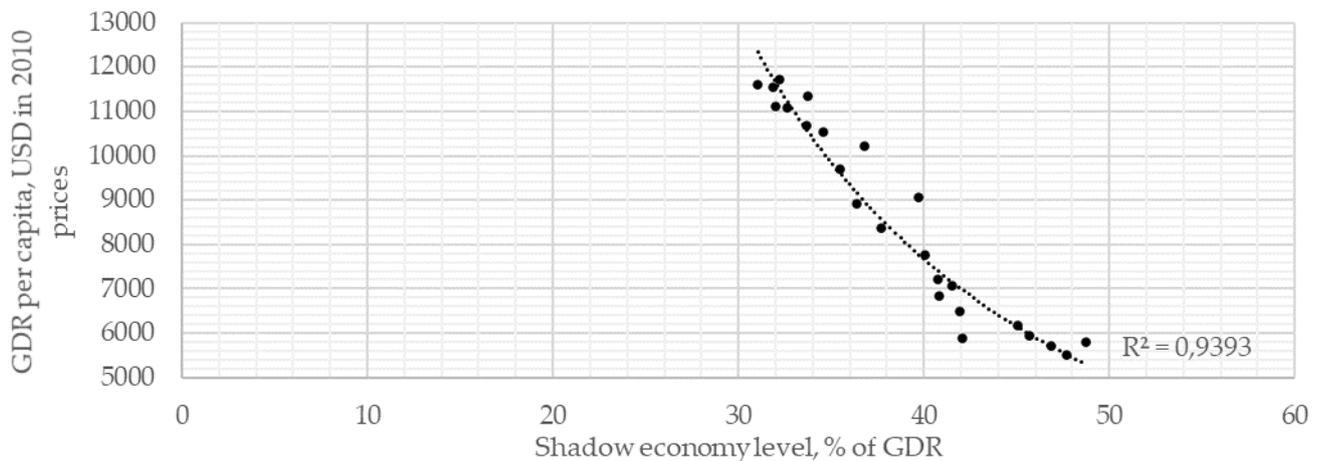


Figure 2. The scale of the shadow economy in Russia and the volume of its GDP per capita: a scatterplot and a graph of the regression equation

Figure 2 clearly illustrates the existence of a high dependence of the level of Russia's economic development on the scale of the shadow economy observed in it. This dependence has a power form and is described by the following regression equation:

$$y = 7670820.6871x^{-1.8727}, \quad (1)$$

where y is the volume of GDP per capita, US dollars in 2010 prices; x is the level of the shadow economy, % of GDP.

According to the point of view of Ya. V. Murashov and T. A. Ratnikova, the safe scale of the shadow economy, in which the corresponding country can be developed, should be considered the scale that does not exceed 12% of GDP (Murashov & Ratnikova, 2017, p. 30). Table 2, compiled using equation (1), provides information on what would be the volume of Russian GDP per capita with the specified scale of the shadow sector.



Table 2. The volume of GDP per capita in Russia with a safe scale of the shadow economy.

Significance level α	GDR per capita, USD in 2010 prices	
	MIN	MAX
0,10	71826,18	74363,32
0,05	71623,72	74565,78
0,01	71187,00	75002,50

Source: Own calculations

Table 2 quite clearly reflects the damage caused to the economic development of Russia by the threat to its economic security that I consider. After all, the volume of GDP per capita, which it would have achieved with the safe scale of this phenomenon, exceeds that of Germany, Canada, the Netherlands, France and a number of other prosperous countries.

This state of affairs is explained by the fact that a significant level of the shadow economy in Russia gives rise to another threat to its economic security, namely, an unfavorable investment climate (Lizina & Badokina, 2020, p. 156; Burov & Kisloshaev, 2017, p. 105), singled out by some economists, for example, M. S. Oreshkin as a key one (Oreshkin, 2018, p. 18). The correctness of this opinion is evidenced by its consistency with the opinions of many great scientists, for example, J. M. Keynes (Keynes, 1936), R. Harrod (Harrod, 1937), E. Domar (Domar, 1947) and others, and the fact that this threat, in turn, is the cause of several negative features characteristic of Russia that have a similar status. First of all, it has a detrimental effect on innovation activity, preventing Russian companies from investing in the creation of new knowledge (Teplykh & Galimardanov, 2017, pp. 104-105), a statement about the importance of which for economic growth was made by J. Schumpeter in 1934 (Schumpeter, 1934). In addition, the characteristic of the investment climate inherent in the country under study does not allow the development of its transport and energy infrastructure and polarizes its constituent regions in terms of the level of socio-economic development. Indeed, individual administrative-territorial units, in particular, those where the scale of the shadow economy exceeds the all-Russian indicator, require large-scale investment projects to strengthen their positions on the Russian economic map. So, for example, the Kurgan region will remain the only disadvantaged region of the Ural Federal District and the Ural economic region, if its agricultural potential is not fully realized, the Pskov region needs investments in improving infrastructure, the current state of which will largely neutralize the positive effects of its tourist attractiveness, the Republic Tuva needs the construction of a railway that will connect it with the Republic of Altai and thereby eliminate a serious flaw in its geographical position, the Udmurt Republic needs funds to build new and modernize existing treatment facilities, etc.

The chain of related threats to Russia's economic security does not end here, since the last of the factors just considered, generated by an unfavorable investment climate, also causes other negative circumstances hindering the economic development of this country. In particular, it makes a significant contribution to the value of the Gini coefficient, which reflects the degree of differentiation of the population in terms of income, and reduces the quality of human potential, damaging the quality and accessibility of education and medicine. The second circumstance takes place as a result of the fact that regions lagging behind in their socio-economic development annually receive funds from the federal budget called subsidies for equalizing the



budgetary provision of territories, which could be directed to the development of these socially significant areas, and determines, to a certain extent, the existence of such a threat as an unfavorable migration situation. Indeed, one of the reasons for the departure of Russians to Germany, the United States and other developed countries is their characteristic higher quality than in Russia, education and health care.

The entire described situation testifies to the importance for the Russian authorities of carrying out measures aimed at reducing the level of the shadow economy as much as possible. For a correct answer to the question of what kind of activities should be carried out, it is necessary to consider the definitions of the concept of "shadow economy", the authors of which are economists known throughout the world. For example, the Peruvian scholar, E. de Soto, defined it as "the spontaneous and creative reaction of the people to the inability of the state to meet the basic needs of the impoverished masses" (de Soto, 1995, p. 14). The reason why the state is unable to meet the needs of the population, which negatively affects its well-being, is its high degree of corruption. Regression analysis of the dependence of the level of the shadow economy in a particular country on the scale of corruption observed in it, measured by a special indicator called the Corruption Perception Index (hereinafter - CPI), will allow us to construct an equation that describes such a dependence, on the basis of which it will be possible to determine, when on what scale of corruption, the level of the shadow economy in Russia will be safe. The initial data for this procedure are presented in Table 3.

Table 3. The level of the shadow economy and the scale of corruption in some countries of the world in 2015

Country	Shadow economy level, % of GDR	CPI, score	Country	Shadow economy level, % of GDR	CPI, score
Australia	8,10	79	Malawi	33,56	31
Austria	9,01	76	Malaysia	26,07	50
Albania	26,26	36	Mali	29,45	35
Algeria	23,98	36	Morocco	27,13	36
Argentina	24,99	32	Mexico	28,07	35
Armenia	35,96	35	Mozambique	30,98	31
Bahrain	16,63	51	Namibia	21,78	53
Belarus	32,37	32	Nepal	30,22	27
Bulgaria	20,83	41	Niger	34,12	34
Bosnia and Herzegovina	29,88	38	Netherlands	7,83	87
Burkina Faso	29,63	38	Nicaragua	39,51	27
Burundi	35,68	21	New Zealand	8,97	88
Butane	20,28	65	Norway	15,07	87
United Kingdom	8,32	81	Oman	23,91	45
Hungary	20,49	51	Pakistan	31,62	30
Guyana	26,09	29	Papua New Guinea	35,16	25
Guinea	41,58	25	Paraguay	31,66	27
Guinea-Bissau	34,94	17	Poland	16,67	62
Germany	7,75	81	Portugal	17,82	63
Honduras	37,68	31	Republic of the Congo	35,05	23
Hong Kong	12,39	75	Russia	33,72	29
Greece	26,45	46	Romania	22,94	46
Denmark	14,70	91	Saudi Arabia	14,70	52
Dominican Republic	27,97	33	Singapore	9,20	85
Egypt	33,32	36	Slovenia	20,21	60
Zambia	32,99	38	Suriname	23,80	36
Israel	19,18	61	USA	7,00	76
Jordan	15,16	53	Sierra Leone	34,18	29
Ireland	9,58	75	Tajikistan	37,73	26



Iceland	12,45	79	Tanzania	38,91	30
Spain	22,01	58	Togo	31,49	32
Italy	22,97	44	Trinidad and Tobago	31,40	39
Kazakhstan	32,82	28	Tunisia	30,90	38
Cambodia	33,85	21	Turkey	27,43	42
Cameroon	28,93	27	Uganda	31,88	25
Canada	9,42	83	Philippines	28,04	35
Qatar	13,08	71	Finland	13,30	90
Kenya	33,43	25	France	11,65	70
Kyrgyzstan	30,78	28	Croatia	22,96	51
Colombia	25,25	37	Chile	13,16	70
Comoros	40,92	26	Switzerland	6,94	86
Costa Rica	19,24	55	Sweden	11,74	89
Kuwait	21,72	49	Ecuador	30,18	32
Latvia	16,62	55	Eritrea	36,53	18
Lebanon	29,16	28	Estonia	18,49	70
Libya	38,27	16	Ethiopia	25,10	33
Lithuania	18,65	61	South Africa	21,99	44
Luxembourg	10,38	81	South Korea	19,83	56
Mauritius	19,23	53	Jamaica	24,97	41
Mauritania	25,75	31	Japan	8,19	75

Source: Created by author (Medina, Schneider, 2018, pp. 69-76; Индекс восприятия коррупции 2015. URL: <https://www.transparencv.org/en/cpi/2015>)

Table 3 presents a large sample, which includes Russia and 99 other countries located in absolutely all regions of the world. The results of the analytical procedures performed on the numerical data contained in the table are clearly shown in Figure 3.

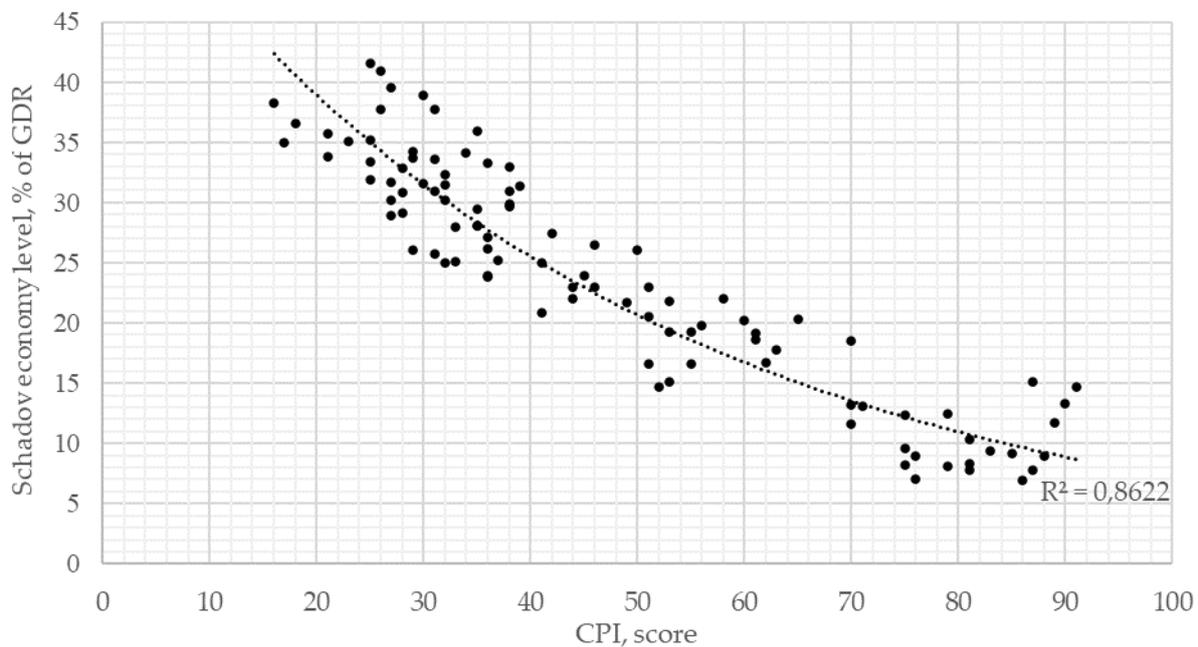


Figure 3. The scale of corruption and the level of the shadow economy: a scatter plot and a graph of the regression equation

The regression equation describing the dependence of the level of the shadow economy in a particular country, mentioned in Table 3, on the scale of corruption observed in it, the graph of which is presented in Figure 3, is as follows:



$$y = 59.3165e^{-0,0211x}, \tag{2}$$

where y is the level of the shadow economy, % of GDP; x – CPI, score.

Using equation (2), it is possible, with a high degree of probability, to determine at what value of CPI the level of the shadow economy in the corresponding country will be safe. The results of this procedure are presented in Table 4.

Table 4. Potentially possible level of the shadow economy in the countries of the world

CPI, score	The level of the shadow economy at a given CPI value, % of GDP		CPI, score	The level of the shadow economy at a given CPI value, % of GDP	
	MIN	MAX		MIN	MAX
50	19,95*	21,37*	75	11,04*	13,36*
	19,85**	21,48**		10,86**	13,53**
	19,63***	21,69***		10,52***	13,88***
55	17,85*	19,34*	80	9,68*	12,27*
	17,74**	19,45**		9,49**	12,46**
	17,51***	19,68***		9,10***	12,85***
60	15,91*	17,55*	81	9,42*	12,07*
	15,79**	17,68**		9,22**	12,27**
	15,55***	17,92***		8,83***	12,67***
65	14,14*	15,98*	82	9,17*	11,88*
	14,01**	16,11**		8,97**	12,08**
	13,73***	16,39***		8,56***	12,48***
70	12,52*	14,58*	83	8,92*	11,69*
	12,37**	14,74**		8,72**	11,89**
	12,06***	15,05***		8,30***	12,30***
71	12,21*	14,33*	84	8,67*	11,50*
	12,06**	14,48**		8,47**	11,71**
	11,74***	14,80***		8,04***	12,13***
72	11,91*	14,08*	85	8,44*	11,32*
	11,75**	14,23**		8,22**	11,53**
	11,43***	14,56***		7,79***	11,96***

Source: Own calculations

Note: ***, **, * – significance at the level of 1%, 5% and 10%, respectively

As Table 4 shows, in order for the level of the shadow economy in Russia to be safe, its CPI value must be at least 71 points. At the same time, as the ultimate goal of the Russian anti-corruption policy, it is necessary to determine the increase in this value to at least 85 points, since only in this case it will be possible, with a 99% probability, even under unfavorable circumstances, to state that the scale of this phenomenon has not exceeded the threshold mark.

Considering the results of the Russian anti-corruption policy pursued over the past two decades of the 21st century, it is easy to see that the achievement of such a goal requires its radical transformation. In particular, it is necessary to eliminate the shortcomings in the activities of the Main Directorate for Economic Security and Anti-Corruption (hereinafter - GUEBiPK) of the Ministry of Internal Affairs of the Russian Federation and all departments and departments of economic security and anti-corruption (hereinafter - UEBiPK and OEBiPK, respectively) of the territorial bodies of the Ministry of Internal Affairs of the Russian Federation. First of all, it is necessary to expand the terms of reference of these power structures, bringing them as close as possible to the powers of the Singapore Corruption Investigation Bureau, thanks to



which this state, being one of the most corrupt in the world back in 1965, today is at the opposite pole of the rating of countries in terms of CPI indicator. In addition, it is imperative to eliminate the key problem of these departments and departments, which is that their employees are prone to commit acts of corruption. To do this, taking into account the experience of Singapore, it is advisable to introduce collective responsibility for them, the essence of which is the dismissal of the entire team if at least one of its members uses their official position for personal gain. Indeed, without its establishment, it is impossible to improve the ethical climate within these organs, which can currently be described as unhealthy (Mukhametov, 2019, p. 6).

In addition to all the considered areas for improving the efficiency of the activities of the GUEBiPK of the Ministry of Internal Affairs of the Russian Federation and all UEBiPK and OEBiPK of the territorial bodies of the Ministry of Internal Affairs of the Russian Federation, for the maximum possible and relatively quick achievement of the goal mentioned above, simultaneously with their implementation, it is necessary to urgently and without fail take a number of other measures (table 5).

Table 5. Possible ways to reduce corruption in Russia

Way	Explanation
Amendments to the current version of the Criminal Code of the Russian Federation	All crimes of a corruption nature, the list of which is presented in the appendix to the Directive of the Prosecutor General's Office of Russia N 738/11, the Ministry of Internal Affairs of Russia N 3 of December 25, 2020 "On the Enactment of Lists of Articles of the Criminal Code of the Russian Federation Used in the Formation of Statistical Reporting" should be punished by real imprisonment with a fine and with life imprisonment of the right to hold public office. At the same time, absolutely all persons guilty of committing these crimes, incl. and those that are currently inviolable. The effectiveness of such a measure is evidenced by the experience of Singapore, mentioned earlier on the positive side, and its absence is extremely noticeable in China, where punishments, which are quite severe, are, according to journalist M. Melnikov, "only a small fry" ¹
Ensuring freedom of the press	As international experience shows, journalistic investigations make it possible to identify a significant part of the illegal actions committed by officials. After all, once on the pages of newspapers and magazines, corrupt officials will no longer be able not to fall into the field of view of specially authorized structures. In this regard, the Russian authorities need to urgently and without fail make all possible efforts, including making changes to the current legislative framework that will help our country get out of the last quarter of the rating of countries in the world in terms of press freedom, compiled by the company "Reporters Without Borders" for 180 countries, i.e. reduce the value of the World Press Freedom Index (hereinafter referred to as WPFJ), which is closely related to the value of CPI (application), and therefore level the current situation, called by this company "a stifling atmosphere for independent journalists" ²
Regularly informing officials about their rules of conduct	The rules of their professional ethics should be hung in the offices of all civil servants, establishing the inadmissibility of any action by them related to the use of their official position for personal gain. In addition, in all administrative buildings it is necessary to place posters that clearly show the connection between the level of economic development of the country and the scale of corruption in it, as well as the legal consequences that may occur for corrupt officials.
Transfer of the capital to another city	The capital of Russia, located in the city, which is also its financial center, facilitates contacts between top officials and big business, pushing them to commit various corrupt acts.
Changing the rules for admission to the civil service	Only those persons who do not have overdue debts on loans, utility bills, etc. should be admitted to public positions, since outstanding debts are an additional incentive to receive bribes
Change in the structure of remuneration of officials	The salary of civil servants should motivate them to honestly fulfill their professional duties

Source: Created by authors

¹ China or Singapore: Which Way to Fight Corruption is More Beneficial for Russia. URL: https://ekb.tsargrad.tv/articles/kitaj-ili-singapur-kakoj-sposob-borby-s-korrupciej-vygodnee-dlja-rossii_218981

² Reporters Without Borders. URL: <https://rsf.org/en/russia>



Among all the anti-corruption measures considered in the table, a measure related to the modification of the salary structure of civil servants deserves special attention. The amount of monetary remuneration to these persons should be calculated according to the following formula:

$$Z_{G/C} = Z_{cf} \cdot x + r, \tag{3}$$

where $Z_{G/S}$ is the salary of civil servants; Z_{cf} - the average salary in the administrative-territorial formation corresponding to the level of certain officials (i.e. for federal officials - the average salary in Russia, regional - in its corresponding subject, etc.); x is a special coefficient, the value of which will range from 1.5 to 4 and depend on the position held, class rank and other similar characteristics of civil servants; r - bonus for honest and conscientious performance by officials of their professional duties, the amount of which will be from 15 to 30% of the indicator Z_{cf} .

The practical use of formula (3) will make the salary of officials directly dependent on the level of well-being of the population of the corresponding administrative-territorial unit of Russia. This is likely to be an incentive for them to make every possible effort to improve this parameter, and therefore refuse to use their official position for personal gain. An additional reminder to civil servants of the need to work honestly and conscientiously will be the allowance r . As for the coefficient x , its values should be equal to: a) for officials of the junior group - from 1.5 to 2; b) for officials of the senior group - from 2.1 to 2.5; c) for officials of the leading group - from 2.6 to 3; d) for officials of the main group - from 3.1 to 3.5; e) for senior officials - from 3.6 to 4.

After all the above measures to strengthen the Russian anti-corruption policy bring the desired result, the country under study, due to the improvement of the investment climate, will have all the opportunities to level such a threat to economic security as the differentiation of its constituent regions in terms of the level of socio-economic development, the danger of which has been said before. In addition to the administrative-territorial units discussed above, other regions also need large investment projects. Table 6 lists these entities, as well as some sectors of their economy in which it is necessary to invest money.

Table 6. Regions of Russia in need of large investment projects

Region	Sectors of the economy to be invested in
Altai region	- Manufacture of refractory products; - production of household non-electrical appliances, etc.
Astrakhan region	- Manufacture of soap and detergents, cleaning and polishing products; - manufacture of motorcycles, etc.
Volgograd region	- Production of metalworking and woodworking machines, etc.
Kabardino-Balkar Republic	- Manufacture of carpets and rugs; - production of aluminum, etc.
Karachay-Cherkess Republic	- Manufacture of glass and glass products; - production of bijouterie and similar goods, etc.
Nenets Autonomous Okrug	- Manufacture of other finished products, etc.
Omsk region	- Production of essential oils, etc.
Orenburg region	- Lead, zinc and tin production; - production of adhesives, etc.
Primorsky Krai	- Wallpaper production; - production of wiring accessories, etc.
Republic of Adygea	- Manufacture of cutlery and cutlery; - production of sheet glass, etc.



Altai Republic	- Manufacture of other finished products, etc.
The Republic of Buryatia	- Production of prefabricated parquet flooring; - metallurgical production, etc.
The Republic of Dagestan	- Production of cast iron, steel and ferroalloys; - production of fiber optic and power cables; - production of lifting and transport equipment, etc.
The Republic of Ingushetia	- Production of fertilizers and nitrogen compounds; - production of metal doors and windows; - production of household non-electrical appliances, etc.
Republic of Kalmykia	- Production of workwear, etc.
Republic of Crimea	- Manufacture of machinery and equipment for the processing of plastics and rubber; - manufacture of hydraulic pumps, etc.
Republic of North Ossetia - Alania	- Manufacture of kitchen furniture; - manufacture of other porcelain and ceramic products; - production of chemical fibers, etc.
Saratov region	- Production of cast iron, steel and ferroalloys; - production of abrasive products, etc.
Stavropol region	- Manufacture of equipment for air conditioning; - production of household electrical appliances, etc.
Chechen Republic	- Production of dyes and pigments; - manufacture of machinery and equipment for metallurgy; - production of glass and glass products, etc.
Yaroslavskaaya oblast	- Production of ceramic plates and tiles, etc.

Source: Created by authors

Table 6 lists the sectors of the economy that are currently underdeveloped in the respective regions, but at the same time, according to the Spatial Development Strategy of the Russian Federation for the period up to 2025, approved by Decree of the Government of the Russian Federation of February 13, 2019 N 207-r, are for them promising. This means that investment in these industries will lead to a significant increase in the total volume of products manufactured in these regions, which is closely related to the level of their socio-economic development (Kombarov, 2021, p. 216).

As a logical conclusion of this study, it is necessary to consider the Republic of Dagestan. Interest in this region is due to the fact that one of its organizations, namely, PJSC "Dagestan Energy Retail Company" (hereinafter - PJSC "DEK"), is currently characterized, according to the model of R. S. Saifullin and G. G. Kadykova (Bukharin, Paraskevich, 2018, p. 1184), high probability of bankruptcy. Since this organization is one of the largest in the specified region, the occurrence of such an event to a certain extent neutralizes the effect of investments in the sectors of the economy that are promising for it, mentioned in Table 6. To determine what actions should be taken by the management of this company in order to eliminate this situation affairs, it is necessary to consider some indicators of its activity (table 7).

Table 7. Some parameters of PJSC "DEK" activity for the period from 2009 to 2020

Year	Revenue, thousand rub.	Cost price		Other expenses, thousand rub.	Net profit, thousand rub.
		Thousand. rub.	Share in revenue, %		
2009	5239648	1604491	30,62	1668240	1574673
2010	6114372	1324790	21,67	2900091	-1082761
2011	6038072	2323011	38,47	3690254	-2833947
2012	6172543	2279556	36,93	3807992	-1645599
2013	6873552	2536388	36,90	1799090	-1186515



2014	8214102	3234531	39,38	2477129	-2311082
2015	8791570	3480383	39,59	3814217	-3705660
2016	9817847	3732472	38,02	4167103	-3549544
2017	10578129	4071312	38,49	6349448	-5739371
2018	11714944	5010852	42,77	7540045	-6936648
2019	12381636	5257456	42,46	10873191	-7915150
2020	6627722	2728309	41,17	5726043	-4453833

Source: Created by author

The table clearly shows that the organization of PJSC "DEK" during almost the entire period under consideration received billions of dollars in losses, the amount of which in 2014 - 2019. showed almost monotonous growth, interrupted only in 2020. The main reason for this extremely negative circumstance is other expenses that increased in 2014-2015, as well as in 2017-2019. at a rapid pace, many times faster than the growth rate of revenue, and reached by the end of the analyzed time period of colossal proportions. Studying the structure of these expenses, it is easy to see that the largest share is occupied by reserves for doubtful debts, which in 2009-2020 traditionally exceeded 70% of their volume. This indicates an urgent need for the management of the analyzed company to take actions that could lead to the emergence of an opportunity to reduce the amount of these provisions.

CONCLUSION

Thus, it follows from the above that the Russian economy, starting from the distant 2013, has been demonstrating annual growth rates of about 0%, i.e. is in a state of stagnation. These rates are blocked by a number of negative circumstances called threats to economic security. Having considered all these threats and established the existence of interrelations between them, the authors of this study came to the conclusion that the most dangerous threat for Russia is such a threat as a significant level of the shadow economy. Its increased danger is explained by the fact that it has a sharply negative impact on the state of the investment climate, and therefore, is the cause of many other factors that have a similar status, including the uneven spatial development of the country under study.

This state of affairs testifies to the urgent need for the Russian authorities to actively combat the shadow economy. Using regression analysis, the authors of this study found that the tool for such a struggle is the reform of anti-corruption policy. In particular, it is necessary, guided by the experience of Singapore, to eliminate shortcomings in the activities of the anti-corruption power structures of the country under study, as well as to toughen penalties for corrupt officials, ensure freedom of the press, modify the procedure for calculating the salaries of persons in public service, and take some other measures.

In conducting the study, the authors used data on the scale of the shadow economy obtained by the staff of the International Monetary Fund, L. Medina and F. Schneider, and published in the report "Shadow Economies Around the World: What Did We Learn Over the Last 20 Years?". The choice of this report is due to its wide demand in the scientific community and its honorary status as the only source containing the specified information for almost all countries of the world over a fairly long period of time. However, it is not



without one drawback, which is that this gap ends in 2015. This state of affairs somewhat narrowed the possibilities of the authors, in particular, obliged them to confine themselves to this particular moment of time when carrying out analytical procedures. Of course, data on the scale of this phenomenon for 2016 and subsequent years are present in other sources, but they were obtained using other methods that differ from those guided by L. Medina and F. Schneider, and therefore their use simultaneously with the results of the work of these economists, which was resorted to, for example, by A. A. Kasyanenko, N. S. Karavanskaya and O. E. Kalenov (Kasyanenko, Karavanskaya, Kalenov, 2018, pp. 20-21), seems to be incorrect. Therefore, in order to ensure the proper quality of future research in the field of the shadow economy, they need to eliminate this shortcoming in their work and supplement it annually with fresh data.

Author contributions:

Conceptualization, M.K.; methodology, M.K.; formal analysis, S.P., M.K.; investigation, M.K.; project administration, S.P., M.K.; data curation, M.K.; resources, M.K.; supervision, M.K.; validation, S.P., M.K.; writing—original draft preparation, M.K; writing—review and editing, M.K.

All authors have read and agreed to the published version of the manuscript.

Data Availability Statement:

The data presented in this study are available on request from the corresponding author.

Conflict of interests:

The authors declare no conflict of interest.

References

- Aganbegyan A. G. (2012). We see one thing, but we hear another. *Economic strategies*, Vol. 14, No. 5 (103), Pp. 10-19.
- Bukharin S. V., Paraskevich V. V. (2018). Increasing the efficiency of analysis of proximity to bankruptcy based on econometrics methods. *Economic analysis: theory and practice*, Vol. 17, No. 6 (477), Pp. 1178-1196. <https://doi.org/10.24891/ea.17.6.1178>.
- Burov V. Yu., Kisloshchaev P. A. (2017). Ensuring the economic security of small enterprises as a factor contributing to the development of innovative activities. *Fundamental Study*, No. 3, pp. 105-109. (RUS). Available at: <https://fundamental-research.ru/ru/article/view?id=41403/> / Burov V.Yu., Kisloshhaev P.A. Obespecheniye ekonomicheskoy bezopasnosti malykh predpriyatiy kak faktor, sposobstvuyushchiy razvitiyu innovatsionnoy deyatel'nosti // Fundamental'nyye issledovaniya. – 2017. – № 3. – S. 105-109.
- China or Singapore: Which Way to Fight Corruption is More Beneficial for Russia. URL: https://ekb.tsargrad.tv/articles/kitaj-ili-singapur-kakoj-sposob-borby-s-korruptsiej-vygodnee-dlja-rossii_218981.
- De Soto E. (1995). *The Other Path: The Invisible Revolution in the Third World*. Catallaxy, Washington. Translated from English. Moscow, 320 p. (RUS) / De Soto E. Inoy put'. Nevidimaya revolyutsiya v tret'em mire. M.: Catallaxy, 1995. – 320 s.
- Domar E. D. (1947). Expansion and employment. *The American Economic Review*, Vol. 37, No. 1, pp. 34–55. Available at: <http://www.jstor.org/stable/1802857>



- Harrod R. Mr. (1937). Keynes and traditional theory. *Econometrica*, No. 5, pp. 74-86.
- Ivanter V. V. (2018). Mechanisms of economic growth. *The world of new economy*, Vol. 12, No. 3, pp. 24-35. <https://doi.org/10.26794/2220-6469-2018-12-3-24-35> (RUS) / Ivanter V.V. Mekhanizmy ekonomicheskogo rosta // Mir novoy ekonomiki. – 2018. – Tom 12. – № 3. – S. 24-35. – <https://doi.org/10.26794/2220-6469-2018-12-3-24-35>.
- Kasyanenko A. A., Karavanskaya N. S., Kalenov O. E. (2018). Development of the shadow sector in the Russian economy. *Economics of Knowledge: Theory and Practice*, No. 1 (5), pp. 15-26.
- Keynes J. M. (1936). *The general theory of employment, interest and money*, Macmillan, London, 394 p.
- Kombarov M. A. (2021). The scale of the uneven spatial development of Russia and ways of its reduction. *Economic security*, Vol. 4, No. 2, Pp. 209-226. doi:10.18334/ecsec.4.2.111510 (RUS) / Kombarov M.A. Masshtaby neravnomernosti prostranstvennogo razvitiya Rossii i puti ikh snizheniya // Ekonomicheskaya bezopasnost. – 2021. – Tom 4. – № 2. – S. 209-226. – doi: [10.18334/ecsec.4.2.111510](https://doi.org/10.18334/ecsec.4.2.111510).
- Larin A. V., Tarunina E. N. (2015). Entrepreneurial activity and economic development: The shape of the relationship. *Applied Econometrics*, No. 1 (37), pp. 3-26. (RUS) / Larin A.V., Tarunina Ye.N. Predprinimatel'skaya aktivnost' i uroven' ekonomicheskogo razvitiya: forma zavisimosti // Prikladnaya ekonometrika. – 2015. – № 1 (37). – S. 3-26.
- Lizina O. M., Badokina T. E. (2020). Evaluation of the shadow component in the structure of the national economy. *Moscow Economic Journal*, No. 9, Pp. 155-165. DOI: 10.24411/2413-046X-2020-10620.
- Medina L., Schneider F. (2018). *Shadow Economies Around the World: What Did We Learn Over the Last 20 Years?* Series IMF Working Paper. Volume 2018: Issue 017. Publisher: International Monetary Fund, 76 p. <https://doi.org/10.5089/9781484338636.001>
- Mukhametov A. F. (2019). Fight against corruption: perception, rating, experience. Success or failure? *Law and state*, No. 3 (84), Pp. 4-17.
- Murashov A. V., Ratnikova T. A. (2017). Dynamics of unaccounted incomes in Russian households. *Applied Econometrics*, No. 2 (46), pp. 30-54. (RUS) / Murashov A.V., Ratnikova T.A. Dinamika neuchtonnykh dokhodov rossiyskikh domashnikh khozyaystv // Prikladnaya ekonometrika. – 2017. – № 2 (46). – S. 30-54.
- On the Strategy for Economic Security of the Russian Federation for the period until 2030: Decree of the President of the Russian Federation of May 13, 2017 No. 208. - Moscow, 2017, <https://www.prilib.ru/en/node/681513> / O Strategii ekonomicheskoy bezopasnosti Rossiyskoy Federatsii na period do 2030 goda: Ukaz Prezidenta Rossiyskoy Federatsii ot 13 maya 2017 g. № 208. - Moskva, 2017, <https://www.prilib.ru/en/node/681513>.
- Oreshkin M. S. (2018). Prospects for economic policy. *Economic policy*, Vol. 13, No. 3, pp. 8-27. DOI: 10.18288/1994-5124-2018-3-01. (RUS) / Oreshkin M. S. Perspektivy ekonomicheskoy politiki // Ekonomicheskaya politika. – 2018. – Tom 13. – № 3. – S. 8-27. – DOI: 10.18288/1994-5124-2018-3-01.
- Perskaya V. V. (2016). Trans-Pacific Partnership and Challenges for Russia. *Economy. Taxes. Right*, Vol. 9, No. 2, pp. 14-20.
- Reporters Without Borders. URL: <https://rsf.org/en/russia>
- Schumpeter J. A. (1934). *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*, Harvard University Press, Cambridge, 255 p.
- Teplykh G. V., Galimardanov A. Sh. (2017). Modeling of innovative investment in Russian regions. *Applied Econometrics*, Russian Presidential Academy of National Economy and Public Administration (RANEPA), vol. 46, pp. 104-125
- Yusupov K. N., Toktamysheva Yu. S., Yangirov A. V., Akhunov R. R. (2019). Economic growth strategy based on the dynamics of gross domestic product. *Economy of the region*, Vol. 15, No. 1, pp. 151-163. DOI: 10.17059/2019-1-12. (RUS) / Yusupov K. N., Toktamysheva Yu. S., Yangirov A. V., Akhunov R. R. Strategiya ekonomicheskogo rosta na osnove dinamiki valovogo vnutrennego produkta // Ekonomika regiona. – 2019. – Tom 15. – № 1. – S. 151-163. – DOI: 10.17059/2019-1-12.



About the authors



Svetlana PYANKOVA

Doctor of Economics, Professor of the Department of Regional, Municipal Economics and Management, Ural State University of Economics, Ekaterinburg, Russia.

Research interests: strategic planning of regions, economic security of the regions, development of single-industry towns.

ORCID ID: <https://orcid.org/0000-0002-7072-9871>



Mikhail KOMBAROV

Postgraduate student of the Department of Regional, Municipal Economics and Management, Ural State University of Economics, Ekaterinburg, Russia.

Research interests: shadow economy in Russia and in the world, quantitative assessment of the scale of uneven spatial development of Russia, factors affecting the level of economic development of Russian regions.

ORCID ID: <https://orcid.org/0000-0002-6194-7762>

Copyright © 2022 by author(s) and ACCESS Publishing Press This work is licensed under the Creative Commons Attribution International License (CC BY)



Appendix Correlation analysis of the dependence of the scale of corruption in the countries of the world on the level of freedom of the press for 2018-2020.

Country	2018		2019		2020	
	CPI	WPI	CPI	WPI	CPI	WPI
Austria	76	14,04	77	15,33	76	15,78
Algeria	35	43,13	35	45,75	36	45,52
Argentina	40	26,05	45	28,30	42	28,78
Bangladesh	26	48,62	26	50,74	26	49,37
Belgium	75	13,16	75	12,07	76	12,57
Benin	40	30,16	41	31,74	41	35,11
Bulgaria	42	35,22	43	35,11	44	35,06
Botswana	61	25,29	61	25,09	60	23,56
Burundi	17	55,26	19	52,89	19	55,33
Germany	80	14,39	80	14,60	80	12,16
Greece	45	29,19	48	29,08	50	28,80
Georgia	58	27,34	56	28,98	56	28,59
Denmark	88	13,99	87	9,87	88	8,13
Indonesia	38	39,68	40	36,77	37	36,82
Iraq	18	56,56	20	52,60	21	55,37
Ireland	73	14,59	74	15,00	72	12,60
Iceland	76	14,10	78	14,71	75	15,12
Spain	58	20,51	62	21,99	62	22,16
Italy	52	24,12	53	24,98	53	23,69
Canada	81	15,28	77	15,69	77	15,69
Cyprus	59	19,85	58	21,74	57	20,45
Colombia	36	41,03	37	42,82	39	42,66
Kuwait	41	31,91	40	33,86	42	34,30
Lithuania	59	22,20	60	22,06	60	21,19
Luxembourg	81	14,72	80	15,66	80	15,46
Malaysia	47	47,41	53	36,74	51	33,12
Malta	54	27,44	54	29,74	53	30,16
Morocco	43	43,13	41	43,98	40	42,88
Mexico	28	48,91	29	46,78	31	45,45
Nepal	31	32,05	34	33,40	33	35,10
Netherlands	82	10,01	82	8,63	82	9,96
New Zealand	87	13,62	87	10,75	88	10,69
Norway	84	7,63	84	7,82	84	7,84
Pakistan	33	43,24	32	45,83	31	45,52
Peru	35	30,27	36	30,22	38	30,94
Poland	60	26,59	58	28,89	56	28,65
Russia	28	49,96	28	50,31	30	48,92
Serbia	39	29,58	39	31,18	38	31,62
Slovenia	60	21,69	60	22,31	60	22,64
Tajikistan	25	50,06	25	54,02	25	55,34
Thailand	36	44,31	36	44,10	36	44,94
Taiwan	63	23,36	65	24,98	65	23,76
Tanzania	36	30,65	37	36,28	38	40,25
Uzbekistan	23	60,84	25	53,52	26	53,07
Uruguay	70	15,56	71	16,06	71	15,79
Philippines	36	42,53	34	43,91	34	43,54
Finland	85	10,26	86	7,90	85	7,93
France	72	21,87	69	22,21	69	22,92
Croatia	48	28,94	47	29,03	47	28,51
Montenegro	45	31,21	45	32,74	45	33,83
Czech	59	21,89	56	24,89	54	23,57
Switzerland	85	11,27	85	10,52	85	10,62
Sweden	85	8,31	85	8,31	85	9,25
Sri Lanka	38	41,37	38	39,61	38	41,94
Equatorial Guinea	16	66,47	16	58,35	16	56,38
Ecuador	34	30,56	38	31,88	39	32,62
Eswatini	38	51,46	34	49,09	33	45,15
Estonia	73	14,08	74	12,27	75	12,61
Ethiopia	34	50,17	37	35,11	38	32,82
South Korea	57	23,51	59	24,94	61	23,70
Correlation coefficient		-0,9178***		-0,9576***		-0,9628***